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30 June 2010

Research Director

Environment and Resources Committee

Parliament House

Brisbane, QLD 4000

By email: erc@parliament.qld.gov.au

Website: www.parliament.qld.gov.au/erc

Dear Sir/ Madam,

Response to Environment and Resources Committee Inquiry into Growing QLD's Renewable Energy Electricity Sector

The Clean Energy Council (CEC) is the peak body representing Australia's clean energy and energy efficiency industries.

Its priorities are to:

- create the optimal conditions in Australia to stimulate investment in the development and deployment of world's best clean energy technologies;
- develop effective legislation and regulation to improve energy efficiency; and
- work to reduce costs and remove all other barriers to accessing clean energy.

The CEC works with members and the government to identify and address the barriers to efficient industry development in the stationary energy sector and energy efficiency.

The clean energy industry and its members contribute to the generation of electricity using wind, hydro, solar, biomass, geothermal and ocean energy as well as the emerging technologies and service providers in the energy efficiency sector including solar hot water and cogeneration.

The CEC welcomes this opportunity to provide a submission in response to the QLD Parliament Environment and Resources Committee's Inquiry into Queensland's Renewable Energy Electricity Sector.

Policy Opportunities

With its diverse clean energy industry, abundant energy resources and its commitment to reduce greenhouse gas emissions to mitigate the effects of climate change, Queensland is an ideal location to become a leader in the renewable energy industry. To transform to a low carbon economy will require the accelerated deployment of proven clean energy technologies such as wind, hydro, biomass, photovoltaic and cogeneration and the accelerated development of emerging technologies such as solar thermal, geothermal and wave/ocean power.

To achieve a clean energy industry in Queensland that is innovative, competitive and profitable and contributes towards Queensland's economic growth through high-value green jobs, any renewable energy strategy needs to be deployed in a holistic way that is complemented by other national and state-based strategies and is consistent with other policies relating to energy.

KEY RECOMMENDATIONS

Key recommendations to grow Queensland's renewable energy industry include:

- Implementation of policies complementary to the national Renewable Energy Target to assist the deployment of renewable energy technologies throughout the state.
- Effective strategies to address the challenges in accessing capital for the development and deployment of emerging cleantechs through grants, specific R & D funding, tax incentives and low interest loans.
- Advocacy for nationally consistent policies that promote harmonisation and easier delivery of measures between states such as a national feed-in tariff.
- Expansion of the state's feed in tariff to encourage the uptake of distributed generation such as biomass, mini hydro and micro wind.
- Measures to address infrastructure and network constraints on the grid and barriers to the connection of renewable energy projects.
- A marketing strategy to educate the industry to understand the scale of transformation required to 2020 and beyond, and the opportunities this presents.
- The Queensland Government needs to promote the training and up-skilling of workers to meet a growing demand for workers that will be required in low emission industries. A strategy to identify and build the current and future skills needed by the workforce to transition the economy to a low carbon economy is required.

Policy Measures to assist Renewable Energy Technologies

To reduce reliance on fossil fuels, secure energy and reduce emissions in the stationary energy sector, Queensland needs to use the national Renewable Energy Target (RET) to invest to a much greater extent in renewable and low emission energy resources.

The Queensland Government needs to implement renewable energy policies that complement the national RET to gain its share of the $20 billion investment required to meet the target by 2020. The introduction of a state-wide renewable energy target that is complementary to the national RET will assist the Queensland Government to drive the corresponding policy measures required to achieve a higher proportion of renewable energy in its energy mix.

Realising the full potential of Queensland's renewable energy sources will require a shift in the locations where electricity is generated and the transmission capacity of such areas. The Queensland Government must do more to address barriers to the deployment of both small[1] and large scale renewable energy projects and transmission planning plays a large role in overcoming some of these barriers.

An analysis to determine the current and potential constraints on the transmission network for distributed generation and for larger scale projects would be of great benefit to address connection barriers. Transmission extensions to new remote renewable generation regions are required and current planning processes will not necessarily lead to efficient outcomes[2]. The CEC is of the opinion that there is significant potential in co-ordinating the planning of transmission lines with generators and between the States to capture the co-location and economy of scale benefits of building energy transmission infrastructure. This is particularly important with regard to the remoteness of some of Queensland's renewable energy resources. Key issues that need to be addressed to improve the efficiency of transmission development are further discussed in the attached report by MMA[2].

While Queensland has an excellent solar resource, it lacks transmission infrastructure in those areas where the solar resource is most prominent. The Townsville-Mt Isa Transmission Line, for example, could create an incentive for renewable energy providers to deploy their technology in surrounding regions by addressing the current lack of available infrastructure and costs of connection to the grid.

The Queensland Government being a large user of electricity could consider purchasing a certain percentage of electricity consumed from renewables. This would greatly enhance a renewable project's ability to obtain a Power Purchase Agreement which is often imperative to the viability of a project.

The Government also needs to address policy and cost barriers to the deployment of smaller scale distributed renewable energy projects. The Queensland Government needs to advocate for nationally consistent policies that promote harmonisation and easier delivery of measures between states such as a national gross feed-in tariff. The CEC believes that gross feed-in

[1] Small scale refers to sub-megawatt systems.
[2] MMA 2010, Transmission Issues for Remote Renewable Energy Generation

tariffs are the best way to drive the deployment of small-scale renewable energy technologies. In the absence of a national feed-in tariff Queensland should expand its state based feed-in tariff to encourage the uptake of distributed generation such as biomass, mini hydro and micro wind.

Cogeneration and trigeneration are vital methods of enhancing a building's overall energy consumption from the grid. Current connection rules act as a disincentive to the deployment of such projects and the rules need to be altered to make it easier to connect projects. Likewise the approvals process for installing renewable energy equipment needs to be simplified and standardised across jurisdictions to encourage organisations to make such an investment. The CEC recommends that Queensland Government undertake a review of the barriers to the uptake of cogeneration and trigeneration plants and steps required to streamline the planning approval process.

Additionally, supporting the establishment of a demonstration project to trial the applicability of either co-generation or tri-generation technology on a precinct-size scale would be a commendable initiative by the Queensland Government.

With abundant biomass resources, bioenergy has a significant part to play in contributing to Queensland's transition to a lower carbon economy. A waste strategy that allows for maximum opportunities for the generation of electricity from waste is essential. Legislated waste policies particularly with regard to landfill, currently do not allow the full benefits of bioenergy to be captured. Capturing the energy potential from waste in landfills should be recognised as a form of resource recovery from a waste management perspective. With biomass plants already a proven baseload renewable energy technology, policies to encourage higher deployment of such technologies should be implemented and their access to incentives ensured. While the deployment of small scale bioenergy power plants has significant potential, there are currently very few sub megawatt plants as they require support mechanisms to encourage their uptake and growth.

Policy Measures to assist Emerging Renewable Energy Technologies

It is critical that additional support is also provided to emerging technologies such as wave/ocean, geothermal and large scale solar technologies to assist them to progress from the drawing board to market. The Clean Energy Council (CEC) has submitted to the Queensland Cleantech Industry Development Strategy with policy measures around the support mechanisms governments can adopt to support technologies at different stages of the commercialisation process. These support mechanisms were identified following the CEC commissioning reports by Ernst & Young[3] and the University of Sydney[4] (attached).

[3] Ernst & Young 2010, Navigating the Valley of Death–Exploring mechanisms to finance emerging technologies in Australia

[4] Andrew Wait, 2010 - Investment in clean technologies as a public good: a discussion paper prepared for the Clean Energy Council.

These policy support mechanisms include:

- Government grants and tax incentives to support research and development of emerging clean energy technologies and the exploration activities associated with ocean and geothermal energy.
- Loan guarantees for projects at commercial demonstration phase
- Government grants for demonstration projects
- Revenue subsidies such as feed-in tariffs and accelerated depreciation at early deployment stage

A further summary of this support is provided in the attached Emerging Technology Support Summary Paper.

Education & Community Support and Skills Training

Education is the key to community and industry understanding and commitment to the scale of transformation required to a low carbon economy and the part Queensland can play. A marketing strategy is required to educate the community and industry of the opportunities this presents. The Queensland education system should also be utilised to ensure individuals realise their role in reducing emissions and the benefit this has for the whole community.

The creation of clean jobs is a major benefit of growing the renewable energy industry. The Queensland Government needs to promote the training and up-skilling of workers to meet the rising demand for workers that will be required in low emission industries. A strategy to identify and build the current and future skills needed by the workforce to transition the economy to a low carbon economy is required. Training programs through universities and TAFEs are required to promote a capable and responsive industry. The CEC has completed several reports on a workforce and training strategy which are attached.

Closing

The CEC and its members would be happy to discuss these issues further with you as your Inquiry progresses. If you have any further questions please contact Felicity Sands via telephone on 03 99294100 or by email: felicity@cleanenergycouncil.org.au

Yours sincerely

Russell Marsh

Policy Director