



**Council of Australian Governments (COAG)
Renewable Energy Sub Group**

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

Discussion Paper 3

**Support for small-scale off-grid renewable
generation**



INFORMATION FOR RESPONDENTS

Key Dates

9 October 2009	Discussion paper available on the Commonwealth Department of Climate Change (DCC) Website
30 October 2009	Submissions on discussion paper due

Submission Guidelines

These guidelines outline the requirements for submissions on this discussion paper in relation to a COAG review of specific Renewable Energy Target (RET) issues:

1. Submissions are invited from all interested stakeholders;
2. Submissions should utilise the **Submission Template** provided on the website to address the questions raised in this discussion paper. Additional comments are also welcomed;
3. Where possible submissions should be lodged electronically to the email address below, preferably in Microsoft Word or other text based formats. Alternatively, submissions may be sent to the postal address below to arrive by the due date;
4. **Submissions will not be treated as confidential** and may be made publicly available. Extracts of submissions may also be made publicly available in the final report provided to COAG. If a submission or extracts of a submission are to be kept confidential, please indicate this in the **Submission Template**; and
5. All submissions are due **Close of Business 30 October 2009**. The Secretariat reserves the right not to consider late submissions.

Submissions should be sent to:

Email: RET@climatechange.gov.au

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

Contact details

Further information relating to the review and copies of this paper are available on the DCC website at www.climatechange.gov.au/renewabletarget/consultation.

Hard copies are available on request via telephone: 02 6159 7428 or email RET@climatechange.gov.au.

Important Notice

This paper is intended as a basis for consultation with stakeholders. The views and opinions expressed in this publication do not represent Government policy and do not commit the Australian Government to any particular proposal. While reasonable efforts have been made to ensure that the contents of this publication are factually correct, the Australian Government does not accept responsibility for the accuracy or completeness of the contents, and shall not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance on, the contents of this publication.

Introduction

The expanded national Renewable Energy Target (RET) scheme is designed to ensure that 20 per cent of Australia's electricity supply is from renewable sources by 2020. Legislation to implement the expanded national RET scheme was passed by the Commonwealth Parliament on 20 August 2009.

The Council of Australian Governments (COAG) agreed to examine further some of the eligibility provisions of the RET for new small-scale technologies as well as heat pumps and rules for off-grid resource projects to ensure that the eligibility rules remain relevant over time to reflect new technologies and recent developments in renewable technology and resource project development structures.

The COAG review is also considering the potential for introducing a measure to provide additional support to off-grid renewable generation within the RET.

Terms of Reference for the Review are attached. Three discussion papers have been released on the issues outlined above. In addition to this discussion paper:

- Discussion Paper 1 relates to the eligibility of new small-scale technologies and heat pumps; and
- Discussion Paper 2 relates to the self-generation provisions of the RET for off-grid resource projects.

Focus and intent of this discussion paper – small-scale off-grid renewable generation and the RET

The RET COAG Review Terms of Reference state that the Review will consider:

- Whether the Solar Credits or a similar mechanism under the RET should be used to provide incentives for off-grid renewable generation, and the extent to which it would benefit remote communities, particularly Indigenous communities. The Review will have regard to:
 - the experience of the former Renewable Remote Power Generation Program (RRPGP) and whether its program parameters remain relevant: notably with respect to remoteness from grid, connection costs and the current and likely future cost of small-scale renewable technologies and other power generation technologies; and
 - the impact that inclusion in the RET would have on deployment of existing eligible technologies and the market for Renewable Energy Certificates, noting that there would be no change to annual targets under the RET legislation.

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 RET, and to encourage input on these issues from individuals, businesses and organisations to inform the review process.

Off-grid renewable generation

The majority of electricity in Australia is supplied through a series of main grids, including the National Electricity Grid in Queensland, New South Wales, Victoria, Tasmania and South Australia, along with the Mount Isa Grid in Queensland, the Darwin-Katherine and Alice Springs grids in the Northern Territory and the South-West and North-West grids in Western Australia.

However, remote communities, including many Indigenous communities, do not have access to the electricity supplied through these main grids. For these communities, electricity is generally supplied through mini-grids or stand-alone power generation systems. In many cases, these are powered by diesel fuel, natural gas and liquefied natural gas (LNG).

Solar Credits

The RET includes new incentives for small-scale renewable energy installations. ‘Solar Credits’ are available to households, businesses and community groups that install small generation units, such as a small solar array.

The RET scheme guarantees a market for additional renewable energy generation, using a mechanism of tradeable Renewable Energy Certificates known as RECs (backed by a legislative obligation). The RET scheme’s rules allow owners of small-scale solar photovoltaic (PV) systems, small wind turbines and micro-hydro systems to create at the time of installation RECs equivalent to the output of up to 15 years operation depending on the system type.

Solar Credits boosts the support to households, businesses and community groups that install small-scale solar PV, wind and micro-hydro systems by multiplying the number of tradeable RECs able to be created for eligible installations. If the system is installed between 9 June 2009 and 30 June 2012, the home owner will receive five times as many RECs as under the standard deeming arrangements. The multiplier reduces to four for systems installed from 1 July 2012 to 30 June 2013 and continues to reduce each year until it has phased out to the standard multiple of 1 from 1 July 2015.

Solar Credits replaces rebates previously provided under the Solar Homes and Communities Plan and applies to new installations of small-scale renewable energy generators eligible under the RET scheme. Solar credits will apply to the first 1.5 kilowatts (kW) of capacity installed. Generation from capacity above 1.5 kW will still be eligible for the standard 1:1 rate of RECs creation.

Solar Credits will be available to eligible on-grid and off-grid solar PV systems, small wind turbines and micro-hydro systems. The exact level of subsidy will depend on the location, as the amount of renewable energy produced is dependent on the amount of sunshine, and size of the system. The value from Solar Credits depends on the price of RECs, which varies according to demand from entities liable under the RET and supply from renewable energy sources in the market. For example, a solar PV system in Sydney, Perth, Adelaide, Brisbane or Canberra will receive \$5,150 for a 1 kW system and \$7,750 for a 1.5 kW system installed in 2009, based on a \$50 REC price.

There are higher costs for installation of off-grid renewable generation compared to renewable generation connected to a main grid. The Review is to consider whether incentives for off-grid renewable generation should be provided through a multiplier mechanism similar to Solar Credits to be applied to capacity above the existing Solar Credits 1.5 kW limit. As Solar Credits will phase out by 2015-2016, consideration will also need to be given to phase-out arrangements for any further incentives provided. Similarly, the Carbon Pollution Reduction Scheme will increase the incentive to switch to 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?

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

Experience of the Renewable Remote Power Generation Programme

The RRP GP, which closed to new applications in all states except Western Australia on 22 June 2009, provided rebates for households, communities, not-for-profit, business, government and other organisations, in those areas of Australia not close to a main grid, to support the installation of renewable generation systems. Rebates of up to 50 per cent of the capital cost of renewable generation and essential enabling equipment were available to applicants that complied with the eligibility requirements and procedures.

The program saw \$300 million committed between 2001 and June 2009 to renewable energy generation in remote and regional areas, supporting more than 31 major projects and 7,000 residential and medium-scale projects up to 20 kW in size. The RRP GP also supported installation of more than 170 renewable generation systems for Indigenous communities.

The RRP GP guidelines for its residential and medium-scale sub-program required that a renewable generation system must reduce reliance on fossil fuel generation at a site at least 1 kilometre from the nearest main grid line. Applicants less than 1 kilometre from a main grid line needed to provide written evidence from the local network service provider that the total cost to connect to the main grid was more than \$30,000.

The Review is to consider whether these parameters relating to remoteness from a main grid and costs of connection remain relevant. For example, grid connection costs have changed significantly in recent years. Similarly, technology costs have declined over time, making renewable energy systems relatively more affordable. The Review will reflect on the appropriateness of these parameters in considering the potential for introducing a measure to provide support for off-grid renewable generation through the RET.

The RRP GP offered support for a range of renewable energy technologies, including wind and solar thermal technologies. However, the majority of rebates provided under the residential and medium-scale sub-program were for the installation of solar PV systems. Although solar PV installations under the residential and medium-scale sub-program could be up to 20kW in size, around 95 per cent of PV systems installed since the RRP GP extension came into place were less than 5 kW, with more than 50 per cent of PV systems having capacities less than 1.5 kW.

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.

Cost of renewable generation

The Review will consider the relative costs and benefits of a range of technologies, most notably solar PV, small-scale wind and mini-hydro and batteries compared to alternatives such as diesel generation, as well as the impact that geographic location has on the relative costs and benefits of these technologies. The Review will also need to consider the likely future cost trends of these technologies, noting that current trends are for these technology costs to fall as, for example, economies of scale emerge.

Specifically, any additional support levels will need to be considered in the context of technology costs going down over time and the potential role of the Carbon Pollution Reduction Scheme in increasing their competitiveness relative to fossil fuel 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).

Impact on existing eligible technologies and REC market

Any decision to provide incentives for small-scale off-grid generation will need to be assessed in terms of the impact this will have on other eligible technologies under the RET. As there would be no change in annual targets under the RET, this would reduce the amount of RECs available to support the deployment of other renewable energy technologies.

A decision to provide incentives for small-scale off-grid generators will likely change the relative composition of technologies supported by the RET. For example, it may lead to the deployment of more small-scale solar PV generation and consequently the deployment of less large-scale generation. The magnitude of this effect would depend on the level of additional uptake of small-scale off-grid generation systems.

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

Remote Indigenous communities

In addition to reducing greenhouse gas emissions, the development of renewable energy in remote Indigenous communities presents opportunities to achieve outcomes such as improved health and wellbeing (principally through a reliable electricity supply) and economic development, both of which contribute to meeting the goals of closing the gap on Indigenous disadvantage.

New employment avenues, increased local capacity and confidence, and improved technical support networks are just some of the outcomes already achieved through renewable energy projects in remote Indigenous communities.

Renewable generation also presents other benefits to remote communities, such as reduced noise pollution from diesel generators, and reduced frequency and costs associated with transport.

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?

Attachment A: COAG Terms of Reference - Review of Specific Renewable Energy Target (RET) Issues

The expanded national Renewable Energy Target (RET) scheme will deliver on the Government's commitment to ensure that 20 per cent of Australia's electricity supply is from renewable sources by 2020.

Legislation to implement the expanded national RET scheme was passed by the Commonwealth Parliament on 20 August 2009.

As part of the process of designing the RET scheme the Council of Australian Governments (COAG) agreed to examine further some of the eligibility provisions of the RET for new small-scale technologies as well as heat pumps and rules for off-grid resource projects to ensure that the eligibility rules remain relevant over time to reflect new technologies and recent developments in renewable technology and resource project development structures.

Following discussions on the RET legislation, the COAG review is also to consider whether it would be feasible to introduce a measure to provide support to off-grid renewable generation within the RET.

The Review is to provide a report to COAG before end-2009 regarding:

1. Whether any new small-scale renewable technologies that are not currently eligible should be included in the RET, as well as the eligibility of heat pumps. The review will have regard to:
 - 1.1. The extent to which the technology is cost-effective, reliable, and able to be readily deployed in the market.
 - 1.2. The impact that inclusion in the RET would have on deployment of existing eligible technologies and the market for Renewable Energy Certificates. There would be no change to annual targets under the RET legislation.

New small-scale technologies will be limited to devices which, drawing from a renewable energy source, either generate electricity or replace electrical devices (thereby displacing fossil-fuel based electricity consumption).

The review will also consider whether a regular process for assessing the eligibility of new technologies under the RET would be appropriate, also having regard to the impact on investor certainty.

2. Whether changes should be made to the current provisions that allow for exemption from liabilities under the RET based on 'self-generation', which mainly affect off-grid remote resource projects. In particular, whether the rules continue to meet the original policy intent of excluding such projects, without creating unintended impacts on the RET's overall objective to support the deployment of renewable energy. The review will have regard to:
 - 2.1. Recent developments in resource project development structures.
 - 2.2. The potential for the self-generation provisions to create perverse incentives for companies to structure their operations, to avoid RET liability, or otherwise distort resource development decisions.

3. Whether the Solar Credits or a similar mechanism under the RET should be used to provide incentives for off-grid renewable generation, and the extent to which it would benefit remote communities, particularly indigenous communities. The review will have regard to:
 - 3.1. The experience of the former Remote Renewable Power Generation Program (RRPGP) and whether its program parameters remain relevant: notably with respect to remoteness from grid, connection costs and the current and likely future cost of small-scale renewable technologies and other power generation technologies.
 - 3.2. The impact that inclusion in the RET would have on deployment of existing eligible technologies and the market for Renewable Energy Certificates. There would be no change to annual targets under the RET legislation.

Based on these terms of reference, three short issues papers will be released for public consultation on specific issues.