15 Jan 2020

Submission to the AER on SA Power Networks' Revised Regulatory Proposal 2020-2025

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Special Thanks to Renewable Energy Policy Group for contributions and inspiration.

This submission does not reflect the position of any entity or group except the author. It has not been endorsed or reviewed by anyone.

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Introduction: Trust

> *If you believe… they put a man on the moon (man on the moon).*
> *If you believe there's nothing up their sleeve, then nothing is cool.*
> -REM, "Man on the Moon"

What would it mean for consumers to trust networks? If networks follow the National Electricity Objective, they should always act in the best interest of consumers, but we observe that this is not always the case. Networks also have a responsibility to investors to maximise profits, value and share price. A network may be expected to act dishonestly if the perceived reward is high enough to justify its perceived risks should the deception be revealed. One might even be inclined to forgive networks for attempting to take more than their efficient revenues, for the same reason that we would forgive a pet dog for stealing food from an unguarded dinner plate. We can trust a dog to be a dog.

> *Milestone 1: By 2018, network customer engagement and collaboration has regular, credible processes, underpinned by greater access to shared information, which begin to enhance trust.*
>
> -Energy Networks Australia and CSIRO, *Electricity Network Transformation Roadmap Final Report, April 2017,* p.17.

"Trust in trustworthy experts" would be the ideal state of the consumer-network relationship envisioned by the National Electricity Rules. The Rules promote trust because trust can be simplifying and sometimes essential to achieving common goals. Complete trust is not strictly a requirement, since transparency can be a good substitute, albeit at additional cost. The 'optimal' level of consumer trust in networks is closely aligned with the level of honesty exhibited by the networks and their representatives. Greater access to shared information and transparent, historical documents will only enhance trust in networks to the extent that results demonstrate networks' commitment to honesty and consistency.

The AER has some control over a DNSP's incentives to act honestly, through its enforcement regime. Incentive-based regulation works because it is easier to trust corporations when profits are aligned with consumers' best interests. Trusting the AER to properly incentivise DNSPs would be a reasonable substitute for consumers placing trust in DNSPs directly. Sound regulation reduces the need for consumers to protect themselves through engaging in the regulatory process, reducing their costs.

Low levels of trust lead consumers to examine regulatory documents more carefully, increasing the risk to networks of deceit being exposed, and causing long-term damage to the network's reputation. Consumer engagement in the regulatory process can therefore be a deterrent to network dishonesty, in addition to being an effective means to detect it.

Trust, continued

If ENA wishes to 'enhance trust', it should acknowledge the false and misleading work it has done on tariff reform, and commit to removing bias from future work. I hope researchers and their employers understand that it is not possible to 'prove anything with statistics' under full transparency. The public will eventually detect the bias and adjust its level of trust accordingly.

A particularly brave example of biased research commissioned by the ENA is the Energeia study, *Network Pricing and Enabling Metering Analysis*, *November 2014*. The largest source of bias is the model used to calculate network costs:

> *For the ENA project, we applied an assumed peak demand reduction coefficient to the modelled reduction in individual customer demand.* (16)

The model is not stated explicitly, but for 'selected residential customers' it works out to be:

1) *Network Savings* = Peak Demand reduction * Long-run-marginal-cost per kVA
2) Peak demand reduction = Individual demand reduction * 0.84
3) Expected short-term individual demand reduction = 8.3% on the Time of Use tariff, and 19.2% on the Demand Tariff.

Since the relationship between individual peak demand and network peak demand is not causal and the primary driver of network savings has been left out of the model, this simple linear model suffers from severe omitted variable bias. Reducing peak volume (kWh) is the real driver of reduced network peak demand[1], but the effect is incorrectly credited to the only variable in the model, individual peak demand reduction. The model assumes that there is no value in reducing peak kWh, creating bias against the Time of Use tariff.

The value of reducing individual maximum demand is close to zero after controlling for associated peak volume reduction. That is, if customers invest in reducing individual maximum demand without also reducing peak volume, actual network savings would be nil. Demand Tariffs end up looking like a reasonable tariff option only because of the bias injected by researchers in this study. This deception may be able to fool an under-resourced regulator and some others in the short-term, but this publication will remain a permanent blemish on ENA's reputation for honesty with consumers.

The Energeia study was incorporated into a sickening piece of propaganda in 2014, the *ENA Position Paper: Towards a National Approach to Electricity Network Tariff Reform.* By coincidence, it was announced today that ENA's contact person for that paper, currently head of research at Energy Consumers Australia (ECA), will become acting CEO of ECA in March. ECA should be fighting ENA's inefficient proposals and the AER's complacency, not allowing ENA to infiltrate the regulatory process through NewReg.

[1] Ausgrid *Revised Regulatory Proposal, Appendix K, Price Elasticity of Demand* (2016)

Introduction 2: Demand Stimulation

In general, demand stimulation is a set of policies or prices which reward customers for increasing quantity, size, or frequency of purchases. In competitive markets, demand stimulation is a natural and reasonable business strategy. In a monopoly setting, demand stimulation is a known abuse of power, causing inequity in the short-term and inflating total cost in the long-term.

Figure 1: This wouldn't be funny if it truly promoted speeding. (Source: The internet)

Roads and highways are also monopoly networks, and it is essential for road policy to promote safe travel above all else. Incentivising drivers to commit more, or more severe, violations and pay fines, rather than deterring violations and improving safety, is an inefficient outcome for motorists.

Electricity networks generally don't cause safety issues through demand stimulation, but inefficient use of the grid would be expected to inflate long-run capacity needs and associated costs (at least until rising costs trigger the 'death spiral' scenario, where customers bypass the network in vast numbers and at great expense).

Demand Stimulation continued

Networks would do well to acknowledge that they are not currently incentivised to implement efficient tariff reform. ENA noted the backwards incentive in 2014:

> *"Network tariff reforms should be revenue neutral, without seeking to increase or decrease the short term revenue approved by the regulator for network businesses to operate the electricity grid. However, in the medium to long term, tariff reform will significantly reduce the future investment required in the electricity network and Australia's electricity supply chain."*
>
> *ENA Position Paper: Towards a National Approach to Electricity Network Tariff Reform.* December 2014, page 2.

In other words, the effect of tariff reform on network profits is neutral in the short-term, but will reduce costs, revenues and profits in the medium-to-long term. The more efficient and empowering the tariff, the greater the impact it will have on long-term network profits. Here is a clear case where network profits are at odds with consumers' best interests, yet everyone in power seems to be pretending everything is fine. An incredible amount of misleading information has been produced in attempts to deceive consumers about tariff reform. It is deeply concerning that the regulator has not yet stepped in to stop this ongoing violation of trust which will keep tariff reform perpetually stalled.

SA Power Networks regulatory proposal: Tariffs

While some networks continue to push an obvious agenda to corrupt the tariff reform process, SA Power Networks has quietly been making profound reforms which appear likely to benefit consumers in meaningful ways. I see no new issues with the revised TSS, and I am very pleased to see the bar for small customers being put on mandatory Demand Tariffs has risen to 120 kVA, up from 70kVA. This should come as a relief to many businesses in that range which would not be appropriately charged and incentivised on the Demand Tariff.

Tariff Structure Statement Part B provides clear and helpful supporting information for the interested public, while Part A provides technical details for the advanced reader without unnecessary rhetoric. I support the two-document format and I am impressed with the improvements made since 2017 to the structure and written content of SA Power Networks' TSS.

I have one new concern to raise, which I didn't catch when reading the draft TSS. In the data analysis of peak demand for various subregions, (page 41 of the revised proposal), SA Power Networks reasonably states that results show peak demand is approximately the same on weekends as it is on workdays over all subregions except the Central Business District. It then erroneously concludes that tariffs should not have different prices based on day of the week, except in the CBD.

The error arises from the fact that many existing customers are now a tariff which offers off-peak rates all weekend long (for example, B2R). If the price signal to shift use to weekends is removed, the customers who have already responded may revert back to using energy during weekdays, causing the original problem to return. A better conclusion would be "the data shows no reason to

alter existing price signals for shifting load to weekends, except perhaps in the CBD. Customers may have only recently invested in responding to the current day-of-week signal, potentially at significant expense, and it would not be fair to now remove what should still be a valid price signal for reducing peak demand during workdays.

Issues with LRMC and cost allocations can hopefully be sorted over the next period, to remove existing cross subsidies which continue to erode price signals and stimulate demand. As network prices creep higher and technology costs fall rapidly, networks must ensure that staying connected continues to be competitive on total cost, not just marginal price, in order to retain customers.

SA Power Networks: Smoothing Proposal

An ongoing issue of concern is the way revenue smoothing is presented and applied. It appears that SA Power Networks would effectively be given a loan from consumers, to be paid back over the period at an interest rate of CPI. Given the heated debate regarding the required interest rate for investors, why should customers be offered anything less than the WACC for their capital contribution? I would think the NEO sufficient to entitle consumers to equal treatment to investors when providing capital loans to networks.

The presentation of this proposal in Attachment 1, pages 6-8, is in nominal dollars, makes it difficult for consumers to identify the missing value. It was made clear to the Tariff Working Group that the smoothing proposal is neutral in terms of real dollars, thus the effective interest rate is (forecst) CPI. Perhaps hiding the fact that this is not a good deal for consumers is the point of adding confusion by converting to nominal dollars.

To see that this offer is not in the best interest of consumers, note that the revenue in question is 'allowed revenue' and might not actually be collected in the correct year. It is therefore reasonable to compare the effects of approving the proposal under the assumption that actual annual revenue does not change. The difference between Allowed and Actual Revenue goes into the overs/unders account. The interest rate which applies to that account is, correct me if I'm wrong, the Weighted Average Cost of Capital (WACC). The outcome of approving the loan shown to be negative for consumers, costing Loan amount (~$20M in year 1 for 4 years, ~$10M in year 2 for 2 years)*(WACC-CPI)% annually.

Conclusion

Credit to SA Power Networks for leaving me little to gripe about, having addressed so many serious issues over the past 2 years. I hope that the rest of the DNSPs will match its efforts to produce genuine value for consumers. Thank you again for the opportunity to engage in this process, and for giving me a sliver of hope for the future.

Best regards,

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