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Determination of Solar Feed-in Tariff Premium
Essential Services Commission of SA (ESCOSA)
GPO Box 2605
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Dear ESCOSA

RE: Solar Premium Issues Paper

TRUenergy welcomes this opportunity to provide comments on "Determination of Solar Feed-in Tariff Premium" Issues Paper of August 2011.

In 2009 Premier Rann signed the updated Australian Energy Market Agreement (AEMA) which lists as one of its objectives "streamline and improve the quality of economic regulation" in order to "lower the cost and complexity of regulation".[1] As ESCOSA has outlined in the Issues Paper, it is required to determine a prescribed amount that will be the minimum retailer contribution to solar feed-in tariffs. It is imperative that ESCOSA undertakes this task in a manner consistent with the AEMA. Such an approach will help foster the development of a competitive and efficient retail electricity market, in accordance with the AEMA and delivering benefits for all SA electricity consumers.

It is important to note that, due to the presence of significant competition in the SA retail electricity market, there is a significant risk asymmetry in setting the level of the retailer contribution to the solar feed-in tariff. If the contribution is too low then we would expect to see market offers being developed above the regulated rate, with solar customers able to access these offers and receive the higher rates. However if the contribution is set too high then solar customers will become unprofitable, meaning retailers may have an incentive to avoid supplying them where possible and will seek to recover the excess costs from other electricity customers. The AEMA aims to "lower barriers to competition"[2] so setting the feed-in tariff too high would be contrary to this.

TRUenergy provides the following comments on each of the key topics in the Issues Paper.

Determining the fair and reasonable value

The concept of "fair and reasonable value" may have different meanings to different stakeholders. Some may consider it relates to net present value or payback periods for solar panel owners, some may consider it relates to impacts on solar takeup rates, some may consider it relates to total scheme costs or total subsidy required. In June 2011 ESCOSA looked at indicative cost implications of all of these.[3] However, for the purposes of determining the solar feed-in tariff premium, the legislation only directs ESCOSA to have regard to the fair and reasonable value "to a retailer"[4] of solar electricity fed into the grid, without any mention of payback periods or solar takeup rates. The key direct benefit to the retailer, as the Issues Paper identifies, is the value of the wholesale energy exported.

[1] Australian Governments, *Australian Energy Market Agreement (as amended)*, July 2009, page 8
[2] Australian Governments, *Australian Energy Market Agreement (as amended)*, July 2009, page 8
[3] ESCOSA, *Proposed Amendments to the South Australian Photovoltaic Feed-in Scheme - Advice to the Treasurer*, June 2009, page 22
[4] South Australian Legislation, *Electricity Act 1996*, July 2011, s35A(2a)

Calculating the wholesale value of solar PV electricity

Electricity generated by solar panels clearly is of value. Every kilowatt hour generated means less generation is required from other sources. This is the case for all electricity generated and fed into the distribution network, regardless of whether it is simultaneously used on site or metered as export back into the grid.

Under a net metering arrangement, the feed-in tariff will only be paid on the net export component. However, legislation requires retailers to make an offer to a "qualifying customer who feeds electricity generated by a qualifying generator into a distribution network" [5] without specifying net exports only.

This is an important issue in the context of the Issues Paper. It would appear sensible for ESCOSA to determine only the wholesale value of electricity generated, without attempting to determine the value of the net export component. Adopting a generation approach has significant advantages over valuing exports such as:

- It is consistent with the legislative requirements;
- It will ensure that the retailer contribution determination and any updates thereof, are streamlined and keep cost and complexity to an absolute minimum, in accordance with the AEMA; and
- Solar generation profiles are relatively uniform and predictable whereas export rates and times can vary dramatically, meaning generation calculations will be less complex and the results far more reliable than attempting to determine a "one size fits all" export value.

In estimating the value of the energy generated both incremental Long Run Marginal Cost (LRMC) and market based approaches could be utilised, noting that over the long term these should be equal. SKM MMA[6] recently undertook a study for the Clean Energy Council which is a useful attempt at determining solar value. However care needs to be taken in interpreting the results of the SKM MMA report, noting that:

1. The study attempts to value exports, not just solar energy generation. The study does highlight the further degree of complexity, extra assumptions and greater degree of averaging that is required to derive a value for exports.
2. The study looks at NSW, not SA.
3. The wholesale market price can vary significantly year on year, in particular the number and timing of high price periods. A larger study with a longer data analysis period, rather than a one year calculation, would provide a more robust estimate.
4. The study's 57% shape premium is materially higher than preliminary analysis undertaken by TRUenergy.
5. The shape premium has been calculated from an analysis of historical market data, but this has then been applied to a LRMC purchase cost. This mixing of concepts may undermine the integrity of the outcome.

In order to estimate the fair and reasonable value to a retailer of the electricity generated by solar PV customers ESCOSA should determine a process that is sensible, predictable and can be easily updated as required.

Possible network benefits from solar PV generation

Solar may have network benefits. However, if these exist they should be identified, valued and translated into specific tariffs or other benefits by the networks and their regulator. As ESCOSA is required to determine the fair and reasonable value "to a retailer" [7] of solar power, it would be inappropriate to include any network benefits in the retailer contribution.

As the Issues Paper identifies, energy losses may be reduced by distributed solar generation. However under current arrangements the avoided losses will be shared back across all energy users over time.

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[5] South Australian Legislation, *Electricity Act 1996*, July 2011, Part 3 Division 3AB
[6] SKM MMA, Value of Generation from Small Scale Residential PV Systems, July 2011
[7] South Australian Legislation, *Electricity Act 1996*, July 2011, s35A(2a)

The value to a retailer is likely to be immaterial, temporary and difficult to measure with any accuracy. It would be inappropriate to include any losses benefit in the retailer contribution.

Other costs or benefits to the retailer

Potential indirect gains such as those outlined in the Issues Paper are difficult to measure and are not likely to be material. Any attempt to include these in solar feed-in tariffs is also complicated by the need to ensure that only the portion of any such benefits that is a gain to the retailers is incorporated, as the legislation requires.

Given the complexity of quoting, service order processing, tariff changes and ongoing meter data management and billing costs for solar customers, there is no doubt that the cost to serve a solar customer is higher than a non-solar connection. This is exacerbated by the fact that SA is moving to a system where some solar customers will be on the mandated 44c plus retail contribution tariff, some on the mandated 16c plus retail contribution tariff and some on the retail contribution only tariff. The extra costs of serving solar customers are being funded by retailers.

TRUenergy suggests it is likely that the extra costs to serve solar customers far exceed any indirect benefits to retailers, noting that many of these costs and benefits will be difficult to measure and may change over time.

The competitive retail energy market

TRUenergy is of the view that there is genuine competition in the SA retail electricity market and also that the average solar customer has a far greater understanding of the electricity market than the average non-solar customer, partly due to the fact that they need to engage with retailers and distributors in order to become a solar generator.

Most solar customers have had little difficulty in obtaining a feed-in tariff that includes a retailer-funded component. The vast majority of these are receiving 6-8 cents from their retailer. Retailers weigh up various costs, benefits and opportunities in determining their contribution to feed-in tariffs and the different offers reflect varying value perceptions. Given the competitive retail market, it is reasonable to assume that the fair and reasonable value of solar to retailers lies within the range of contributions currently on offer.

Implications of setting the feed-in tariff too high or too low

As noted above, there is a major risk asymmetry in setting the level of any mandated retailer contribution to the solar feed-in tariff. This suggests that, should there be a range of outcomes for the fair and reasonable value of solar generation, the low end of the range should be adopted for the mandated retailer contribution.

ESCOSA has noted in the past the potential for "a reduced incentive to compete for customers with PV generation units" due to cost concerns and also that there are "reports that this may already be happening in the market as a result of the existing feed-in scheme. Any increase in retailer costs would serve to exacerbate this issue."[8]

Degree of regulation required

The legislation requires ESCOSA to have regard to the fair and reasonable value of solar to a retailer. It does not require that ESCOSA set the mandated retailer contribution at the fair and reasonable value and the legislation is drafted such that the mandated contribution is a minimum or floor amount. Retailers are not permitted to offer below the mandated contribution but are free to make offers above it.

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[8] ESCOSA, *Proposed Amendments to the South Australian Photovoltaic Feed-in Scheme - Advice to the Treasurer*, June 2009, page 22

TRUenergy suggests that there is not a market failure regarding retailer contributions. The retail electricity market is clearly suggesting that the fair value of solar generation is in the 0-8 cent range and there is no evidence that customers are having problems accessing retailer contributions. Given this, the "floor price" approach of the legislation and the significant risk asymmetry outlined above, it may be appropriate for ESCOSA to set the mandated retailer contribution at or close to zero.

In order to give guidance to prospective solar customers, it may also be appropriate for ESCOSA to calculate and publish a simple benchmark solar price, being what it believes a fair and reasonable value of solar generation to a retailer to be. This could be updated every two or three years. This would provide a useful guide to new solar customers to test offers received against the independently calculated benchmark, but would not force retailers to offer a particular rate if they believe it to overestimate the fair value. It would also facilitate ongoing product innovation by retailers to deliver more competitive solar offers, rather than simply complying with a regulated rate.

Conclusion

TRUenergy believes that, while ESCOSA has been asked to have regard to the fair and reasonable value to a retailer of solar generation, there is a strong case for minimalist regulation in this area and that both customers and retailers are likely to benefit from such an approach.

Should you wish to discuss any of the issues raised in this submission please feel free to call me on (03) 8628 1120.

Yours sincerely,

Andrew Dillon
Regulatory Pricing Manager