

**Att: Paul Liggins  
Deloitte, Melbourne**

**18<sup>th</sup> Jan, 2010**



Dear Paul,

Thanks for the opportunity to provide some input to assist with your report to the ICRC regarding Determination of a Premium Rate for ACT's Electricity Feed-in Renewable Energy Premium. Below is our response to the questions you provided to Stephen at our Canberra branch.

**Is the ATA able to make an estimate of the number of jobs that have been created as a result of the scheme?**

As there is more than one incentive to purchase grid connect solar PV systems it is difficult to estimate what proportion of new grid connect PV systems are directly attributable to the ACT Electricity Feed-in Renewable Energy Premium, however the following projections can be made about the potential for the scheme to create jobs in coming years.

- A 50-60c/kWh Gross Feed in Tariff creates a better long-term financial incentive for system owners with access to capital than the effective subsidy offered by the Solar Credits scheme. The Gross FiT offers a higher, and more reliable, Return on Investment than the Solar Credits scheme<sup>1</sup> and is not aligned with a reduction in environmental benefit (see also later question)
- The installation of one thousand new PV systems per year in the ACT would maintain the equivalent to 25-30 domestic full-time jobs. 20 of these jobs are directly involved in the sale, supply, installation and connection of systems. The remaining 5-10 are in public administration, energy distribution and retail, education and training, component import and distribution etc<sup>2</sup>
- Projected uptake figures derived from the approved cost of the feed in tariff scheme suggest that 2,415-3,221 new systems could be installed per year over the life of the scheme year, **sustaining the equivalent of 60-96 ongoing domestic full-time jobs for the duration of the scheme.** <sup>3</sup>

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<sup>1</sup> Based on current REC prices, and the variation of REC prices seen throughout the life of the MRET and the Expanded RET

<sup>2</sup> Estimates derived through consultation with PV sale and installation businesses.

- Sun Wind and Power, Trevor Robotham: team of 3 installers and 2 support staff could install 5 systems (4 'typical/average', 1 'large/complex') per week, for 48 weeks per year (assuming one day per week of unsuitable weather). 5 jobs for 240 systems per year equates to 20.8 jobs/1,000 systems/year.

- The Environment Shop, Rory Gutterson – "...for 1000 installs in a year: 12 people for sales/logistics/admin/management 8 installers (4 teams of 2) So in total 20 people..."

- ATA estimates 5-10 additional domestic jobs per 1,000 systems per year are created in related areas such as the import and distribution of system components, the public sector (eg scheme administration, administration of RECs etc) energy retail, energy distribution (eg supply and installation of new meters), education and training etc.

<sup>3</sup> from "Issues paper – Electricity Feed-in Renewable Energy Premium: Determination of Premium Rate" p16:  
Direct scheme payments - 2009/10: \$3.1M 2013/14: \$15.3M. Mean yearly increase =  $15.3 - 3.1 / 4 = \$3.05M$ .

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Importantly, these figures are based on PV systems only. It is reasonable to expect that as wind energy is also allowed under the scheme, additional jobs may be created by demand for grid connected wind energy. However, as these could effectively displace PV installations the net increase from wind energy is not likely to be significant.

It is worth noting at this point that anecdotally from discussions with system installers in NSW, the NSW 60c/kWh gross feed-in tariff is already bringing about a significant increase investment in both solar and wind energy.

**Are there any issues with supply of panels? My understanding is that all the panels are imported and that sometimes shortfalls occur? Has the announcement of the NSW scheme affected supply channels?**

**How has the cost of solar panels changed over the past 12 months and what are the forecasts of changes in costs in the near future?**

In recent years the inability of global supply to meet demand of PV panels has resulted in supply constraints. As Australia is a relatively small market for PV, and per unit shipping costs are higher than for the larger PV markets such as Europe and the US, this has led to an unreliable supply of PV panels, and this has contributed to Australians continuing to pay a higher price for PV than purchasers in other world markets.

Recent global developments including

- Alleviation of supply bottlenecks (for example, an increase in silicon production capacity in Asia)
- reduction in demand in some larger European markets (eg Spain and Germany)
- flow on effects from the 'GFC'

presently continue to correct the global supply/demand imbalance and over the coming year the price of solar PV modules (and system components such as inverters) is expected to continue to decrease.

To date the strong incentives for investment in solar PV in Australia, such as the now retired SHCP grant scheme, have increased demand and therefore local supply capacity. However, due in part to the ad-hoc and relatively short-lived natures of schemes such as the SHCP this has failed to result in a total correction of PV purchase price in Australia and resultantly the retail cost of PV panels here has not yet reached parity with other markets.

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(cont.)

Mean generation attributable to new systems for \$3.05M/\$0.505 = 6,039,603 kWh

Typical annual generation for 'average' size PV system in ACT 1.5kW = 1,875 kWh or 2kW = 2,500kWh.

Potential annual new systems based on above

= 6,039,603/1,875 kWh = 3,221 new systems, or

= 6,039,603/2,500 kWh = 2,415 new systems

Full time equivalent jobs required to install 2,415-3,221 new systems per year = 60 – 96 jobs

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By comparison, Germany's Feed-in-Tariff, introduced in the early 1990's, has provided the long term market certainty required to establish a robust local market and this is reflected in the cost of systems and local installed capacity in that country

It is fair to assume that the introduction and revision of new state- and territory- based schemes help smooth the demand issues caused in part by the federal schemes.

**Do you have a view on how sensitive the number of installations is to the feed-in tariff rate? If it increased to 60 cents or fell to 40 cents would this have a large impact on demand? Or is the key driver the Commonwealth SHCP/Solar Credit arrangement?**

Most potential PV system purchasers will make their decisions in consideration of all available incentives and thus it difficult to attribute to just one driver.

As earlier noted however, a 50-60c/kWh Gross Feed in Tariff creates a better long-term financial incentive for system owners with access to capital than the effective subsidy offered by the Solar Credits scheme. The Gross FiT offers a higher, and more reliable, RoI than the Solar Credits scheme<sup>4</sup> and is not aligned with that schemes effective reduction in environmental benefit (see final question)

For those with access to capital or credit, a feed-in tariff alone may be sufficient financial incentive to invest in PV. As payback period is directly aligned with the tariff rate, it is reasonable to assume that an increase of 10c/kWh of the tariff amount will reduce the payback period by about 20% (assuming a modest discount rate) and therefore have a significant impact on demand.

Any increase in the tariff must be accompanied with a corresponding increase in the annual approved cost of direct scheme payments, to ensure that there is no negative impact on employment or emissions reduction caused by a lessening of capacity under the scheme.

Subsidy of some or all of the up-front system cost will be an incentive to all potential purchasers, except where it is aligned with a negating of the environmental benefit of the system as is the case with the Solar Credits scheme (see below).

Anecdotally, the recent announcement of the NSW Gross 60c/kWh has resulted in an immediate and significant increase in demand both for solar PV and wind energy systems.

**Is interest in installing renewable generation still strong or has there been a drop off in enquiries since the SHCP was replaced with Solar Credits?**

Most potential purchasers of Solar PV systems are motivated to reduce Australia's carbon emissions.

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<sup>4</sup> Based on current REC prices, and the variation of REC prices seen throughout the life of the MRET and the Expanded RET

Unfortunately, the Solar Credits scheme involves the creation of 'ghost RECs', which literally has the opposite effect to carbon reduction, by filling a quota of the mandated RET target with REC's that are not attributable to renewable energy generation.

As a result, the replacement of SHCP with the Solar Credits scheme has the undesired effect of making solar PV systems again unaffordable for most whose intent is to reduce Australia's carbon emissions. This would doubtless be a significant contributing factor to the reduction in new PV systems.

The SHCP grant subsidy was sufficient to improve the affordability of a small (1-2kW) PV systems so that capital outlay was low enough for many low and middle income earners, and those without access to significant capital or credit, to be able to afford new PV systems. In the absence of 'ghost RECs' the subsidy was available without compromise of the environmental benefit of the system.

The key benefit of the Solar Credits scheme over SHCP was the removal of the means test (households with an annual taxable income exceeding \$100K could not qualify for SHCP). ATA has been unable to obtain income data for PV installations approved under the new scheme, but it is likely that a number of those would have been ineligible under the SHCP scheme due to the means test.

Thanks again Paul, please feel free to contact myself or Damien Moyse at the ATA Melbourne office if we can be of any further assistance.

Kind regards,

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Energy Advocate

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