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22 April 2013

Essential Services Commission of South Australia
GPO Box 2605
Adelaide 5001

Dear Sir / Madam,

RE: 2013 Determination of Solar Feed-in Tariff Premium

The Clean Energy Council (CEC) welcomes the opportunity to respond to the Essential Services Commission of South Australia's draft price determination, *2013 Determination of Solar Feed-in Tariff Premium*.

The CEC is the peak body representing Australia's clean energy and energy efficiency industries. Its priorities are to:

- Create the optimal conditions in Australia to stimulate investment in the development and deployment of world's best clean energy technologies;
- Develop effective legislation and regulation to improve energy efficiency; and
- Work to reduce costs and remove all other barriers to accessing clean energy.

The CEC works with governments and over 600 member organisations to identify and address the barriers to efficient industry development in the clean energy sector. The clean energy industry contributes to the generation of electricity using wind, hydro, solar, biomass, geothermal and marine energy as well as emerging technologies and service providers in the energy efficiency sector.

For further information regarding this submission please contact Darren Gladman at DGladman@cleanenergycouncil.org.au.

Yours sincerely,

Russell Marsh
Director, Policy

Clean Energy Council submission to the ESCoSA 2013 Determination of Solar Feed-in Tariff: Draft Price Determination

Executive Summary

If the recommendations of the draft determination are adopted South Australian owners of solar PV systems will be providing a financial benefit to electricity retailers and/or they will cross-subsidising other customers, depending on how much of the financial benefit is passed on by electricity retailers to their customers.

The draft determination has used the narrowest conception of a feed-in tariff, based on the financial benefit that a solar PV owner provides to his or her electricity retailer. We note that ESCoSA has acknowledged that rooftop generators of solar electricity provide additional economic benefits to all electricity retailers, and that some or all of those financial benefits may ultimately be passed on to all electricity consumers. Those benefits include:

- Lower wholesale electricity prices due to a reduction in electricity demand. The reduction in wholesale electricity prices may be retained by electricity retailers or may be passed on to all consumers in the form of lower retail tariffs.
- Lower wholesale electricity prices due to flattening of the Net System Load Profile.
- Reduced network loss factors.
- Lower costs to retailers due to avoided contracting and risk management costs.

In addition, solar PV and other forms of distributed generation can reduce or defer the need for further investment in the 'poles and wires' infrastructure. A report published in 2013 by the Victorian Government estimated that by enabling the avoidance or deferral of network investment, decentralised energy could save Victorian electricity consumers in the order of \$437 million per annum by 2020¹.

There are several specific aspects of the Draft Price Determination that are matters of concern for the CEC.

ESCoSA has acknowledged that its proposal would only reward solar PV owners for financial benefits accruing directly to his or her electricity retailer. The solar PV owner would not receive payment for benefits shared by all electricity retailers.

ESCoSA has made no attempt to quantify the economic benefits of solar PV arising from the reduced need for network investment and nor has it considered how solar PV owners could be rewarded for this benefit.

¹ Langham, E., Dunstan, C., Cooper, C., Moore, D., Mohr, S. and Ison, N. 2011, Decentralised Energy Costs and Opportunities for Victoria, prepared by the Institute for Sustainable Futures, University of Technology Sydney for Sustainability Victoria, November 2011.

1. The Scope of the Determination

The CEC's view is that the term 'fair and reasonable' should be interpreted as a subsidy-free value that reflects the benefits of electricity generated from small-scale PV generators to electricity retailers **and to other parties** (eg. distribution network service providers, other businesses and entities in the electricity supply value chain and other customers). It is fair and reasonable that the benefits brought by PV owners should be captured by PV owners.

ESCoSA has taken a far more narrow view and has determined the feed-in tariff based only on the direct financial benefit received by the electricity retailer paying the feed-in tariff to an eligible customer.

Restricting the consideration of payments to owners of PV systems in this way constrains the extent to which PV owners can be rewarded for benefits they provide to participants in the electricity market other than their own electricity retailer.

In other Australian states governments have recognised the economic value of solar PV generation arising from the reduced need for infrastructure investment. For example, in Victoria:

- A report published in 2013 by the Victorian Government (Langham et al, 2011) estimated that by enabling the avoidance or deferral of network investment, decentralised energy could save Victorian electricity consumers in the order of \$437 million per annum by 2020; and
- The Victorian Competition and Efficiency Commission (VCEC) has recommended that the value of network benefits should be returned to distributed generators.

Recommendation 1:

The term 'fair and reasonable' should be interpreted as a subsidy-free value that reflects the benefits of electricity generated from small-scale PV generators to electricity retailers **and to other parties**. It should not be the financial benefits that owners of solar PV systems provide to their electricity retailer alone.

2. Benefits shared with all electricity consumers

ESCoSA has acknowledged that PV systems feeding electricity back into the grid will provide benefits for all consumers, namely:

- Lower wholesale electricity cost due to flattening of the Net System Load Profile (NLSP);
- Lower wholesale electricity price due to overall reduction in demand;
- Lower contracting and risk management costs; and
- Reduced network loss factors.

ESCoSA has justified excluding these benefits from the FiT calculations on the grounds that "those factors may provide benefit to retailers collectively or to other parties but do not provide value to the PV customers' 'own' retailer". This rationale is weak. Elsewhere in the National Electricity Market (NEM) costs are attributed to retailers in the absence of information specific to the retailer's customers. For example, retailers' electricity purchases for small retail customers are settled against the relevant Net System Load Profile (NLSP), regardless of whether or not they have interval meters installed. This means that it is not possible to identify each customer's consumption for each half-hour settlement period. There are many precedents for charging retailers on the basis of aggregated costs and benefits. A similar approach could be adopted for the financial benefits of solar PV that

accrue to all electricity retailers. Financial benefits to each retailer could, for example, be calculated based on the total financial benefit and apportioned by each retailer's market share.

ESCoSA should at least provide an order-of-magnitude estimate of the financial benefits that solar PV owners provide to all electricity retailers and that will not be captured by its feed-in tariff proposal.

Recommendation 2:

ESCoSA should publish an estimate of the approximate size of the financial benefits that South Australian owners of solar PV systems will provide to all South Australian electricity retailers and which will not be returned to solar generators if ESCoSA's feed-in tariff proposal is adopted.

Recommendation 3:

The financial benefits that accrue to all electricity retailers from solar PV generation should be returned to owners of solar PV systems. In situations where it is not possible to attribute benefits to individual electricity retailers the benefit should be calculated based on the total benefit to all electricity retailers, apportioned by market share.

2.1 Network Loss Factors

CEC welcomes ESCoSA's recognition that the electricity market receives a benefit from the reduction in loss factors due to solar PV generation and that the benefit of reduced loss factors from PV generation accrues to all retailers in the market.

It is disappointing that ESCoSA has recommended against including this as part of the FiT calculations and instead has recommended continuation of the status quo, whereby this benefit is shared amongst all electricity retailers.

CEC is of the view that the financial benefits of reduced loss factors should be returned to those whose investments are responsible for the reduction, namely the owners of solar PV systems. Doing so would not raise electricity prices.

ESCoSA has justified excluding network loss factors from FiT calculations on the grounds that the financial benefits are shared between all retailers. There are many areas of electricity market regulation in which costs are apportioned to retailers on the basis of their market share. There is no apparent reason why benefits to electricity retailers could not be apportioned by market share and returned to owners of solar PV systems.

If the benefit of reduced loss factors is not returned to PV households then they will be providing a financial benefit to electricity retailers or they will be cross-subsidising all other consumers if the financial benefits are passed on to customers by retailers.

The financial benefit of reductions in network loss factors due to PV exports should be calculated and included in a fair and reasonable FiT. At the very least, ESCoSA should provide an order-of-magnitude estimate of the financial benefit arising from PV exports and subsequent changes in network loss factors.

2.2 Retail margin and head room

Where PV energy exports enable retailers to avoid costs, the margin associated with them also forms part of the direct financial benefit to the retailer. Electricity retailers should not be able to

retain the equivalent value of retail margin and head room on costs that they are able to avoid when PV energy is exported.

With South Australia moving to deregulate electricity prices, retail margin and head room are no longer regulated. We have therefore used the guidelines employed by the Queensland Competition Authority, namely a margin of 5.7% and head room of 5%.

The 10.7% margin and head room on ESCoSA's proposed FiT of 9.8 c/kWh would equate to about 1.05 c/kWh. On a 10.42 c/kWh FiT advocated by CEC, the 5.7% margin and 5% head room equate to 0.59 c/kWh and 0.52 c/kWh respectively.

Recommendation 4:

Owners of PV systems should receive as part of the FiT the margin and head room on costs that retailers avoid when PV energy is exported. This equates to around 1.12 c/kWh, comprising 0.59 cents/kWh for the margin on the FiT and 0.52 cents/kWh for the head room on the FiT.

Table 1 outlines all of the items comprising CEC's estimate of a fair and reasonable contribution by electricity retailers for the benefits they derive from solar customers in South Australia. Note that this only takes account of the direct financial benefits to retailers from their customers and does not include the benefits enjoyed by all retailers collectively. In the absence of published information on the financial benefits that South Australian owners of solar PV systems will provide to all South Australian electricity retailers we have not been able to include these components in the calculations in Table 1.

Table 1 – CEC calculation of fair and reasonable contribution by electricity retailers to a FiT in SA

Cost component	Retail cost (c/kWh)	Comments
Wholesale electricity costs	8.53	
Avoided losses (8%)	0.68	
Market and ancillary service fees	0.10	
<i>Subtotal</i>	9.31	
Plus margin (5.7%)	0.59	Based on 5.7% margin allowed in Queensland. Assumes no margin on FiT, which reduces unavoidable costs.
<i>Subtotal</i>	9.90	
Plus head room (5%)	0.52	Based on 5% head room allowed in Queensland. Assumes no head room on FiT, which reduces unavoidable costs.
TOTAL (excl. GST)	10.42	

Recommendation 5:

Owners of PV systems should receive a retailer payment of **at least** 10.42 cents for each kWh exported.

3. Next steps

ESCoSA's report has highlighted some useful next steps in solar energy policy.

The first step should be to quantify the financial benefits that solar PV can provide to all electricity retailers collectively and the benefits arising from avoided or deferred network expenditure. This can then provide a basis for ensuring that owners of solar PV systems are appropriately rewarded for the financial benefits to which they contribute.