



CHIEF MINISTER

Parliament House
State Square
Darwin NT 0800
chief.minister@nt.gov.au

GPO Box 3146
Darwin NT 0801
Telephone: 08 8901 4000
Facsimile: 08 8901 4099

Committee Secretary
Senate Standing Committee on Economics
PO Box 6100
Parliament House
CANBERRA ACT 2600

Via email: economics.sen@aph.gov.au

Dear Secretary

The Northern Territory Government welcomes the opportunity to make a submission to the Senate Economics Legislation Committee' Inquiry into the Renewable Energy (Electricity) Amendment Bill 2009 and a related bill.

My Government supports the principles and intent of the national Renewable Energy Target (RET), as evidenced by our agreement at the April 2009 meeting of the Council of the Australian Governments for the design of a RET Scheme. The purpose of this submission is to draw attention to the Territory's ability to meet the expanded RET.

Renewables account for only a very low share of the energy market in the Northern Territory compared with other Australian States. Notwithstanding the likely imposition of a carbon price, the future prospects for investment in renewable energy in the Northern Territory are poor. Separate modelling undertaken both for the Australian Government and the Northern Territory Government suggests that there will be no additional investment in renewable energy in the Territory as a consequence of the RET until after 2020.

In a carbon constrained world, the future of electricity generation is in generating it from renewable and low emission sources. The lack of private investment in the Territory is because the renewable energy investment opportunities in other jurisdictions, particularly around wind, are immediately available and more profitable.

The key to enable the development of a renewable energy industry in the Northern Territory, and to support the policy intent of the RET, is for the Northern Territory Government to work with the Commonwealth to ensure the following goals are achieved:

- the progressive roll out of solar or other renewable generation plants to replace diesel in remote communities in the short to medium term, and
- the development of a longer term renewable energy strategy for the Territory, including possible assistance with funding large-scale pilot plants in appropriate locations.

The Northern Territory Government looks forward to engaging cooperatively with the Commonwealth to determine the most appropriate approach, including funding mechanisms available, to successfully implement the above goals.

The contact officer for this Submission is Rachael Shanahan, Director, Climate Change Policy and Coordination Unit, Department of the Chief Minister (rachael.shanahan@nt.gov.au , (08) 8999 6176)).

Yours sincerely



PAUL HENDERSON

7/8/09

**NORTHERN TERRITORY GOVERNMENT SUBMISSION
TO THE SENATE ECONOMICS LEGISLATION COMMITTEE**

**INQUIRY INTO THE
RENEWABLE ENERGY (ELECTRICITY) AMENDMENT BILL 2009
AND A RELATED BILL**

Introduction

The Northern Territory Government supports the development of renewable energy as part of a suite of measures to reduce Australia's greenhouse gas emissions.

The Northern Territory Government also supports the expanded Renewable Energy Target (RET), as evidenced by the Chief Minister joining the Territory to the national RET.

Background

Until the late 1980s, the main electricity generation facility in the NT ran on bunker fuel. When a new plant was commissioned, the Territory took the decision to invest in gas rather than coal. While this was a greener decision, it was also more expensive and wholesale electricity prices in the Territory have subsequently been higher relative to jurisdictions which source the majority of their energy from coal.

This price differential is likely to change when a carbon price is introduced.

The Power and Water Corporation, the NT's only public generator, has annual generation of 1800 GWh, comprising:

- 1500 GWh on the Darwin Katherine Integrated System, fuelled exclusively by gas when Blacktip supplies are established
- 300 GWh in regional and remote areas, 80% of which is gas fuelled, and the balance of 60 GWh is predominantly diesel but with five solar facilities.

Renewables account for only a very low share of the energy market in the Northern Territory compared with other Australian States. Notwithstanding the likely imposition of a carbon price, the future prospects for investment in renewable energy in the Northern Territory are also poor. Separate modelling undertaken both for the Australian Government and the Northern Territory Government (NTG) suggests that there will be no additional investment in renewable energy in the Territory as a consequence of the national RET. There are a number of reasons for this, including:

- most renewable energy in other parts of Australia is derived from hydro or wind resources, which are not commercially available in the NT,

- because the NT has a small load requirement, there has been little private sector interest in proving up other renewable resources, such as geothermal or tidal energy,
- solar thermal has potential in the Territory but only in areas south of the monsoonal regions, where an extension to, and perhaps augmentation of, the Darwin Katherine Integrated System (DKIS) grid would be required, and
- in order to underwrite the development of the Blacktip gas field, Power and Water Corporation has taken on a significant take or pay contract for future gas supplies: this provides little commercial incentive for the Power and Water Corporation to invest in renewable energy which could displace gas-fired generation in the future.

As a consequence of this, government support is likely to be required in order to develop a viable renewable energy industry in the Northern Territory. While the RET Scheme will provide strong market signals in other States, it will not assist in developing renewables in the NT. Instead, the effect of the RET will be to increase emissions costs by an estimated \$88 million to 2020 in order to purchase Renewable Energy Certificates from other jurisdictions. The benefits of this to Territorians are not clear and the modelling showed that the costs of RET to the NT's gross state product (GSP) will be greater than any other State.

A renewable energy strategy for the NT

Short term issues

In the period to 2020, the Northern Territory will focus on reducing emissions from its current power generation systems. The Power and Water Corporation's forward investment program will be directed towards, *inter alia*, selecting new generating plant on the basis of maximising the fuel efficiency, and hence minimising carbon emissions, of the NT's power systems. This may include the replacement or upgrade of some existing open cycle gas turbines with combined cycle (CCGT) units, which have substantially lower emissions. This will be undertaken on a commercial basis in the light of an increasing carbon price.

Most remote communities in the Northern Territory are served by small diesel generators. Not only do these units produce high levels of carbon emissions, but they are also an expensive means of generating electricity, not least because of the high cost of trucking in the fuel. There is a strong case for replacing these generators over time with solar units, while retaining some diesel capacity for back-up. This is an immediate area where Australian Government support would be of considerable assistance.

Medium term issues

In a carbon constrained world, the Northern Territory is better placed than other jurisdictions in terms of electricity generation because of its reliance on gas rather than coal. In addition to its lower level of emissions, gas is highly flexible and can be used for base load, intermediate and peaking duty. This advantage is unlikely to last beyond the medium term, however, as even CCGT generation has a significant carbon footprint and as the carbon price rises, it will gradually become uncompetitive. Unless carbon capture and storage (CCS) becomes commercially viable, and can be applied to CCGT plant at an acceptable cost, the NT will need to begin deploying other power generation technologies some time after 2020.

The options for base load generation using very low to zero emissions technologies are currently limited. The Australian Government has published estimates showing that, in the event CCS does not become commercially viable, roughly half of the world's electricity will be derived from renewable sources later in this century and the other half from nuclear power.¹ Since nuclear power has been ruled out for Australia, the Northern Territory needs to examine renewable energy options for satisfying its electricity requirements on a commercial basis in the period beyond 2020. The most prospective renewables for the NT appear to be:

- Geothermal
- Solar thermal
- Biomass
- Tidal.

All have advantages and disadvantages. Significant work will be required to understand their potential in the Northern Territory and, as was discussed above, it is unlikely that the private sector will invest in feasibility studies in the absence of government support.

The key therefore to enable the development of a renewable energy industry in the NT is for the Northern Territory Government to work with the Commonwealth Government to determine the most appropriate approach to carry out the NT's renewable energy strategy, including funding mechanisms available.

In order to do its part, the Northern Territory Government will also ensure that strategies aimed at developing the Territory's renewable energy industry in both the short and medium term are included in the *Northern Territory Climate Change Policy*, to be released shortly.

¹ Australian Government, *Australia's Low Pollution Future: the Economics of Climate Change Mitigation*, Canberra, 2008, page 127.