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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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 RRPGP and what size 'REC multiplier' would be appropriate?

I do not think Solar Credits should be used in place of RRPGP. The use of a REC multiplier mechanism under RET simply creates 'phantom' RECs (RECs for which there isn't actually any renewable infrastructure created). These phantom RECs simply reduce the requirement of the liable parties under the RET to install or have installed renewable infrastructure. It is bad enough that the replacement of the SHCP distorts the intention of the RET without making matters worse by engineering a RRPGP replacement along the same lines.

Additionally, in spite of the continued use of a $50.00 per REC in Discussion Paper 3 the price of a REC is actually closer to $25.00. Solar Credits or similar would not provide the level of support required unless the multiplier was much greater than five times. This would only make the number of phantom RECs greater and the fall in the price of RECs greater still.

A 1.5 kW off-grid system might cost approximately $30,000. Under the RRPGP the support available was 50 percent of the system cost or, in this example, $15,000. In Tasmania the same system would now be entitled to approximately $3,332 (1.185*1.5*15*5*$25.00). A reduction in excess of 75% and insufficient in most instances for the system to be afforded. Diesel fired generation is the inexpensive alternative likely to be embraced.

In the case of a grid connect system the balance of system cost in addition to the solar panels is not great and therefore linking the support program to the installed generating capacity is reasonable. However, in the case of an off-grid system this is not the case. The balance of system cost which includes an expensive battery bank is usually of the order of two thirds of the system cost and therefore a REC multiplier that concentrates on the systems generating capacity is not appropriate. The application of a coefficient to the total system cost as was the case under RRPGP is more sensible.

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

Similar eligibility criteria to the RRPGP should apply.

I do not think there should be a phasing out of the incentive. It has been assumed that the Solar Credits can be phased out because of cost reductions flowing from technology improvements over time. I think that this phase out results from a primary focus on solar PV panel technology.

As previously indicated, in the case of the off-grid installation the solar PV is not the major system cost. Unless battery technology changes dramatically and produces a substantial drop in storage costs then a phase out should not be considered. It should be noted that the battery technology employed in off-grid systems has changed very little over an extended period of time and there doesn't appear to be an economic alternative to the lead-acid battery on the horizon.

Experience of the Renewable Remote Power Generation Programme

Question 3: Are the RRPGP 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.

The parameters are still relevant with the exception perhaps of the $30,000 connection cost which could be raised to perhaps $50,000. Unfortunately, connection costs have risen dramatically in recent years. Consequently, in some instances, $30,000 could apply to a home site no more than a few hundred metres from the grid and not actually remote at all.

I think it particularly important that support equivalent to 50 percent of the cost of the renewable generation and essential enabling equipment be made available.

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).

Average off-grid installation is $40,000.

Running costs are minimal if the system has been sized to substantially limit the use of a generator set. On average, no more than a few hundred dollars a year until components reach the end of their life. Battery bank replacement after 10-15 years is a significant expense of perhaps $10,000 plus.

Solar PV Panels – 20 years plus
Batteries & inverter – 10 to 15 years

1.5kW system produces on average about 5kWh per day in southern Tasmania. This is adequate for a small family to run lighting and appliances.

The renewable alternative is more expensive than the diesel alternative, both the capital and running costs.

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?

PV technology is likely to be driven by the much larger on-grid market.
Battery and inverter technology would be impacted by incentives for the off-grid sector. Whether major or not I couldn't say. Inverter technology has improved greatly over the last 10 – 20 years however off-grid battery technology has remained static and I am sure incentives are required if we are to see any improvement.

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?

I am not qualified to provide a response to this question.

Any other additional comments