

**Submission to
Issues Paper
on the
“Determination of Solar Feed-in Tariff Premium”
for South Australia.
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Below are my responses to twelve questions posed in the Issues Paper produced by ESCOSA, with the opening question:

“What is the most appropriate method to calculate the fair and reasonable value to a retailer of electricity fed into the network by solar PV systems.”

- 1) How should the variability in the value of energy be reflected in the approach that the Commission takes in determining a FIT premium?**

As a minimum there should be a summer and a winter rate. Consideration also needs to be given to the savings that are made by the retailers for electricity that is not needed because of local generation and consumption by owners of PV systems during the peak of summer.

- 2) Should the value be linked to wholesale electricity prices? If so, how?**

If it is, then it should not be linked to the minimum generating cost from coal fired power stations, but possibly to average wholesale prices per 3 month block from a range of generator types .

- 3) Are there any other approaches to determining the value of energy exported from solar PV systems?**

The obvious approach is to incorporate the environmental value of less mining, and the economic value of less infrastructure stresses and less distribution losses. As an example (without going into the full mathematics), a 2kW PV system reduces conventional energy needs to the extent that 2 tonne less of Leigh Creek coal is needed every year while a modest 5kW reverse cycle air-conditioner requires an extra 20 tonne of Leigh Creek coal to be dug up every year.

These savings include the PV electricity consumed on site, so gross generation should be a valid consideration when looking at the true value of PV energy instead of just net export.

As it is now, the increased stresses on the electricity transmission and distribution system are due significantly to air conditioners, and large amounts of money are spent to upgrade infrastructure, to do automatic load shedding and organize load shifting. PV systems are not responsible for any of these added costs yet the Minister is prepared to criticize the modest PV feed-in subsidy incorporated into electricity prices and ignore the much larger subsidy provided in electricity prices to reverse-cycle air conditioner owners.

4) Are there any other potential costs or benefits to retailers from solar PV exports?

I suspect that retailers are paid a fee by ETSA for the administrative work in distributing the FIT money from all customers in the State to those with PV systems so they would get a benefit there as well as the benefit of getting 100% green energy for nothing or next to nothing .

5) How should the commission quantify these costs or benefits in the derivation of a FIT premium?

I suspect that valid statistical data can be extracted from the costing data that NEMMCO has available to organizations such as ESCOSA.

6) Should the FIT premium incorporate the benefits of any avoided loss factors?

Definitely – as referred to in (3) above.

7) Are there any extra costs and benefits that retailers may incur as a result of increased uptake of solar PV systems?

The obvious benefit that retailers would get is that they will have more 100% green energy to sell to non PV system owners at a premium price – so will make more profit. An extra cost would be time spent handling increased complaints about errors in bills to customers.

8) Should some of the benefits to retailers be shared with all electricity customers or just those customers with a solar PV system?

An interesting sociological question.

One of the positive benefits that would (should?) flow to non PV customers is that the reductions in conventional energy demands by PV owners would lead to longer periods between the need to upgrade State infrastructure and build additional power stations. To that end people without PV systems would receive a financial gain over time.

9) Does the level of the current voluntary FIT premium on offer from some retailers in SA accurately represent the value of the energy to that retailer?

No. The small amount paid by a few of the retailers would barely cover the generating cost of base load coal power(c/kWh). Considering that “peaking generators” can charge up to \$10/kWh during critical summer load times, then getting almost free PV energy is great value to retailers.

10) Should residential customers have a different FIT premium to business customers?

Business customers can claim depreciation costs on capital equipment while residential customers cannot, so this should be allowed for.

11) How should the feed in tariff be updated over time?

It should be adjusted every time the electricity prices change as there is an obvious link.

12) What are the implications of setting the FIT premium too high or too low? How would this impact on competition in the retail market, particularly competition for solar PV customers?

If the FIT premium is set too high in SA then one side effect could be that some of the interstate retailers would withdraw from this market and so reduce competition for South Australian residents. If the FIT premium is set too low then the total feed-in tariff in SA would be insufficient to encourage people with disposable income to invest in PV systems, which in turn would lead to a drop in employment in an industry that has already been badly damaged in other States of Australia.

As the new State sponsored FIT (16c/kWh) will be totally removed in a few years then the only FIT available will then be that provided by the retailers in the State. By then peak oil (and peak gas?) will have raised the price of electricity significantly and it would be a good time to revisit FIT premiums.