SUBMISSION

To: SAPN

Regarding: TSS

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About UnitingCare Australia

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UnitingCare Australia is the Uniting Church's national body supporting community services and advocacy for children, young people, families, people with disabilities and older people.

The UnitingCare network is one of the largest providers of community services in Australia, providing services and supports to more than 2 million Australians each year in urban, rural and remote communities. The network employs 35,000 staff and 24,000 volunteers.

UnitingCare Australia works with and on behalf of the UnitingCare network to advocate for policies and programs that will improve people's quality of life. UnitingCare Australia is committed to speaking with and on behalf of those who are the most vulnerable and disadvantaged for the common good.

Stewardship of our environment is a fundamental responsibility of societies both in the short-term and for the benefit of future generations. We strongly support the notion of the triple bottom line for government community and business organisations whereby economic stewardship, environmental stewardship and the nurture of citizens (social stewardship) are equally valued and reported on publicly.

UnitingCare Australia's principle interest in energy regulation arises because energy is an essential service with rising costs that are putting inordinate financial pressure on growing numbers of households in Australia.

Context

In this brief submission we respond to the questions that SA Power Networks has posed in its consultation paper "electricity tariff reform in South Australia" October 2015.

We thank SAPN for their commitment to engage with consumer interests regarding the Tariff Structures Statement. We recognise that there has not been enough time to adequately explore the issues raised in the process, we continue to discuss the issues. We appreciate that very useful data that SAPN has developed as part of developing TSS thinking, and the willingness to share this data and thinking 'hot off the spreadsheet.'

Before considering these questions however we wish to make a couple of comments on the nature of cost reflective pricing which is a significant philosophical underpinning of the other issues canvassed by SAPN in the tariff structures statement consultation paper.

<u>Cost reflective Pricing.</u>

The discussion paper says on page 4

> "by cost reflective, we mean prices that are closer to reflecting the true cost of serving a particular customer. Currently, tariffs for most small customers

> are based on how much energy they use, but accumulated energy use has little bearing on the actual cost for the network to meet the consumers needs. Network costs are driven by the capacity required by the customer to meet their peak demand on a particular day."

We respond to this statement by expressing the opinion that most customers would regard cost reflective pricing to be exactly based on how much energy they use. Indeed one of the most common complaints from UnitingCare agency clients dealing with the massive price increases they have experienced for electricity over the last half decade or more, is that even though they use less electricity they still pay more. This is regarded by all of our clients as manifestly unfair and an unreasonable proposition.

This perhaps is some of the context for us saying that cost reflective pricing must also consider the capacity of consumers to respond to the price signals that they are given. Since electricity is an essential service, then it is critical that all customers are able to afford a reasonable amount of electricity for basic human needs and functioning at all times of the year at all times of the day. Cost reflective must be a demand side as well as a supply-side consideration.

Fixed charges

Given our brief comments regarding cost-effective pricing above, it stands to reason that fixed charges traditionally referred to as supply charges or network charges are in fact not particularly cost reflective because they do not reflect the demand and use from a customer. UnitingCare Australia favours pricing structures with lower emphasis on fixed charges or supply charges and consequently prices based more on the actual use of end customers rather than the network convenient, fixed supply charge. UnitingCare Australia has issued a discussion paper which explores some aspects of the economics literature of network charges and we have attached this discussion paper with this submission.

We are also aware of the argument which is gaining momentum at the moment that electricity distribution businesses are increasingly concerned at the changing electricity market and the potential for a reduced reliance on grid connection for many customers, particularly with the advent of PV and battery storage. There is a strongly held view amongst many consumers that electricity network businesses are wanting to fast track their recouping of fixed costs before their assets potentially become 'stranded'. Consequently network businesses are actively promoting higher supply charges and accelerated depreciation as strategies to garner more rapid return to capital expenditure than may have been considered a few years ago, before the current changes in the electricity markets became as clear-cut.

With regard to stranded assets' UnitingCare Australia released a paper earlier this year that explored impacts of PV om network prices and i9nclueded an appendix that canvased economic theory regarding network piecing, including the question of 'stranded assets" This paper included the following statement:

"In considering ways to recover the residual between total costs and variable costs, it would be useful first to consider how excluding imprudent expenditures might reduce this residual. In this regard we point to Hotelling's pithy advice in 1939 in relation to railways in the United States, much of which was economically stranded through excessive investment and technology change:

"… the fact is that we now have the railroads, and in the main are likely to have them with us for a considerable time in the future. It will be better to operate the railroads for the benefit of living human beings, while letting dead men and dead investments rest quietly in their graves".

This is useful advice in the current context of electricity networks in Australia.
We raise this issue of changing network demand and the question of stranded assets because we believe it is useful context for the very important issues being considered in the tariff structures statement and also to assert UnitingCare Australia position that current and future customers should not bear excess burden for excessive investment in the past.

The following extract is the final section from the report. A full copy of this report is attached.

"So, what might consumers' take from the theory? We suggest the following:

1. LRMC is at best a philosophy or broadly defined principle. It can be applied in many ways and very different tariff structures and levels might be claimed to be consistent with it. It is not an objective, verifiable and certainly not a precise standard.
2. A good case exists in the theory of marginal costs (whether short run or long run) for some form of time differentiation in tariff charges for residential and other energy users. The theory does not however provide clear guidance on relative price levels (how much higher peak prices should be than off-peak) or the number of different time bands.
3. The theories of electricity pricing provide no substance to the idea that shortfalls between marginal costs and total costs are efficiently recovered through fixed charges. In fact, to the contrary, the use of fixed charges to recover sunk costs is anathema to the theory of marginal costs, whether long run or short run.

Finally, we return to the question posed in the introduction: does economic theory offer answers that allow us to understand the impact on tariffs of other seemingly non-economic objectives such as fairness, predictability and consistency? Or, to put it differently, can theory tell us with confidence what a cost-reflective tariff is? This paper suggests that the answer is "no". Despite the attention of many fine minds over a long period, there are many different views on the theories and even more on their implementation.

The tariff debate is often portrayed as one in which economically efficient cost-reflective tariffs are undermined by politics and non-economic factors such as fairness and equity. But the line that demarcates an economically efficient approach from others is not clearly drawn. On closer inspection, many seemingly non-economic factors are entirely relevant to the consideration of efficiency.

Consumers and their advocates should participate actively in the debate about tariffs to make their preferences known. Industry needs to find out what consumers want and to orient their pricing policies accordingly."

Demand based tariffs

SAPN proposes effectively a status quo with regard to current demand based tariff structures. We are of the view that fixed costs are not particularly cost reflective and are a burden on lower use lower income households and so for existing demand based tariffs to be used we would strongly support a lowering of the amount of revenue gathered by SAPN from fixed charge components.

We think that there is a very real likelihood that "Demand tariffs" added to fixed and use (energy) charges, has the potential to effectively create a 'two part supply charge', which is unhelpful since supply charges are not strongly cost reflective.

So as short answer to the question of retaining the status quo to demand based tariffs is to say that future tariffs should have lower supply charge components than current arrangements.

Peak demand periods

The economics literature supports the notion of higher charging for higher demand periods of time however this must be tempered with careful consideration of the impact on in customers and with particular reference to an essential service, the capacity to adjust to higher price periods without deleterious impact on health and

well-being. We recognise that this is a difficult issue however UCA agencies are amongst the voices during peak demand periods who are warning elderly and low income households to not put their health at risk by failing to use modest levels of air conditioning and other approaches to keep relatively cool during heat waves, which are the peak demand periods.

This is the difficult trade-off, neat economic theory and convenient network tariff structures against aged, sick and poor people bearing an unreasonable burden from higher electricity prices at the very time when heat waves require people to use more electricity.

We believe it is reasonable to have a modest increase for summer pricing so that there is some price signal but at the same time there has to be a reasonable minimum quantum of electricity available so that aged, sick and disadvantaged people are not adversely impacted by heat waves, by having their health compromised.

For peak demand tariffs to have 'legitimacy', they need to be cost reflective, yet the current peak demand periods do not coincide closely with the small number of genuinely peak demand that the network experiences annually, which is probably in the range of 20 – 40 hours per year.

We suggest that this is one of the tough issues which cannot be fully resolved before SAPN in time to lodge the tariff structures statement but which should be flagged to the AER as a topic for further consideration consultation and debate before tariff structure statements are finalised.

Minimum demand charge

UnitingCare Australia strongly supports the lowering of minimum demand charge in line with our principles summarised above of maintaining essential supply for all people at all times and not placing undue burden on port sick aged and disadvantaged households.

Measurement of peak demand

We agree that measuring a peak demand period based on a single half-hour of each month is "too sharp a signal", in particular because customers have very limited capacity to respond to a one half hour peak.

What is also unclear at this stage is the degree of impact on the peak demand pricing of various quantum shifts in peak demand we believe that this needs to be much more carefully explored before applying a demand charge component to future billing.

Solar PV Feed – in - tariff

The following extract taken from the UnitingCare Australia paper includes a statement regarding the impacts of Solar PV on end consumers.

> *"…. in the case of South Australia, the data …. says that as at the end of 2014, regulated network service provider charges would have to be 7% higher if the revenue that has been lost to households that have installed rooftop PV, is to be recovered."*

A larger extract from this report is given as appendix 1.

Recouping feed in tariffs from all customers is reasonable since all grid connected customers benefit from the reductions in network costs, about 7% is the estimate in our paper, which is shared by all consumers. Rooftop PV is of benefit to all consumers.

We do not agree with the proposition that residential consumers should pay a larger premium for PV feed in tariffs as rooftop PV is installed by both business and residential consumers. Indeed a recent AECO report projecting future electricity use and generation, projects higher future PV investment from small and medium businesses, compared to the residential segment of the market.

Simplicity

While we agree with simplicity as a goal, it does not mean that tariffs need to be simplistic. It is the end choices for consumers and their capacity to react to price signals that must be clear and simple to understand, the structures behind the end consumer interaction can be complex if this gives the best outcomes for consumers. For analogy, a car is relatively easy to drive and standard across models and manufacturers, yet very few consumers understand how a car works. Computing and modelling sophistication mean that electricity tariffs can be complex in the detail but this does not mean that they have to be complex at consumer interface. This is where clarity and simplicity matter.

One of the reasons for the very low trust levels of the electricity industry (lower trust rates than for banks) is because, we suggest, complexity has been used to create confusion as a means to increase price levels beyond what they need to be and to 'trick' consumers into switching retailers.

Mitigating Impacts

It is crucial that customers are able to adjust their behaviour to changing tariff arrangements. To achieve this requires market testing, as would occur with any producer or service changing their product, this means direct testing of the actual options that are proposed for consumers in new billing arrangements. There are many techniques for engaging with consumers, and we are happy to provide more detail if this helps. Firstly, there must be a commitment to 'market test' by talking with and listening closely to different consumer types.

The second issue is for network businesses and retails to be actively sorting out how network tariff structures will be taken to consumers by retailers. This B2B work is crucial. We suggest that this is the sort of discussions that can be structured between ENA and ERAA, with the AER probably an observer and able to provide advice. TSS is an Australia wide process and this issue common to all db's in all jurisdictions.

Special Purpose Tariffs

UnitingCare Australia supports special purpose tariffs and believes that the notion that they are 'market distorting' are overstated. Hardship tariffs, pensioner discounts, family packages are common place throughout retail markets. Further, the very notion of market contracts over regulated contracts is intended to provide greater levels of differentiation and choice in the market place, eg pay on time discounts are not regarded as market distorting though they provide a penalty, ion practice, to poorer consumers.

The essential nature of electricity means that some special purpose tariffs are needed to enable adequate, affordable, essential supply.

WE strongly believe that hardship / social tariffs are a special purpose tariff that is fair and reasonable for an essential service in a society with a tough labour market and growing income and wealth gaps between different members of society.

We will endeavour to provide further comments on this subsequent to presenting this response paper.

Impacts on Business

Varying cost for some businesses is a matter for negotiation between the business, energy supplier, Department of State Development and maybe Local Government or the Regional Development Board as this is a question of employment and economic policy as well as the costs of energy supply. Some economic development funding for certain individual businesses or even classes of business (miners, irrigators for example) is appropriate in some circumstances.

Air Conditioning costs

This is a very important issues and Uniting Care Australia recommends that an air conditioner charge be added to the tariff mix for all air-condition units over, say, 5kw. While air conditioning penetration is very high in SA and is a major driver of peaks in electricity demand, very few lower income people have large air-conditioning systems and so would not be adversely impacted by setting a modest threshold for application of an air conditioning tariff. A starting point would be for a three phase tariff that is higher.

We recognise that this approach requires the application of rules requiring that SAPN is notified of new air-conditioner purchases and the address for installation. This needs to be sorted out.

The priority is to develop a robust and equitable air-conditioner element of future SA tariffs

Robust for the future

Transition

Appendix A: Excerpt from Rooftop PV, Tariffs and Theory

We have calculated the reduction in revenue to NSPs from households that have installed rooftop PV. Figure 6 below shows our estimate of the reduction in payments for network services in 2014 from households that have installed rooftop PV.[1]

Figure 1: Reduction in network payments in 2014 per household with rooftop PV

[1] Most NSPs in the NEM are subject to a cap on their prices, not their revenues. For these "price cap" NSPs, for the period of a regulatory control (5 years) the revenue they have lost from households that have installed PV is not recoverable during the period of the control. However, since NSPs prices are based on expected sales over the five years, the effect of expected demand reductions (of which PV is a part) could have already been factored in the determination of the regulatory control. As such, the information shown in Figure 4 cannot be thought of as actual lost revenue. All distribution network service providers will be moving to revenue-based regulatory controls, rather than controls over their prices. This will make them invariant to the loss of consumption from sales to households that install PV. However they will be exposed, to the extent that the loss of revenue during a regulatory control period is not adequately taken into account in the establishment of the revenue control. For this reason, with revenue controls, it is impossible to be certain whether, at any point during a regulatory control period, the network service providers or other consumers are bearing the losses associated with reduced through-put. However from the start of the next regulatory control period, unless there is some reduction in the value of the regulated networks' asset base, it will be the case that consumers rather than shareholders bear the financial impact of reduced consumption from households that install PV.

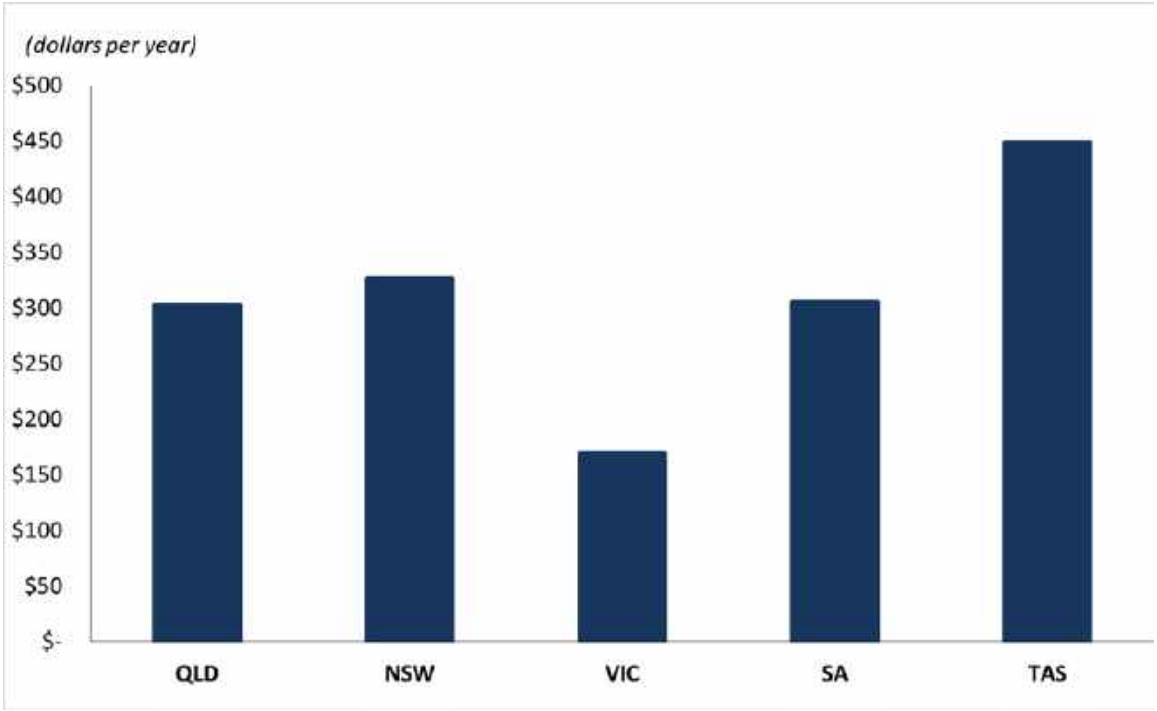


Figure 7 aggregates the lost revenue per household across all households with rooftop PV. It shows that the reduction in payment for network services from households with PV is higher in Queensland than anywhere else in the NEM. This is partly because the penetration of rooftop PV has been significant in Queensland, but partly also because Queensland's network charges are higher than anywhere else.

Figure 2: Reduction in network payments in 2014 attributable to households with rooftop PV

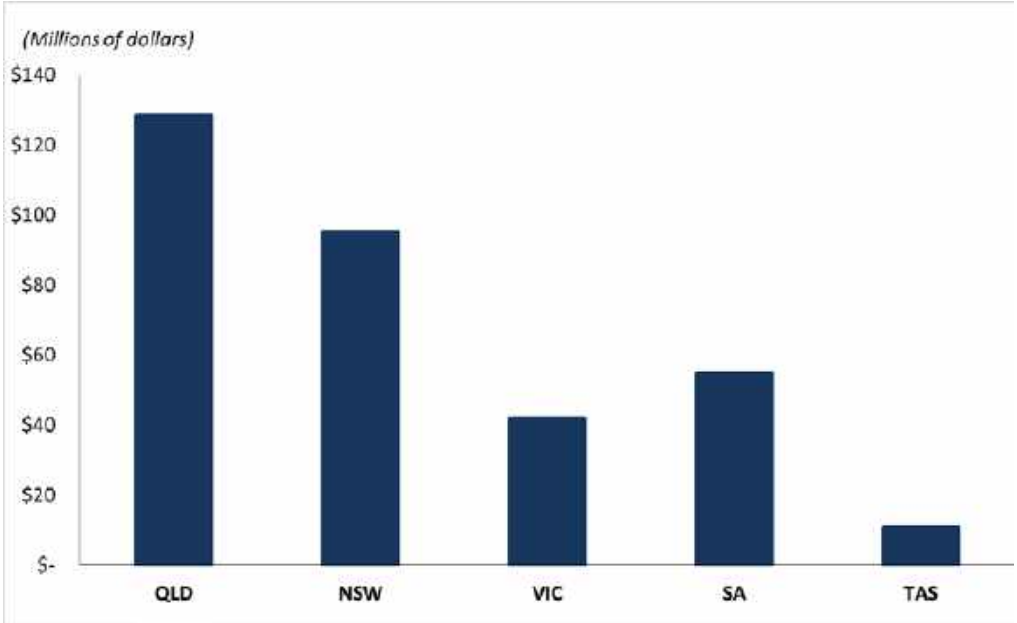
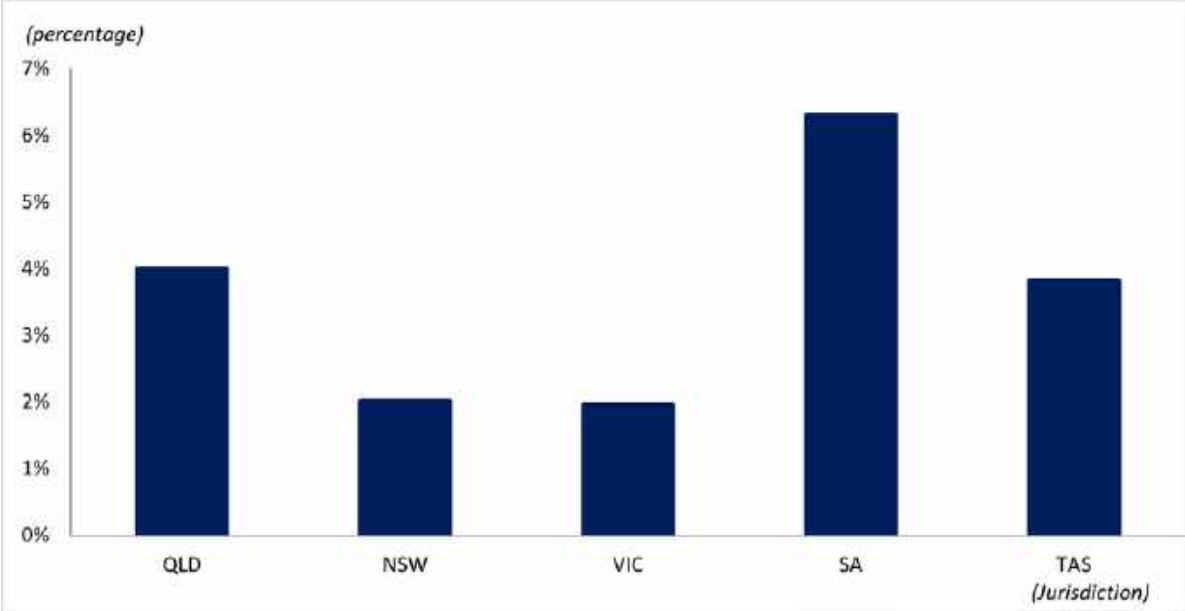


Figure 8 extends the analysis in Figure 7 by expressing the revenue reductions as a percentage of the allowed distribution network services business revenues in 2014. In South Australia households with rooftop PV deliver the fourth lowest reduction in

NSP revenues (as shown in Figure 7). However, when stated as a percentage of regulated revenues, rooftop PV in South Australia has had the biggest impact on network service provider revenues, because it is the state with the highest proportion of households with rooftop PV.

The amounts shown in Figures 7 and 8 are significant. For example in the case of South Australia, the data in Figure 8 says that as at the end of 2014, regulated network service provider charges would have to be 7% higher if the revenue that has been lost to households that have installed rooftop PV, is to be recovered.

Figure 3: Reduction in network payments in 2014 attributable to households with rooftop PV as a percentage of regulated distribution network services revenues



When examined, as a time series from 2008 to 2014, rooftop PV as a percentage of regulated distribution network services revenues has increased significantly from a negligible proportion in 2008 to as high as 9% of regulated revenues in SA in 2014.

And the summary of this paper

Tariffs for households with rooftop PV

In the Australian Energy Market Commission's (AEMC's) Draft Rule Determination on distribution network pricing arrangements, the AEMC refers to a case study that a consultant, NERA, developed for it. That case study is of a South Australian consumer with a 2.5 kilowatt north-facing solar panel, which NERA suggests would pays about $200 a year less than a similar consumer without solar panels, but that this PV would only reduce future costs by $80.[2]

[2] The reduction in future costs occurs because the rooftop PV reduces demand in peak periods and so avoids the need for network expansion.

The thrust of the AEMC's recommendation in dealing with this "problem" is that tariffs should better reflect costs, and specifically the way that costs at the margin vary with demand during the day.

An example of a tariff that does this is AusGrid's time of use tariff for households that have installed rooftop PV and that receive the New South Wales Government's premium feed-in tariff. In the second section we compared the network prices for such customers with the prices paid by AusGrid's other household customers without rooftop PV who typically do not have a time of use tariff. As shown in Figure 3, the average price for network services for households with rooftop PV, is lower. This is as we would expect: households with rooftop PV consume less during more expensive peak and shoulder periods and more during less expensive off-peak periods. A tariff that reflects the temporal variation in costs is sensible and the outcome in terms of average network prices for households with rooftop PV reflects their beneficial pattern of consumption and production.

More cost reflective tariffs do not however solve the "problem" that households that install rooftop PV pay less for network services than they did before the PV system was installed. In fact "cost reflective" tariff make the problem worse (in the sense that the revenue shortfall against what was previously recovered, increases).

To address this, many in the industry have been pushing for an increase in fixed charges particularly for households that install rooftop PV. In Attachment 1 below we note that the Brattle Group in their report for the AEMC said that fixed charges might be efficient (because customers would not change their consumption as a result of such charges). But, as we note, consumers lose as a result of such charges because even if they do not decrease their consumption of electricity, they forego consumption of some other good or service as a result of higher payments for electricity. A solution that might be more efficient for the industry therefore comes at the customers' expense. For this reason, higher fixed charges cannot be described as an efficient solution or fair way to deal with the problem of increasingly stranded network assets[3].

We also noted in the Attachment that in the theory of electricity pricing there is no acceptance of fixed charges to recover sunk costs, and in the design of two-part tariffs the standing (fixed) charge was meant merely to recover customer-specific costs such as meters and meter reading and bill costs. We found in the Network Tariffs paper that increasingly in Australia, fixed charges in network tariffs are rising, despite the fact that the fixed element in network charges for households in Australia is already much higher than in many other comparable countries.

Finally irrespective of whether they are efficient or fair, higher fixed charges may well not be successful in choking demand for rooftop PV. Network service providers do not contract with households directly and so the structure of network tariffs will not be visible to households unless retailers mirror them in their retail tariffs. In our Network Tariffs paper we noted that they generally do not: retail prices have high fixed charges in Victoria, but the network service providers have relatively low fixed charges, and vice versa in Queensland. In their relationship with customers, retailers may consider various combinations of fixed and variable charges to win business.

[3] The attachment sets out greater detail on the theoretical aspects.

They may therefore choose to recover through variable charges, the fixed charges that they face from networks. As such changing fixed charges in networks may, ultimately, have little impact on customer behavior.

Do NSPs have a right to "lost revenue"?

The AEMC's characterisation of the problem of rooftop PV is that households that have installed PV reduce their payments to their network service providers, but that this is not sufficient to offset the beneficial impact on future network investment. Therein, from the AEMC's perspective lies the problem. Underlying this characterisation is the assumption that NSPs have a right to recover whatever amount of revenue they recovered before a household installed PV. But why is this an appropriate assumption? A decline in demand for grid-supplied electricity as a result of distributed generation is, from the perspective of network throughput, no different to a decline in demand for the grid for other reasons such as more efficient consumption or reduced consumption or closure.

The point is that technology change has created opportunities for households, and increasingly industry and commerce, to meet part of their own needs more cheaply by installing their own generation. The grid retains a monopoly in the provision of back-up and a route to market for surplus production, although the development of batteries may change this in future.

Networks are now being asked to deliver a different service at least to some energy users, than the service they were designed to deliver. The new demands are different and lower than the original demands, if not in the peak demand on residential feeders, then on peak demands on the shared network. As result there is now increasing excess "stranded" capacity and with that the question of who should pay for this.

This problem cannot be solved by tariffs that better reflect costs. To the contrary, tariffs that better reflect costs, will simply make stranded assets more obvious. For the reasons set out in this section and on the basis of the evidence in our previous paper, and the attachment to this research, it is clear that policy makers and the industry would be making a bad mistake if they tried to protect network service providers through higher fixed charges. Such charges are inefficient and regressive. The problem of stranded assets will need to be shouldered by consumers and shareholders in some other way, including the revaluation of assets. Economic efficiency and fairness, not the preservation of the incumbents' rents, must be the guiding objectives.