

Submission Template

COAG Review Discussion Paper 3 – Support for small-scale off-grid renewable generation

Overview

This submission template should be used to provide comments on:

COAG Review Discussion Paper 3 – Support for small-scale off-grid renewable generation

The purpose of this discussion paper is to provide an introduction to the key issues relating to support for off-grid renewable generation within the Renewable Energy Target (RET), and to encourage input on these issues from individuals, businesses and organisations to inform the review process

Stakeholders are asked to use the template provided to answer the questions posed in the discussion paper. The Department will also accept any other documents, further information, costing tables etc that are attached to the submission template.

Contact Details

Name of Organisation:	Solar Energy Industries Association Incorporated
Name of Author:	Bruce Hannam, President
Phone Number:	(02) 6358 8403
Email:	seia@seia.org.au
Website:	www.seia.org.au (still being built)
Date:	17 Oct 2009

Confidentiality

All submissions will be treated as public documents, unless the author of the submission clearly indicates the contrary by marking all or part of the submission as 'confidential'. Public submissions may be published in full on the Department of Climate Change website, including any personal information of authors and/or other third parties contained in the submission. If any part of the submission should be treated as confidential then please provide two versions of the submission, one with the confidential information removed for publication.

A request made under the *Freedom of Information Act 1982* for access to a submission marked confidential will be determined in accordance with that Act.

Do you want this submission to be treated as confidential? Yes No

Submission Instructions

Submissions should be made by **close of business 30 October 2009**. The Department reserves the right not to consider late submissions.

Where possible, submissions should be lodged electronically, preferably in Microsoft Word or other text based formats, via the email address - RET@climatechange.gov.au.

Submissions may alternatively be sent to the postal address below to arrive by the due date.

Renewable Energy Sub Group Secretariat
Department of Climate Change
GPO Box 854, Canberra ACT 2601

For more information phone: 02 6159 7428

Off-grid renewable generation

Question 1: Solar Credits currently apply up to the first 1.5 kilowatts (kW) of capacity installed. Should Solar Credits or a similar 'REC multiplier' mechanism under the RET be used to provide further incentives for off-grid renewable generation? If so, what level of eligible capacity (such as 20 kW) should apply? How would this compare with the level of support under the RRP GP and what size 'REC multiplier' would be appropriate?

Solar Credits Scheme is failing as the REC price falls, and our research shows a long-term depressed market due to over supply. Any REC multiplier would be inappropriate for support of off-grid systems.

Residential off-grid market would rarely, if ever, have 20kW of generation, more likely say 2kW.

The RRP GP was a well thought through programme that satisfied both user and supplier. Once pre-approval was granted there was certainty of subsidy value, and the supplier was often able to apply the rebate as a subsidy off the invoice price.. By contrast, any REC multiplier scheme varies in value from day to day, requiring the customer to find the full price up-front, and then wait for a rebate. Due to the high cost of off-grid, this is a poor form of financial assistance.

Question 2: What other eligibility criteria should apply and what would be an appropriate process for phasing out the incentive?

The RRP GP eligibilty criteria should be regarded as a good starting point, per. Q.3.

Phasing out an off-grid incentive is not realistic in the foreseeable future. The technology and economics of generation and storage would need to improve considerably before the need could reduce.

On-going maintenance of systems requires up-grades carrying on for decades

Experience of the Renewable Remote Power Generation Programme

Question 3: Are the RRP GP program parameters still relevant if incentives for off-grid renewable generation are provided under the RET? Views are sought on:

- whether 1km from a main grid is an appropriate definition for remote 'off-grid';
- whether the \$30,000 connection costs threshold is appropriate for sites that are considered close to a main grid; and
- whether support equivalent of up to 50 per cent of the cost of the renewable generation and essential enabling equipment is appropriate.

Many of the RRP GP parameters are not relevant when under RET. For both supplier and government, processing procedure would prove cumbersome and costly.

The cost of mains threshold of 1km or \$30k meant most residences in rural areas qualify, so even making the requirement at all is just extra paper-work without a worthwhile outcome. Most people will connect mains power if they can afford it. Power utilities would prefer to not have many of the rural connections, and therefore tend to raise their estimation costs to meet the threshold.

The RRP GP support level of 50% was appropriate, and meant systems were properly sized to the user's power requirements rather than their budget.

Cost of renewable generation

Question 4: Information is sought on the costs of different small-scale off-grid renewable generation systems for example in different geographical locations, in particular:

- the capital cost of the technology, including installation;
- annual running costs, including maintenance;
- the effective life of the system;
- the capacity factor of the system, if applicable; and
- how this compares to fossil fuel based generation (such as diesel).

Detailed information is available from RRP GP records on capital costs

Annual running costs are minimal on properly sized off-grid systems. Some generator running during winter months or wet season is typical, but may only amount to 10 or 12 hours in total per year.

Effective life span of system comes down to the three main components:

Solar modules – 25 years warranty, and life span far exceeding this is expected. My own residential off-grid system shows no degradation in charging after 18 years.

Batteries – usually lead-acid flooded cell. Life span of about 10 or 12 years is normal for quality batteries, and replacement is expensive.

Electronic components – typically the inverter/charger and solar regulator. Life span expected about 10 to 15 years for the inverter before components start to fail. A solar regulator is good for 20 years+. Household insurance often covers the cost of fusion damage caused by lightning surge, which is the most common power failure cause.

Effective life of the system therefore is indeterminate if system components are replaced as they fail. If owner saves what they would normally spend on power bills, the accumulated funds would exceed the cost of new batteries and other sundry maintenance costs.

The capacity factor of the system usually proves adequate, but is sometimes challenged by unexpected new appliances, e.g. plasma screen TVs. Comparing capacity factor of PV systems with generator supply is not a useful comparison - each has its own advantages and disadvantages. Off-grid systems are designed to take advantage of all generation possibilities, and usually incorporate the capacities of both.

Impact on existing eligible technologies and REC market

Question 5: Would providing incentives for off-grid renewable generation have a major impact on the deployment of existing eligible technologies?

Yes, as obviously any incentive must have some favourable effect, but any proposed scheme must have far more to it than just incentive. Market demands drive the development of new technologies, and improvement of existing technology. Programs require subsidy best done on the former RRPGP model.

Remote Indigenous communities

Question 6: What would be the wider economic and social benefits of renewable generation under the RET for remote Indigenous communities? How can these benefits be used to close the gap in Indigenous disadvantage?

A reliable power supply is essential to indigenous communities to achieve health, education and life-style outcomes.

It gives them a some responsibility over their own power supply and some of our installers who have worked on remote indigenous communities have seen a remarkable change in the community's respect of themselves and their possessions once 24hr power is available.

It changes their lives to have 24hr power not relying on a generator for a say 8 to 10 hr window during the day, they can store food for longer periods and live healthier lifestyles. The more remote ommunity's can now store medicines or store them for longer periods

Any other additional comments

Advantages of supporting off-grid systems

Subsidy/rebate programs for off-grid power is the most worthwhile and advantageous program of all. It's rarely pointed out that off-grid PV systems force energy efficiency on the consumer to such a degree that power savings for each installed Watt is magnified five times to that achieved with grid-connect PV. Residences are often assessed at 4 or 5 kWh per day loads, where a typical city household would be 20 to 30 kWh per day.

Off-grid systems relieve utilities and state governments of expensive and unprofitable rural extensions, and eliminates the risk of bush fire ignition from rural lines falling during extreme weather conditions.

Our industry association strongly recommends that a scheme similar to the RRPGP be reintroduced.