SUBMISSION

Renewable energy from forest residue

A submission by the National Association of Forest Industries to ***Environment, Communications, Information Technology and the Arts Legislation Committee*** *Inquiry into the Renewable Energy (Electricity) Amendment Bill 2002.*

SYNOPSIS

The forest and timber industry can make a very significant contribution to Australia's renewable energy production target.

Current annual wood waste includes up to five million cubic metres of native forest harvesting residue, and a further five million cubic metres of milling residue. These materials could be used for biofuel production throughout Australia.

There is no need to increase the area of production forest being harvested in order to supply renewable energy producers.

Existing residue material could generate enough electricity to meet approximately 30% of the additional power supply targeted from renewable energy sources

Unfortunately, the 'high-value test' of the wood waste regulation is an impediment to domestic investment in power-generating facilities that could utilise our own native forest resources.

The forest and timber industry can meet all other requirements of Regulation 8 of the Act, in particular the need for the material to be sourced from forests that are managed in accordance with the principles of ecological sustainability.

To ensure the greatest return to the Australian community from the management of our native forest resources, the impediments to investment should be removed from facilities to allow the utilisation of resources which are currently wasted.

The high-value test as it is currently written conflicts with the intention of the Act, the realities of forest management and the best interests of Australia's native forest resources.

Improving Regulation 8 would make a significant contribution towards reducing Australia's greenhouse gas emissions - without any increase in forest use.

INTRODUCTION

The forest and timber industry has the potential to make a significant contribution to Australia's renewable energy production target. It has been estimated that each year, Australia could supply up to five million cubic metres of native forest harvesting residue from existing operations and a further five million cubic metres of milling residue each year for biofuel production throughout Australia[1]. This harvesting, or wood waste as it is classified in Regulation 8 to the *Renewable Energy (Electricity) Act 2000*, includes the defective stems, large branches and logs cut from the heavily-branched upper reaches of the trees.

With up to ten million cubic metres of low-grade material already available for activities including bioenergy production, there would be no need to increase the area of production forest being harvested in order to supply renewable energy producers. If just four million cubic metres of those wood waste resources were used each year, they could generate enough electricity to meet approximately 30% of the additional power supply sought from renewable energy sources.

In many other countries of the world, native forest and plantation wood wastes are utilised for high-efficiency electricity generation through direct combustion processes. For example, the renewable energy targets set by Governments in a number of European countries is forcing electricity suppliers to search for renewable energy resources around the world. The Australian industry had a recent request to supply up to one million tonnes of wood waste per annum to co-firing power stations in France.

Unfortunately, the high-value test of the wood waste regulation is an impediment to domestic investment in power-generating facilities that could utilise our own native forest resources. The forest and timber industry believes that it can meet all of the other requirements of Regulation 8 of the Act, particularly where there is a need for the material to be sourced from native forests that are managed in accordance with the principles of ecological sustainability.

Those principles were the basis of the Regional Forest Agreements – agreements that resulted in Australia developing arguably the world's best forest reserve system while delivering resource security for the forest and timber industry. The Regional Forest Agreements provided a means for balancing the economic, social and environmental outcomes from publicly-owner resources. As a result, it is reasonable to expect that any wood waste harvested from native forests would be the by-product of a high-value operation specifically designed to maximise the volume of sawlogs and veneers logs supplied to the timber processing sector.

THE DEFINITION OF ELIGIBLE RENEWABLE ENERGY SOURCES

It appears from the text of the *Renewable Energy (Electricity) Amendment Bill 2002* and the accompanying explanatory memorandum that the intent, amongst other matters, is to clarify the definition of eligible renewable energy sources in section 17 of the Act. If the committee is to reconsider the definition applied to wood waste from native forests under Regulation 8 of the Act, it would be worthwhile considering the difficulties that the regulation poses for the industry in its current format.

While it is reasonable to expect that the wood waste should only be part of an integrated forestry operation, industry believes that the high-value test should be removed from the regulation or altered to recognise that, in native forest operations, the nature of the management regimes lead

to a considerably large proportion of low-grade products being generated. Much of this lower grade resource is used to supply domestic or international paper producers, important markets for maintaining the economic viability of the native forest operations.

At the present time, there are limited global resources available for producing hardwood veneers, sawn timber, laminated and structural products, furniture and flooring. Given the difficulties of gaining access to native forest resources from within Australia and throughout the Asia-Pacific region for these purposes, there is no reason for the forest and timber industry to utilise high-value logs for low-value activities, including pulpwood production.

Pulpwood production was deliberately left out of the list of high-value processes applying to the use of native forest materials when Regulation 8 was originally drafted by the Parliament. As the high-value test is currently written, it fails to recognise that eucalypts are the preferred hardwood pulping species with the older, denser fibres of the native forest resources used as a blend when manufacturing the highest grades of printing and writing paper. These fibres provide a considerable degree of strength and the smooth finish required for high-value printing and writing paper grades.

Under the current definition of wood waste in sub-regulation 3e(i), the high-value test is, at best, unreasonable. It is based on the value of logs delivered to the appropriate mills without any reflection on the value-added uses of those resources and is therefore extremely difficult to meet.

RECOMMENDATIONS ON THE USE OF NATIVE FOREST RESOURCES AS RENEWABLE ENERGY SOURCES

The National Association of Forest Industries recommends that:

1. The high-value test be withdrawn from sub-regulation 3e(i) as it is an impediment to investment in renewable energy production from a greenhouse gas neutral resource; or
2. If the high-value test is to remain as part of regulation 8 to the Act, the test should recognise the end products derived from native forest resources, including the various paper goods.

OPTION TO IMPROVE SUB-REGULATION 3e(ii)

Alternatively, if the committee feels that it is unable to change the high-value test applied in sub-regulation 3e(i), it may consider altering sub-regulation 3e(ii). Sub-regulation 3e(ii) could be changed to recognise that the salvage of low-grade native forest resources for renewable energy production can be the by-product of an operation undertaken in accordance with the principles of ecologically sustainable forest management.

Two immediate examples help to explain why the substantive volumes of lower-grade materials need to be removed from the forest floors after harvesting has been completed. In the first case, it represents the removal of material that is otherwise likely to restrict the amount of sunlight reaching the forest floor and therefore, an increase in soil temperature or a direct exposure to sunlight, which some forest species require in order to germinate. Similarly, leaving all wood waste on the forest floor creates an additional fuel load that may lead to an increase in bushfire intensity, when fires arise.

In both cases, leaving the lower grade material in the forest could impact on the range of species that occur during the regeneration process and would therefore be contrary to the principles of ecologically sustainable forest management. It is important to note that not all of the wood waste from the harvesting operations can be used for renewable energy production. A significant amount of material would therefore remain in the forests once all of the harvesting operations have been completed to provide habitats for vertebrates and invertebrate species as well as returning nutrients to the soil.

CONCLUSION

To ensure the greatest return to the Australian community from the management of our native forest resources, the impediments to investment in facilities that would allow the utilisation of existing resources should be removed. It would be most appropriate to maintain all of the requirements set out in sub-regulation 3e(i), apart from the high-value test, to ensure that the resources are obtained from sustainably managed forests.

The high-value test as it is currently written is not in accordance with the intention of the act, the realities of forest management or in the best interests of managing Australia's native forest resources. It fails to recognise that timber left in the forest doesn't just release carbon dioxide as it decomposes. Rather, wood decomposition generates a mixture of carbon dioxide and far more potent greenhouse gases, including methane.

Improving Regulation 8 to the Act should allow the forest and timber industry to make a significant contribution towards reducing Australia's greenhouse gas emissions without any increase in forest use.

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[1] P.Y.H. Fung et al, Biomass and Bioenergy **22** (2002): 223-236