Department of Climate Change

Discussion Paper 4

Treatment of new waste coal mine gas power generation in the RET

INFORMATION FOR RESPONDENTS

Key Dates

21 December 2010	Discussion paper available on the Commonwealth Department of Climate Change (DCC) Website
28 January 2010	Submissions on discussion paper due

Submission Guidelines

These guidelines outline the requirements for submissions on this discussion paper:

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) is to be kept confidential, please indicate this in the **Submission Template**; and
5. All submissions are due **close of business 28 January 2010.** The Department reserves the right not to consider late submissions.

Submissions should be sent to:
Email: RET@climatechange.gov.au

Address: Renewable Energy Team
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

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. The intent of the review is to help ensure that the eligibility rules remain relevant over time to reflect 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.

Public consultation has already been undertaken on three issues papers covering these aspects of the review:

- **Discussion Paper 1** – Eligibility of new small-scale technologies and heat pumps;
- **Discussion Paper 2** – Self-generation provisions under the expanded national RET scheme; and
- **Discussion Paper 3** – Support for small-scale, off-grid renewable generation.

As part of negotiations on the Carbon Pollution Reduction Scheme, the Commonwealth Government agreed that the current COAG process will review specific RET issues to consider whether new waste coal mine gas projects should be eligible under the RET; and whether annual targets under the RET should be increased to offset additional Renewable Energy Certificates (RECs) not backed by generation as part of the 'Solar Credits' mechanism.

Two further issues papers have been released for public consultation:

- **Discussion Paper 4** – Treatment of new waste coal mine gas power generation in the RET; and
- **Discussion Paper 5** – The Treatment of 'Solar Credits' Renewable Energy Certificates under the RET.

The issues of new waste coal mine gas and Solar Credits will be further considered by the COAG Renewable Energy Sub Group and will be considered by COAG together with the other issues examined by the review of specific RET issues.

Focus and intent of this discussion paper – treatment of new waste coal mine gas power generation under the RET

The purpose of this discussion paper is to outline the key issues regarding whether electricity from new waste coal mine gas generation projects should be included in the RET scheme, and to encourage input on these issues from individuals, businesses and organisations to inform the review process.

The Renewable Energy Target

The RET is designed to encourage the deployment of both large and small-scale renewable energy technologies, from large power stations to household renewable energy systems. Eligible renewable energy sources under the RET include hydroelectric, wind, solar, biomass, geothermal, wave and tidal energy.

Legislation to implement the expanded national RET scheme was passed by the Commonwealth Parliament on 20 August 2009. Building on the existing legislative framework, the RET creates a guaranteed market for additional renewable energy deployment using a mechanism of tradeable Renewable Energy Certificates (RECs).

Demand for RECs is created by a legal obligation that is placed on parties who buy wholesale electricity, that is, retailers and large users of electricity. Liable parties are required to source an increasing percentage of their electricity purchases from renewable energy to meet annual targets which are legislated in gigawatt-hours of renewable energy. One REC is generally equivalent to one megawatt-hour (MWh) of renewable energy. Liable parties can acquire and surrender RECs to demonstrate compliance. Alternatively, they would be required to pay a shortfall charge of $65/MWh from 2010.

The supply of RECs is created by renewable energy power stations, as well as small generation units including small-scale solar panels, small wind turbines and micro hydro systems, and solar water heaters. RECs provide a financial incentive to invest in renewable energy technologies.

Current eligibility of waste coal mine gas under the RET scheme

As part of the passage of the RET legislation, on 17 August 2009, the Government announced that existing waste coal mine gas projects would be eligible to create RECs under the RET scheme. This was a transitional measure, recognising that the cessation of the New South Wales Greenhouse Gas Abatement scheme (GGAS) and transition to the Carbon Pollution Reduction Scheme (CPRS) may impose significant cost on existing electricity generators using waste coal mine gas. Affected companies had indicated that currently profitable projects could be forced to close. As a transitional measure, the timeframe in which existing waste coal mine gas generators can participate in the RET is limited to 1 July 2011 until 31 December 2020.

Waste coal mine gas fuelled electricity generation is not a renewable energy source. Under the RET legislation, waste coal mine gas is listed as an ‘eligible energy source’ to clearly differentiate it from renewable energy.

The annual targets under the RET scheme have been increased to accommodate RECs that are created by existing waste coal mine gas generators to ensure it does not crowd out renewable energy generation and will not impact on the commitment to ensure that 20 per cent of Australia’s electricity mix is from renewable sources by 2020.

In addition, the total amount of eligible waste coal mine gas generation is capped at the amount by which the targets have been increased to ensure that no renewable energy is displaced. The amount of RECs that can be created from existing waste coal mine gas generators already in operation is capped at 425,000 RECs (425 gigawatt-hours) in 2011 and 850,000 RECs (850 gigawatt-hours) each year from 2012 to 2020.

Eligibility is limited to waste coal mine gas-fuelled power stations currently in operation. Annual limits will be placed on these power stations' abilities to create RECs based on their 2008 output levels.

The potential inclusion of new waste coal mine gas projects in the RET

This Review is considering whether the eligibility of waste coal mine gas under the RET should be extended to new waste coal mine gas electricity generation projects, that is, not a waste coal mine gas power station that was generating before September 2009.

There are two possible components of electricity generation from waste coal mine gas not currently eligible under the RET – generation from new waste coal mine gas projects and increased generation from existing waste coal mine gas projects (above the current 850 GWh cap). Given that waste coal mine gas electricity generation is by nature linked to the waste resource (gas) available from the coal mine, the potential for extensions to or increases in current production is limited and in many cases, generation from these sites is expected to decline over time. As such, issues raised in this paper are more likely to be of relevance to new waste coal mine gas electricity generation projects.

The viability of waste coal mine gas electricity generation depends on the base price received for electricity generation in wholesale electricity markets (the 'black' electricity price), which is influenced by the underlying cost of coal and gas, and its relative competitiveness with fossil fuel based electricity generation. Generally, electricity generation from waste coal mine gas tends to be more expensive than other fossil fuel based generation.

With the introduction of a carbon price under the proposed CPRS, electricity generation from low emissions waste products would be advantaged compared to other fossil fuel based electricity generation as the emissions intensity (and therefore the carbon cost) is lower. As such, the CPRS will provide some incentives in favour of low emissions electricity generation such as that from waste coal mine gas.

Waste coal mine gas generation may also be eligible for direct adjustment assistance proposed under the CPRS for the coal sector. As part of the negotiations on the CPRS legislation, the Government agreed that a $270 million Coal Sector Adjustment Fund will be established within the Climate Change Action Fund to provide grant funding for coal sector abatement projects and capital grants, with a priority for electricity generation from waste coal mine gas. This funding will be provided on a three for one basis, with coal mine operators required to meet three quarters of the cost of the project.

Including new waste coal mine gas projects in the RET would support electricity generation with a relatively low emissions intensity that would displace emissions from other fossil fuels with a much higher emissions intensity like coal. It would use a resource that would otherwise be wasted, resulting in higher emissions if the methane is released directly into the atmosphere. Waste gases burn with fewer emissions than any fossil-based solid or liquid waste fuel per unit of energy.

In the context of the proposed CPRS, there will be an incentive for waste coal mine gas to be flared, rather than being released directly into the atmosphere, to reduce the fugitive emissions from coal mine methane. Some state governments also require flaring for occupational health and safety reasons. Flaring waste coal mine gas is a less expensive process than generating electricity through burning the gas. However, using waste coal mine gas to generate electricity reduces fugitive emissions as well as using the waste to produce low emissions electricity.

There is some international precedence where waste coal mine gas is included in renewable energy targets or similar policies. For instance, Germany's feed-in tariff policy includes waste coal mine gas as an eligible source but differentiates it from being a renewable energy source. In addition, the development of climate change policies in the United States includes consideration of waste coal mine gas as part of its renewable energy policy.

Stakeholders are encouraged to provide information on the potential level of generation from new waste coal mine gas projects and the extent to which support through the RET is required for these projects.

Question 1:

Information is sought on the expected potential electricity generation from new waste coal mine gas projects, including the:

- expected MW capacity and generation in gigawatt-hours;
- expected life of new waste coal mine gas projects; and
- levellised cost of generation from new waste coal mine gas projects (in $/MWh).

Impact on renewable energy generation and annual targets under the RET scheme

To avoid crowding out renewable energy, annual targets under the RET would need to be increased by the amount of generation expected from new waste coal mine gas projects. Setting a cap on the amount of new waste coal mine gas generation that would be eligible would provide certainty for investors that the inclusion of generation from new waste coal mine gas projects would not displace renewable generation.

For example, the annual targets could be increased by an additional 425 gigawatt-hours in 2011 and 850 gigawatt-hours for each year after. This would have the effect of doubling the amount of eligible RECs available for the waste coal mine gas sector in total.

Consistent with the eligibility of existing waste coal mine gas under the RET, a time limit could be applied (until 2020) for new waste coal mine gas generation as the carbon price matures.

The RET already includes provisions to support the viability of existing waste coal mine gas projects. Given that, as noted above, generation from existing waste coal mine gas projects is expected to decline over time, the cap for new waste coal mine gas generation could be limited to generation from new projects, rather than expansions to existing waste coal mine gas projects. Limiting eligibility for new waste coal mine gas generation only to new projects would target assistance to new investment rather than providing further support to existing projects. Alternatively, the total allocation for waste coal mine gas generation (existing and new) could apply to existing projects, expansions to existing operations as well as new projects.

If the increases in annual targets to offset generation from new waste coal mine gas projects are greater than the actual REC creation from these projects, there would be scope for additional renewable generation to contribute RECs equivalent to the remaining portion of the increase in annual targets.

The addition of new waste coal mine gas generation under the RET would result in increased complexity in administering the RET scheme. Currently, to be eligible to participate in the RET, existing waste coal mine gas projects must be accredited as a power station by the Regulator. The Regulator must then determine the annual eligible generation limit (the amount of RECs that can be created) for each existing waste coal mine gas power station. The sum of all these annual eligible generation limits must not exceed the amount by which the annual target has been increased to account for waste coal mine gas.

Including new waste coal mine gas generation would exacerbate the complexities for the Regulator in administering the RET scheme to take account of this expected generation and ensuring that total waste coal mine gas generation does not exceed the overall cap (the amounts by which the targets have been increased).

Impact on electricity prices

Electricity generation from waste coal mine gas is generally higher cost than that produced by other fossil fuels. As such, increasing the annual targets under the RET to offset new waste coal mine gas RECs would increase the costs of the RET for liable parties as it would increase the number of RECs that these liable parties need to acquire under the RET. This would have a flow-on effect to households, businesses and other electricity consumers in the form of higher electricity prices.

If the increase in RET targets to take account of expected generation from new waste coal mine gas are set in advance, this could also potentially increase the cost of the RET if the expected generation does not eventuate as more RECs would need to be produced by other sources.

Question 2:

Views are sought on:

- whether new waste coal mine gas projects should become eligible to create RECs under the RET. Noting that inclusion of new waste coal mine gas projects would involve offsetting increases in annual RET targets which would increase electricity costs for consumers:
    - what would be an appropriate limit in terms of annual gigawatt-hours on REC creation?
    - what would be an appropriate time limit for REC creation (such as to 2020)?
    - Are there any other limits on eligibility that would be appropriate, such as only new projects rather than increased generation from existing projects?
- administrative issues, including suggestions as to how the Regulator could accredit new waste coal mine gas electricity generators and assign an annual eligible generation limit.
- whether waste coal mine gas project proponents should be eligible for both RECs as well as funding assistance under the proposed Coal Sector Adjustment Fund?