



**Submission by**

**Alternative Technology Association**

**and**

**Environment Victoria**

**on the**

**COAG review of specific  
Renewable Energy Target (RET) issues**

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## 1.0 Introduction

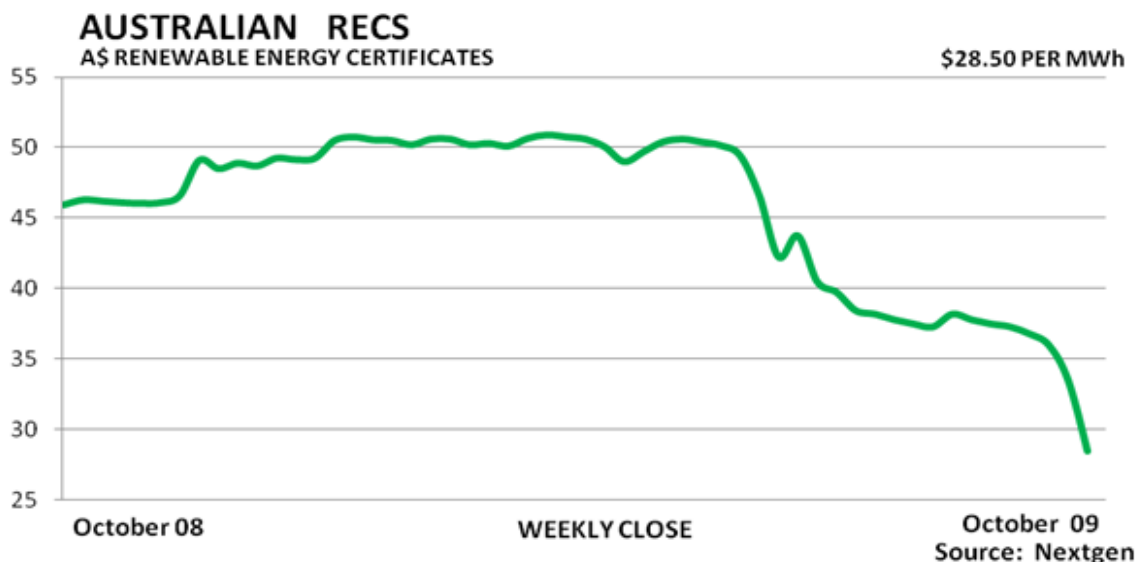
The Alternative Technology Association (ATA) and Environment Victoria (EV) welcome the opportunity to respond to the Council of Australian Government's (COAG) Renewable Energy Sub-Group's *Review of specific Renewable Energy Target (RET) Issues*.

The ATA and EV and their members support a strong climate response involving the short and medium term deployment of renewable energy technologies at all scales across the country. Our members are actively engaged in the renewable energy and energy efficiency sectors, investing in both small scale embedded generation and water heating technologies along with remote stand alone systems as well as large scale renewable energy projects through GreenPower.

### 1.1 RET Context

We note the intention of the three discussion papers to limit responses to the specific RET issues and questions outlined. However, the discussion papers fail to take into consideration the current market distortions that are undoubtedly the most significant risk to the scheme's future success. We therefore provide a broad analysis of current RET issues, along with a more detailed response on the issue of the replacement of the RRP GP program.

Without scheme adjustments, current distortions will only further compromise the RET should the inclusion of additional small scale on and off-grid technologies occur. Notwithstanding a minor recovery in line with the expanded RET legislation being passed in late August, the REC price has seen a continual and rapid deflation over the past six months.



Whilst there will be various drivers underlying REC price volatility, one the most significant must be the substantial recent increase in RECs traded from roof-top solar technologies. *Table 1* below demonstrates that to 9 October, solar water heaters and solar small generation units (SGU) accounted for 60% of the RECs created in 2009 (up from 39% in 2008).

Fuel Type	2008	2009 (to 9/10)	2009 - 2008	2009 % of 2008	2009 (scaled)	2009 (scaled) - 2008	2009 (scaled) % of 2008
Solar Water Heater	2,994,001	5,842,677	2,848,676	195.1	7,790,236	4,796,235	260.2
S.G.U - Solar	377,241	868,839	491,598	230.3	1,158,452	781,211	307.1
Wind	3,126,324	2,995,505	-130,819	95.8	3,994,007	867,683	127.8
Hydro	632,576	185,986	-446,590	29.4	247,981	-384,595	39.2
Other	1,607,444	1,293,627	-313,817	80.5	1,724,386	116,942	107.3
<b>Total</b>	<b>8,737,586</b>	<b>11,186,634</b>	<b>2,449,048</b>	<b>128.0</b>	<b>14,915,512</b>	<b>6,177,926</b>	<b>170.7</b>
Annual Target	6,800,000	9,500,000	2,700,000	-	9,500,000	2,700,000	-

Table 1: REC Creation by Fuel Type – 2008 / 09<sup>1</sup>

Scaled projections indicate that in total, roof-top solar technologies are likely to comprise in the order of 90 – 95% of the 2009 annual RET target, with a total RET oversupply in excess of five million RECs. This significant increase in roof-top solar RECs can be attributed to two main factors:

- Strong financial incentives under the federal *stimulus package* together with complementary state-based rebates and energy efficiency incentive schemes for solar water heaters;
- Exponential growth in solar photovoltaic (PV) investment prior to the finalisation of the *Solar Homes and Communities Plan* (SHCP) on 9 June 2009. The Department of Environment, Water, Heritage and the Arts (DEWHA) have recently announced that the final 55,000 SHCP applications are approved, with an expected 1.0 – 1.1 million additional RECs being created by these units.

## 1.2 Future RET Drivers

Looking forward, this level of investment in roof-top solar technologies is likely to continue, with the following factors continuing to drive uptake:

- The continuation of the *Energy Efficient Homes Package* until the end of 2012 (under which the Australian Government is seeking to support 420,000 solar hot water and heat pump units);
- The recently commenced *Solar Credits Scheme*, offering a five times REC multiplier until mid 2012 (ramping down until mid 2015) with no income means test. With significant cost reductions particularly in solar SGUs over the past 12 months, it is likely that uptake rates of PV will remain high – indeed some in the solar industry are forecasting 30,000 + units per year for the next five years<sup>2</sup>.

<sup>1</sup> Intelligent Energy Systems, 2009. *2009 REC Market Review – A Report for the Clean Energy Council*. IES, Australia.

<sup>2</sup> At an average of 30 Renewable Energy Certificates (RECs) per 1.5 kW system, 30,000 units nationally would create approx. 4.5 million SGU RECs per year; or 90% of the newly available RECs over the first three years of the scheme (and 46% to mid 2015) being taken up by solar PV alone.

- The Queensland Government's 2009 election commitment to install 200,000 solar hot water systems over the next three years;
- The national commitment to phase out electric hot water units by 2013 as well as increasing standards for new housing driving further solar hot water demand;
- The potential collapse in the GreenPower market as a result of the voluntary action flaw in the CPRS legislation. In 2008, almost 2 million additional RECs were traded through the GreenPower mechanism. Should a significant reduction in GreenPower demand occur, this would place greater REC supply pressure on the compliance market.

These factors have obvious consequences for developers of utility scale projects. As representatives of renewable energy consumers in the marketplace, ATA and EV are strong supporters of household demand-side technologies such as solar water heating and PV. However, the uptake of these technologies under the expanded RET have the potential to lock out significant investment in new large scale projects until after 2015.

This is extremely problematic given the RET's role in developing a large scale commercial renewable electricity generation industry and given the need for emissions to be reducing by 2015 at latest.

### **1.3 RET Adjustments**

Given this, we make the following recommendations:

#### Solar PV

In order that the integrity of the RET targets are retained and that development opportunity is enhanced for utility scale projects, it is our view that deemed RECs not associated with electricity generation from SGUs **should be added to the annual targets**, making their effect volume neutral. This should only have a marginal impact on scheme cost and from a legislative perspective, already has a precedent in the treatment of generation from waste coal mine gas. Longer term, the most appropriate mechanism to drive SGU uptake in our view is a **national gross feed-in tariff**.

#### Solar Hot Water / Heat Pumps

With respect to solar hot water and heat pumps, the most appropriate policy mechanism to drive the uptake of these energy efficiency technologies in our view is not a renewable electricity generation mechanism such as the RET, but one that is part of a **comprehensive energy efficiency policy** – such as a national white certificates scheme. We understand that the COAG are progressing a national policy framework for energy efficiency that would provide an excellent opportunity for the development of just such a scheme.

In the shorter term, in order to dampen the impact of solar hot water and heat pumps on the RET, the same solution could be applied as above for SGUs – i.e. add the deemed RECs from these energy efficiency technologies to the annual targets. Whilst this would have a greater financial impact on scheme cost, it could be viewed as an interim measure until a comprehensive national energy efficiency policy is in place. Alternatively (or in conjunction with), the Australian Government could provide price support by assisting to **purchase additional RECs in line with a commitment to buying 100% GreenPower for all government buildings**.

As a cost negative investment over time, driving solar hot water and heat pump technology through a national energy efficiency policy would offer a number of different options with respect to financing, both from the consumer and government perspective (e.g. the UK currently offers a system of loans coupled with white certificates for residential energy efficiency investments).

Without scheme adjustments of this nature, it is difficult to see how the REC price will recover to the extent that it will drive significant numbers of new utility scale projects, particularly if additional small scale technologies, including off-grid renewable generation units, are incorporated into the scheme.

## ***2.0 Off-Grid Technologies***

ATA and EV recognise the success of the former Remote Renewable Power Generation Program (RRPGP), and a number of our members have taken advantage of the scheme over the past eight years. Delivering \$300 million worth of investment in that time with over half the residential and medium scale projects installed in the last 18 months of the scheme is a strong indicator of the former scheme's increasing importance to regional and remote communities.

### ***2.1 Impact of RRP GP Replacement in RET***

We note the consideration given in *Discussion Paper 3* to employing a REC multiplier, similar to the *Solar Credits Scheme*, to replace the former *Remote Renewable Power Generation Program* (RRPGP).

Given the market conditions outlined above, the introduction of another market segment into the RET will risk further oversupply in an already flooded market – placing further downward pressure on the REC price and exposing the remote renewable project proponent (along with all other project developers) to reduced financial support.

By way of example, the \$55 million traded through the RRP GP program in its final two years would have required almost 1.2 million RECs at the current \$29 REC price (with a REC multiplier in the order of 10 – 15). With the likelihood of continued increasing support for any replacement program to RRP GP, it is not difficult to foresee the impact this would have on the RET.

From the proponent's perspective, feedback from ATA members who have taken up projects under the former RRP GP suggest that one of the key factors driving their engagement with the program was the financial certainty provided by the former rebate. A move towards incentivising remote projects through the RET will mean that the remote project proponent is reliant upon a volatile REC price, providing little certainty over project economics. This would prove even more difficult for installation businesses trying to develop long term work programs in remote communities.

### ***2.2 Optimal Off-Grid System Design***

The cost and emissions savings from a renewable energy based standalone power supply result from:

- the efficiency improvements and reduced generator run time from adding energy storage in the form of batteries; and
- reduced fuel usage from adding the renewable energy sources (along with additional energy storage capacity) such as solar photovoltaic, wind turbine generators or micro hydro.

The cost saving and design of hybrid energy systems is based on the calculation of a payback period (the period after which the system 'breaks even') when the net present value is compared with the lowest capital cost option – i.e. a diesel generator only system. In spite of the fact that a well-optimised system will often have a payback period of five years or less, the capital cost for such systems is prohibitive for many proponents.

When a partial subsidy is offered, or a subsidy aligned only with the renewable energy component of a system, proponents often reduce capital costs by reducing the energy storage component of a system below that which is optimal. The result is a shorter battery life (increasing the long term system cost and environmental impact), likely reductions in renewable energy source efficiency, and possible unnecessary over-sizing of the renewable energy source.

This sub-optimal investment by project proponents is likely to be exacerbated by financial support that is based on a variable REC price.

### **2.3 RRP GP Replacement Options**

With respect to the replacement of the RRP GP, we favour a policy response that:

- identifies the need to provide continued strong financial support;
- provides financial certainty to project proponents; and
- does not further distort the performance of the RET.

We would encourage COAG to consider a **system of reduced upfront direct rebates** (or less favourably, a REC multiplier that is also adjusted in the annual targets), coupled with a **system of low or no interest loans** that would allow proponents to borrow the remainder of system capital cost with payments allowed over five to ten years. This approach would assist project proponents with the upfront cost hurdle whilst providing them an avenue for long term financing that supports the most optimal design outcomes for each project.

### **3.0 Further Contact**

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

Yours sincerely,



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