



*Submission by*

Alternative Technology Association

*on the*

## **Review of South Australia's Solar Feed-in Scheme**

**23<sup>rd</sup> November 2009**

**By Email to:** [ClimateChange@dpc.sa.gov.au](mailto:ClimateChange@dpc.sa.gov.au)

**For further information or enquiries contact:**

Damien Moyse  
Energy Policy & Projects Manager  
ATA – Alternative Technology Association  
(03) 9631 5417  
E-mail: [Damien.Moyse@ata.org.au](mailto:Damien.Moyse@ata.org.au)

## 1.0 Introduction

The Alternative Technology Association (ATA) welcomes the opportunity to respond to the current Review of South Australia's *Solar Feed-in Scheme*.

ATA is a not-for-profit organisation established in 1980 to empower our community to develop and share sustainable solutions and to promote the uptake of sustainable technologies. The organisation provides service to over 5,000 members nationally (including almost 600 in South Australia and with a very active branch), who are actively promoting sustainability in their own homes by using good building design and implementing water conservation and renewable energy technologies.

We have structured our submission in response to some of the specific issues outlined in the consultant's *Terms of Reference*.

## 2.0 Balancing Reward with Scheme Cost (3.3)

### 2.1 Tariff Rate and Cost Differential

There is one key aspect with respect to balancing reward and scheme cost that no feed-in tariff (FiT) in any jurisdiction currently recognises – the requirement for a cost differential between the rate collected from electricity consumers and the rate paid to micro-generation proponents.

ATA understands that this issue has been the subject of some debate in South Australia recently, with The Greens proposing a Bill in State Parliament that aimed to require electricity retailers to pay the 44c premium tariff on top of the previous standard FiT rate (i.e. 20c).

Without understanding the exact details of the South Australian scheme's cost recovery model, provided that the cost of the scheme is ultimately collected as a cost spread across all electricity consumers, then the ATA believes there is an argument for detailed consideration of this issue.

Our preferred position is that electricity retailers should be required to pay something reflecting the wholesale value of the electricity generated from micro-generators. It is doubtful that a requirement for retailers to pay the full retail value (i.e. The Greens proposal) would be fair and reasonable, however without legislating some level of cost differential between the rate collected and the rate paid, electricity retailers avoid paying anything at all.

This issue has been recognised in various states (including South Australia, Queensland and Victoria) by retailers who have voluntarily paid an additional 6c – 10c / kWh above the legislated premium FiT rate. However what we are seeing currently is an ad-hoc approach to this issue and greater certainty is required.

Addressing this issue formally through legislation means that a reduction in the cost impact to all consumers of the scheme overall can be achieved. For example, legislating a cost differential of 10c / kWh means that a 60c / kWh FiT will actually cost all electricity consumers only 50c / kWh (with the retailer paying the difference). Including this fundamental aspect in scheme design would mean a 17% reduction in the cost of the scheme to electricity consumers.

## 2.2 Impact on Domestic Electricity Costs

Arguments relating to limiting wealth transfer and the impact of a regressive tax have been used in both South Australia and other jurisdictions to justify net feed-in tariffs. ATA's view is that the cost impact of the scheme is an issue directly linked with the tariff rate and the funding model – not with the net versus gross argument.

Whilst we note the intention of the Review not to consider fundamental changes to the scheme's design, we felt it worthwhile raising the point in the context of balancing scheme rewards and costs.

ATA maintains its strong view that the question of net versus gross in the context of feed-in tariffs is a technical issue and not one that should be used to justify arguments relating to scheme cost and impact on vulnerable consumers. On this, Garnaut<sup>1</sup> has recently said:

*"The two externalities from embedded generation are present for every unit of electricity produced, not just the amount sold – implying that gross metering is the more appropriate approach for addressing this market failure."*

The two externalities referred to by Garnaut are deferred augmentation of the transmission and distribution system and reduced transmission losses. When it comes to solar, a third externality is the value of peak time generation embedded in the electricity network. When it comes to solar, small wind and micro-hydro systems collectively, a fourth is the value of emissions free generation.

In addition, the metrology associated with net FiTs means that network managers such as Distribution Network Service Providers (DNSPs) and the Australian Energy Market Operator (AEMO) cannot easily ascertain the exact level of embedded generation in the network. AEMO (formerly NEMMCO) have recently in relation to the implementation of smart metering<sup>2</sup>:

*"As the policy environment remains unclear as to a consistent approach for gross or net FiTs across Australia, the appropriate direction is to adopt the single metering solution that can accommodate all jurisdictions and provides the greatest flexibility for future policy directions."*

*"Consumer choice will be effectively promoted through gross metering as it provides a greater amount of relevant information to the consumer and other relevant parties in the supply chain. Only gross metering can, for example, allow the consumer to monitor the full output, and value, of their small generator."*

A final misconception with respect to net FiTs is that they are often justified on the grounds that they will lead to increased energy efficiency. ATA has found no evidence of this specifically, either in Australia or internationally and indeed in our view, it is just as likely that net FiTs will lead to load-shifting – with micro-generation proponents directing as much load as possible to off-peak times, when the emissions intensity of electricity grids are usually at their highest.

---

<sup>1</sup> Garnaut, 2008. *'The Garnaut Climate Change Review'*. Cambridge University Press, Melbourne.

<sup>2</sup> National Electricity Market Management Company (NEMMCO), 2009. *'Function 11 – Import / Export Metering'*. Paper to the *Business Requirements Working Group* of the Ministerial Council on Energy's *National Smart Meter Project*.

### ***2.3 Reducing Impact on Vulnerable Consumers***

Bearing the above in mind, ATA shares the concerns of the social policy sector regarding the impact of feed-in tariffs on vulnerable consumers. As it is standard practice to levy the cost of any FiT scheme through the electricity market, a potential wealth transfer from low income households is established, and from a consumer class that are not likely to be able to afford to participate in the scheme.

Should any move toward a stronger scheme be contemplated by the South Australian Government as part of this Review, ATA recommends that affordability concerns be considered in line with other energy affordability policies. Rebates for energy concession card holders or excluding low income households from scheme cost recovery should be considered to address these issues.

Overall, ATA believes that a significantly stronger FiT scheme is achievable for South Australia than is currently in operation. Should it be of interest to the Review, we have provided a scheme model estimating technology deployment and scheme cost in **Appendix A**.

### ***3.0 Expanded Technology Eligibility (4.3)***

ATA strongly recommends that the South Australian Government consider the eligibility of other small scale technologies into its FiT scheme. In particular, micro wind turbines (MWT) and to a lesser extent, micro-hydro systems can provide more favourable micro-generation options than small scale solar, particularly in rural locations still able to grid-connect.

Indeed, the NSW Government recently included eligibility for MWTs in their 60c gross FiT scheme. The experience of ATA members in many rural NSW locations is that where MWTs can access an uninterrupted and relatively constant wind resource, MWT will provide a more optimal micro-generation investment option than solar. Provided connection to the electricity network is possible, there is no reason why this may not be the case in rural areas within South Australia.

### ***4.0 Further Contact***

Thank you again for the opportunity to submit to this review and feel free to contact us (03 9631 5417) should you have any questions regarding the content of this submission.

Yours sincerely,



**Damien Moyse**  
Energy Projects and Policy Manager

## **Appendix A ~ A Potential Feed-in Tariff for South Australia**

ATA has modelled the cost of a 50c / kWh gross FiT for South Australia that includes a cost differential paid by retailers (i.e. the rate collected off all electricity consumers is 40c /kWh with the electricity retailers legislated to pay 10c / kWh). The attached spreadsheet outlining this model assumes:

- 150 MW of micro-generation installed over 10 years;
- Total scheme duration lasting 20 years;
- FiT payments lasting a maximum of 15 years, with micro-generators joining the scheme after year 5 only able to obtain the premium tariff until the 20<sup>th</sup> year of the scheme;
- A degeneration rate of 5% per annum;
- An inflation rate of 3% per annum;
- Total state consumption approximately 20,000 GWh per annum<sup>3</sup>;
- Approximately 800,000 electricity consumers<sup>3</sup> contributing to the scheme (this may require adjustment depending upon treatment of vulnerable consumers).

Properly structured, FiTs levy scheme cost on the basis of electricity consumption (i.e. the more kWh's a household / business consumes, the more they contribute to the FiT scheme).

ATA's model highlights that for an average household (i.e. one consuming 16 kWh per day of electricity), the approximate costs of a gross FiT scheme would be:

- An average of approximately **\$11.00 per annum** (or **\$2.80 per quarter**) over the lifetime of the scheme;
- A minimum cost of approximately \$2.40 per annum and a maximum cost of \$24.85 per annum in the most expensive year (the cost of the FiT rises and falls over the life of the scheme as more generation is installed and then initial scheme participants drop off in the latter years).

An average cost of \$11.00 per annum is extremely small in the context of rising electricity prices (and particularly in the context of likely costs for smart metering). Coupled with strong state energy efficiency policies and support, the overall cost impact of such a scheme can be easily balanced (indeed the experience of ATA members are that households can easily reduce their demand to significantly less than 16 kWh per day).

A FiT rate of approximately 50c / kWh paid on gross generation will see micro-generation proponents pay off their systems in around 10 years (this excludes any discount rate for net present value and includes the normal value of traded RECs – i.e. without the *Solar Credits* multiplier, which ATA does not support and in any event will be reduced from mid-2012 onwards). This is compared to a net FiT arrangement that will see payback periods balloon out to somewhere between 20 and 40 years (i.e. between 50% and 25% export to the grid respectively).

The model demonstrates that a strong gross FiT can provide certainty to all market participants; a strong incentive to the micro-generation proponent; and deliver the SA Government a successful scheme that will drive demand-side micro-generation in the context of shifting energy market policies and greater environmental objectives.

---

<sup>3</sup> These assumptions are indicative only and based upon 2004 / 2005 figures obtain from ABARE tables in: <http://www.abare.gov.au/interactive/energy/excel/Tablei.xls>