ENERGEX TARIFF STRUCTURE STATEMENT
CUSTOMER IMPACT STATEMENT
JOINT SUBMISSION
31 AUGUST 2015

1. Introduction

This is a combined submission from Total Environment Centre (TEC) and Solar Citizens (SC). TEC has been working on reform of the National Electricity Market since 2004 to improve its environmental outcomes through advocacy for more demand management, energy efficiency and decentralised energy. Solar Citizens is is an independent community based organisation bringing together over 1.4 million solar owners and 80,000 direct supporters to protect and grow solar in Australia.

We appreciate the opportunity to respond to Energex's customer impact statement for its draft tariff structure statement. In our view Energex has done a very good job in including small consumers in the TSS process and taking our views into account.

2. Background

Many solar customers have received substantial subsidies to install and run their systems in the form of the national Solar Credit Scheme and Queensland Government Solar Bonus Scheme. These subsidies are now being wound back, and solar customers may be discriminated against, particularly in relation to increasing fixed charges. We recognise that some of this discrimination occurs as a result of solar-specific retail tariffs rather than network tariffs.

Many solar customers consider they are not receiving the full benefit of their exports to the grid - not only in relation to export prices paid by retailers, but also in relation to the value of solar to networks in exporting energy to the grid close to where it is generated. This reduces the need for upstream infrastructure and related line losses and pushes out and in many cases reduces peak demand, thereby reducing the need for future network augmentation.

The declining cost of solar and now batteries means most customers (other than tenants and those in buildings with poor solar access) are in a position of increasing market power. Networks cannot assume solar customers will remain connected to the grid if it is uneconomic for them to do so relative to going offgrid.

As a general principle, solar customers are willing to pay their fair share of network costs as long as they also receive their fair share of network benefits and are not discriminated against relative to non-solar customers.

3. Cost reflective tariffs

We recognise the need to move to more cost reflective network tariffs in order to send consumers a price signal about the cost of augmenting network capacity to meet peak demand (although it is unclear the extent to which retailers will pass through cost reflective network tariffs). We acknowledge that Energex is required under recent changes to the National Electricity Rules to prepare a Tariff Structure Statement and that each network tariff must now be based on the long run marginal cost of providing the service, rather than being largely focused on recovery of sunk costs as is currently the case. If properly applied, this shift will be in the long term interest of consumers as it will reduce the need for investment needed for only short periods of the year, which should eventually flow through to consumers in the form of lower bills.

However, on average solar customers have a more 'peaky' load profile and lower overall consumption than non-solar customers, so are more likely to suffer higher network charges as a result of the move to cost reflective tariffs. We note that as well as being cost reflective, new tariffs are required to conform to the new consumer impact principle that requires network businesses to consider the impact on consumers of changes in network prices and to develop price structures that are able to be understood by consumers.

We also recognise that the move to cost reflective tariffs will not increase Energex's total revenue but is rather about how revenues are recovered between various customer classes. It is important that in this move solar customers do not in effect subsidise non-solar customers - especially those with a large aircon load which is likely to make them unresponsive to voluntary demand tariffs. It is therefore critical that Energex engages with solar customers to help them understand new tariff structures and affords them ample opportunities to adapt.

Finally,we recognise that the rapidly increasing affordability of peak-shaving batteries will greatly improve the ability of some solar customers to respond to demand tariffs. However, many households are on relatively low or fixed incomes, and may never be able to afford batteries without government, retailer or network rebates. In many cases - such as aged pensioners and non-English speaking households - these consumers may have little ability or willingness to respond to peak demand-based price signals.

4. Energex's proposed demand tariff

In common with other network tariffs proposed in draft tariff structure statements, Energex's proposed demand tariff NTC7000 is more cost reflective than existing tariffs. However, no information has been made available to date on either the long run marginal cost in $/kW or $/kVA underlying the demand charge, or how the LRMC has been applied to the demand charge versus the application of residuals to fixed and volumetric charges. Without these figures, we cannot tell how just cost reflective the new tariff will actually be.

Energex should also consider developing other, more directly cost reflective tariffs, such as critical peak pricing with rebates, which offer greater flexibility for some consumers to respond (especially where they have batteries or automated appliances). We recognise that even if it is passed through by retailers, most consumers are unlikely to respond to the relatively weak price and delayed signal sent by a demand tariff, whereas a minority is likely to respond enthusiastically to, say, an SMS from Energex informing them that if they keep peak demand under 1 kW during today's peak they will earn a rebate of $10.

It has been difficult for us to judge the impacts of the proposed demand tariff on solar customers specifically because, while there are 3 consumer cohorts with high solar penetration among the 15 in the CSIRO study, solar ownership is only one of the variables in each cohort. Nevertheless, based on cohorts 2, 5 and 14, it is clear that

- In common with other networks, in general the lower the consumption, the worse the impact.
- Thanks primarily to volumetric charges more thanks 60% lower than at present, total consumption appears to be a more important variable than a peaky load in determining the bill impact - apparently negating the intent of the demand tariff (since cohorts 5 and 14 are better off despite having peaky loads, because they benefit disproportionately from lower consumption charges).

This is regrettable. Solar households have lower than average consumption, and therefore on average will be worse off under the new demand tariff without behavioural change. We would have preferred to see impacts on solar specific cohorts. As with other networks, we suggest modelling the impact of the demand tariff on four cohorts of solar customers: stay at homes with a relatively flat load profile versus working families with peaky profiles; and both with or without the 44 cent FiT, which increases peakiness by incentivising them to export energy during the day and import it in the evening. *Until that information is made available we would not recommend that solar customers switch to this tariff.*

The new load control tariff seems to provide worthwhile benefits to both customers and to Energex. It has been discussed that a solar system and/or small storage may be connected to this load control circuit. If this was in addition to solar connected to the main circuit this would be a welcome development.

5. Implementation
We agree that moving to the demand tariff should be voluntary for the foreseeable future - even though we recognise that this will likely result in consumers who are likely to benefit from it making the switch, while those that are unlikely to benefit remain on existing tariffs. This may lead to a revenue shortfall that results in Energex seeking to increase fixed and/or volumetric charges on existing tariffs. This may mean that solar customers who stay on the current tariff are not better off despite not moving onto the demand tariff. We would appreciate a response from Energex in relation to whether it agrees that this problem is likely to arise, and how it intends to respond to it.

The analysis of the benefits of solar will become more complicated with the introduction of demand tariffs. Therefore it is important that customers and solar installers are as fully informed as possible of the changes that are in train even if it will be some years into the future – NPV studies need this. Providing examples outlining typical cases and how the calculations can be done would be beneficial. These examples could be used to explain load factors and the tools in section 3.5.1 and appendix B of the Customer Impact Statement. Could a solar analysis tool be developed?

We consider that Energex will need to engage directly on an ongoing basis with solar customers to understand and respond to their concerns and to provide practical and financial incentives to make the switch to the new demand tariff. Energex could, for instance, subsidise the shift to smart meters where there are network constraints and there is a quantifiable financial benefit to Energex from solar and other local consumers reducing their peak demand.

We also need more clarity around the modifications needed to solar customers' meters in order for them to participate in demand tariffs, and how Energex intends to charge for these modifications.

6. Adapting
Energex needs to consider how solar customers can adapt to the new tariff to ensure their network charges will not increase (assuming the demand signals are passed through by retailers). This could occur by:
- Load shedding - for instance, via appliances with direct load control (DLC).
- Load shifting to offpeak times.
- Installing real time monitoring and alerts so consumers feel in control.
- Installing batteries to store energy during the day and consume it during the evening peaks.
- New customers installing solar panels to face north-west or west to produce more energy in the late afternoon.

We would also like to know how Energex intends to incentivise reductions in peak demand by non-tariff means of demand management - eg, by continuing to offer rebates for aircon units with direct load control (DLC) or by subsidising battery installations by consumers in constrained areas of the grid.

7. The future
Energex needs to consider how solar and storage will again reduce network revenue and how it will respond. In other words, if solar customers adapt to the new tariff by reducing their peak as well as their daytime demand, this will reduce total revenue. Does Energex intend to further increase fixed charges to recover the same total revenue?

We would also like to know what Energex intends to do about its restrictions on the export of solar to the grid with the implementation of peak demand tariffs. Assuming it is successful and many solar customers install peak shaving batteries, we regard this as obviating the need for a 5 kW restriction. Instead Energex could implement a 5 kW cap on exports to the grid for new solar or battery connections at least.

8. Value of solar exported to network
While Energex and other networks claim that solar customers receive a cross-subsidy from other consumers, most do not recognise the benefit that solar brings to networks, especially where it flattens and pushes out till later in the day the network peak, thereby reducing pressure on constrained parts of the grid.

Ausnet pays a ~4c/kWh summer generation tariff to solar customers, which reflects the value of exports in reducing total demand on hot summer afternoons. ActewAGL pays a 0.5c/kWh tariff to solar customers to reflect avoided transmission use of system (TUoS) charges. Energex does not appear to be planning any similar tariffs to recognise the value of solar exports. Why not?

There is currently a rule change request before the AEMC to implement local generation network credits (LGNC) across the NEM in networks' annual tariff pricing proposals to the AER. Energex is participating in a trial project to understand how this credit might be calculated and paid to generators and potentially also netted off to related consumers (such as councils moving energy between adjacent or nearby sites). W4e therefore recommend that Energex recognises this pending reform in its TSS and supports the rule change as a reform that is complementary to cost reflective consumption tariffs.

Yours sincerely,

Mark Byrne
Energy Market Advocate
Total Environment Centre