

## 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

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<b>Date:</b>	20 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](mailto: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?

The problem with RECs is that the price goes up and down and individuals do NOT want to have to track this to try and find when is the best time to buy. We want to buy as required, regardless of the value of the REC. So why not introduce a scheme similar to the previous scheme where 50% base cost, including installation costs, which are considerable in remote areas. Then additional percentages could be added depending on the distance to the existing grid, up to a maximum. In my case I am about 25km from the nearest grid, say additional 1% for every 5km up to maximum of 25% bonus. If installation costs were allowed, then there may be no need for the bones based on distance.

Why have a level of capacity limit at all, provided it is fit for purpose. A remote village may be better supplied by a community system, rather than individual systems. It could be managed like a body corporate with a quarterly contribution to running costs, etc.

The multiplier doesn't matter to a consumer, its what refund or better still, discount up front he can get. At least the level provided under RRP GP should be provided.

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

Permanent off grid residence or business or service industry, or in use for say 300 days per annum. Provide a time limit to install, say within the next 3 years. Must be used to phase out or reduce other fuels such as petrol, diesel, gas, furnaces, etc. Refunds should again be available for all forms of power generation including wind and current turbines, and solar arrays, as well as any emerging technology that provides renewable energy.

## 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.

All the above parameters still appear to be relevant as discussed above, but please include installation costs in the allowable expenses. All associated equipment that make the system perform better should also be included such as solar trackers, theft prevention devices, safety devices, sensors and measuring equipment, maintenance equipment, etc. You should be allowed to apply to make upgrades to existing systems, replace existing old system or parts thereof, supplement systems with relevant and the most economical equipment over the life expectancy of a system. Initial investigation costs, if a system is approved, should also be covered. Expert advice is difficult to get and good advice including site visits can be costly, especially in remote areas.

## 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).

As I haven't fully costed a new replacement system yet, I cannot answer this question. I would expect costs to be between \$10000 and \$15000 depending on what I install. This is only for a small one bedroom home. I would really like to have a tracker to increase the energy capture, but this must be balanced against the cost of additional panels, which is not easy to calculate. But please take into account that there are additional travelling and accommodations costs involved in remote installations.

My annual running costs for an existing small house solar panel array with lead acid long life batteries is small and hardly worth consideration. However if I upgraded to a more fully automated system which included a charger, generator, inverter, etc, there may be some maintenance costs.

The fastest components to break down are the storage cells, which are generally also the most expensive component. Expected life for well maintained batteries is about 12 years, but this depends on many factors including rate of discharge, how maintained, etc. Perhaps 10 years is a better average for batteries. Solar panels are usually guaranteed to 20 years, then they reduce in power capture slowly, so adding additional panels, not replacing panels is the way to go. Some electrical components may need to be replaced, regulators, inverters and circuit breakers. Increasing the output of a system can also require these components to require upgrading to larger units.

Professional installers should be able to calculate a capacity factor based on the power output, but this can be affected by weather, shading, trees, dust storms, birds, etc. I can't see a requirement to have a capacity factor as long as the system is recommended by a qualified and registered installer (electrician specialising in this technology).

Its not just the price of diesel fuel for generators, its getting it to remote locations, noise of generators, maintenance issues. Over 40 years it may be slightly more for renewable energy, but there are many other benefits, many of which cannot be values (noise for example).

## 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?

I can't see how it would. What the Government needs to do is provide research funding and business support to companies developing renewable energy technology. We have seen so many Solar experts leave Australia for overseas already. This must stop and all efforts made to bring them home. Australians are wonderful inventors, please encourage this.

## 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?

Providing power by itself isn't necessarily going to be of much use to Indigenous communities as many are renowned for their very poor ability to maintain equipment, and renewable energy equipment does require detailed maintenance to get the most out of the system. So I suggest that for installations within Indigenous communities, a maintenance program be incorporated into the costs to have quarterly checks if lead acid storage batteries are used. There may be other types of batteries for example, with less maintenance that may be more suitable for individuals without any technical ability. But where maintenance is required, perhaps this should be included in any contract to get the most out of a system. As panels are subject to stealing, perhaps they also need to be insured, but administering this would be a nightmare.

Providing power to remote communities may permit broadband internet and the use of computers for education and for services such as medical, etc. This would be of great benefit to such communities, but also to the service industry.

## Any other additional comments