

COGENERATION AND TRIGENERATION IN NEW SOUTH WALES

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Mr Jonathan O'Dea MP
The Chair
Public Accounts Committee
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Dear Mr O'Dea MP

Inquiry into Cogeneration and Trigenation in New South Wales

Thank you for the opportunity to make a submission to the inquiry into cogeneration and trigenation in New South Wales (NSW).

Lismore City Council is very focused on renewable energy and the waste materials to generate electricity. Council has, with great interest, been observing the existing and proposed electricity generation industries and undertaken significant research in the areas of generating energy from municipal, commercial agricultural and industrial waste materials and the ability to use other potential by-products such as heat and fuel.

In a period between 2008 and 2009 Lismore City Council supplied shredded timber waste to a sugar mill at Broadwater to be used on the cogeneration plant through a contracted feedstock provider. Upon providing this product to the mill it became evident that the plant needed very cheap or free feedstock in order to make the system viable and in order to get the best value for the ratepayers of the Local Government Area the sugar mill was charged a fee for this timber waste. It was only after the operational and financial problems of the cogeneration plant halted that it came to our attention that the company engaged to source the feedstock was paying Council one price for the timber waste and on selling it to the mill for a higher value, in a sense reducing viability of the system. This now failed system highlighted two key issues with cogeneration systems. The mill had use for the heat and the electricity that was produced by the plant but access to feedstock and REC value was the issue. The sugar mill cogeneration plant relied on a certain REC value in order to be viable and with changes in the Australian market the REC value declined and the viability of the plant reduced.

Lismore City Council has been researching the feasibility of a regional waste to energy plant for a number of years and now that the NSW Government is examining changing its policy on waste to energy the priority of developing this concept has increased. Council is currently working through a process to examine suitable systems and how these would complement existing industry. Such systems would produce other outputs, making them cogeneration and trigenation plants. These outcomes could include heat, gas, steam, fuel oil, or biochar depending on the technology used. Much brainstorming has been happening in order to examine potential industrial uses for these products. These potential industrial uses create a significant opportunity to grow regional industry.

While undertaking the research into waste to energy two main issues come to light, being the value for which the electricity produced is being purchased by electricity retailers and the ability to feed electricity into the grid. A regional waste to energy plant would be an electricity exporter and so would need to sell the electricity to an electricity retailer. The current tariffs being offered do not enhance the viability of such projects and will even discourage them from being developed.

This problem needs immediate action and special feed in tariffs should be introduced for commercially sized projects and would make such projects viable and attractive.

The other issue affecting such projects is the ease to which connections can be made to the electricity supply network. The NSW Government should ensure that the network connection process is simple, as barriers here will also discourage such projects from proceeding.

Modelling suggests waste to energy projects are viable and the ability to produce other outputs that can be used by new industry provides significant benefits to regional economies. Lismore, for example, has large areas of industrial zoned land that can be developed to use cogeneration and trigeneration facility outputs. These waste to energy plants are stand alone and do not require any other fuel, such as natural gas or coal. The Northern Rivers Region has around 170,000 tonne of municipal and commercial waste that currently goes to landfill that could be used to generate electricity.

Lismore City Council is also working with Ballina Shire Council to develop their Biochar Plant. This plant will create electricity and biochar and will be a good model to test the ability to secure adequate feed in tariffs and ease to which network grid connection can be achieved within the Northern Rivers Region. This project will have the capacity to divert 29,000 tonnes of organic waste from the regions landfills, remove 48,000 tonnes of carbon, and generate 6000 MWh of renewable energy. This project is also benefited by the changing NSW Government stance on waste to energy.

The changing policy stance of the NSW Government to allow the generation of energy from waste materials is a positive step and will result in new cogeneration and trigeneration facilities being developed but additional focus is required on ensuring there is adequate feed in tariffs and the process of negotiation to connect to the electricity supply network is made easier.

In addition to the above, the issue of moving electricity generated from one site to another site owned by the same account holder (even if the site is adjoining) has proven to be a barrier to use of renewable energy technologies by our Council and many other organisations in our region. For example, Lismore City Council recently investigated the feasibility of generating energy at one of our sites in order to power that site and the neighbouring high use site. The option of generating the electricity at one site and moving on to the adjoining site was extremely cost effective for Council and resolved a number of site constraint issues. However, this option was not possible due to the *Australian Standards for Wiring Rules (AS/NZS3000)* and the *NSW Service and Installation Rules* that state that Electrical Installations may have only one point of supply, and that one installation cannot be 'mixed' with another. Other alternatives to change the physical supply of the power including changing transformers and turning the site into a High Voltage site were not viable in terms of OH&S requirements and cost.

Shifting electricity from site to site or 'Virtual Net Metering' is not restricted under current retail regulations but the lack of precedent, ambiguity over how it would be implemented, and lack of appropriate pricing structures has led to barriers that currently result in no advancement of this issue. Lismore City Council supports the need for a review of NSW policy in relation to 'Virtual Net Metering' to resolve the current barriers that are delaying the implementation of renewable energy technologies in our region.

Should you require any further information with regard to this matter, please contact Council's Waste Operation Coordinator, Kevin Trustum, telephone number [REDACTED].

Yours faithfully

[REDACTED]
Gary Murphy
General Manager

cc: Thomas George, Member for Lismore.