



Submission

To

COAG Working Group on Climate Change and Water

On

Design Options for the Expanded National Renewable Energy Target Scheme

July 2008

Introduction

The National Association of Forest Industries (NAFI) appreciates the opportunity to make a submission in response to the Discussion Paper, *Design Options for the Expanded National Renewable Energy Target Scheme*, released by the COAG Working Group on Climate Change and Water.

NAFI is the peak representative body for Australia's forest industry. NAFI represents the industry's interests to the public, governments and authorities on matters relating to the national development and use of Australia's forests and wood products.

Australia's forest industry is well positioned to make a significant contribution to Australia's efforts to address climate change, through the carbon storing benefits of its forests and wood products. The forest industry also has significant potential to provide renewable energy through the use of wood waste from industry activities.

Realising this potential will ultimately depend on the treatment of wood waste under the Expanded National Renewable Energy Target Scheme. To date there have been a number of jurisdictional variations in the treatment and eligibility of various forms of wood waste (particular from native forests), creating unnecessary barriers to the use of this material for renewable energy.

Restricting the use of wood waste as a sustainable renewable energy source is a regulatory barrier which NAFI and Australia's forest industry has long been advocating to overcome. The Renewable Energy Sub Group of the COAG Working Group on Climate Change and Water is well placed to address this issue.

This submission deals primarily with ensuring that the Expanded National Renewable Energy Target Scheme provides adequate recognition of all forms of wood waste. The removal of existing regulatory barriers is a key priority if Australia is to derive maximum benefit from the renewable energy opportunities which exist within Australia's sustainable forest industry.

NAFI broadly supports the proposition that the existing rules for wood waste contained within the Australian Government's current MRET scheme be adopted for use in the Expanded National Renewable Energy Target Scheme. However, this must occur on the basis of the removal of existing regulatory restrictions (outlined in this submission) on the use of wood waste for renewable energy generation.

In that context, and in the context of the Discussion Paper, NAFI has provided recommendations that will assist in overcoming regulation that unnecessarily restricts the use of wood waste as a renewable energy source. These recommendations are contained in the final section of this submission.

Renewable energy opportunities from Australia's forest industry

The use of wood waste for renewable energy purposes in Australia has not been widely used to date, however it has significant potential to substitute Australia's fossil fuel based energy production. Experience from overseas indicates that wood waste is an efficient, low emissions and sustainable feedstock which could make a valuable contribution to Australia's efforts to address climate change.

Bioenergy generation from wood related wastes and residues in Australia is in stark contrast to other OECD countries. There are very few plants in Australia, generating an insignificant amount of energy from resources such as timber harvesting residues and sawmill wastes. The total contribution of bioenergy generation from this sector is 2.7% of the total RECs created under MRET in 2005 (REC registry). That is far below the average electricity generation of other OECD countries with similar resources.

For example, small-scale power plant technology exists based on 100% wood feedstock in some European countries. Finland is a significant exporter of wood products and produces 22% of its energy requirements through the combustion of forest industries wood residue for energy generation.

For Australia, based on present harvesting rates (without harvesting a single extra tree), there is enough wood waste available from existing forest industry activities to produce around 3,000 gigawatt hours (GWh) of electricity per annum (see Table 1).¹

¹ MBAC Consulting (2006) *Wood Waste for Renewable Energy* Project funded by FWPRDC and Australian Government

Table 1: Estimated available wood waste from Australia's forest industry activities²

		Potential resource dry wood equivalent (Mt)	Available (green wood equivalent) (Mt)	Available (as supplied) (Mt)	Available (dry wood equivalent) (Mt)
Harvest residues	Native forest	2.2	0.3	-	0.15
	Plantation	2.0	2.0	-	1.00
Wood processing residues		2.8	0.8	-	0.42
Salvaged wood residues		5.3	-	1.0	1.00
TOTAL		12.3	3.1	1.0	2.6

The net benefit of using this wood waste would be a permanent reduction in Australia's greenhouse gas emissions of 3 million tonnes of CO₂e per year. Renewable energy from wood waste reduces CO₂ emissions by 95-99% for each MWh of electricity generated when compared to coal-fired electricity generation.³

The use of wood waste for renewable energy has significant potential to assist the Australian Government in achieving its goal of a 20 percent share for renewable energy in Australia's electricity supply by 2020.

With the MRET for 2020 set at 45,000 GWh, there is the potential from already existing wood waste to provide around 7 percent (3,000 GWh pa) towards this target. It should be noted that this is a conservative estimate as by 2020 Australia will have expanded its commercial forest resources (through plantation expansion), meaning the MRET contribution could be as high as 10%.

Maximising the use of wood waste resources that are currently available in Australia has the potential to:⁴

- reduce greenhouse gas emissions by around 3 million tonnes of CO₂e each year;
- create over 2300 new direct jobs;
- deliver over \$800 million of direct investment in renewable energy facilities; and
- supply renewable electricity to at least 400,000 houses.

It is important to note that wood waste may be used as the primary source of energy in new power generation plants, or it may be co-fired with coal in existing power generation plants. The latter utilises the infrastructure already developed for generating electricity from coal and can be undertaken at a relatively low cost.

² MBAC Consulting (2006) *Wood Waste for Renewable Energy* Project funded by FWPRDC and Australian Government

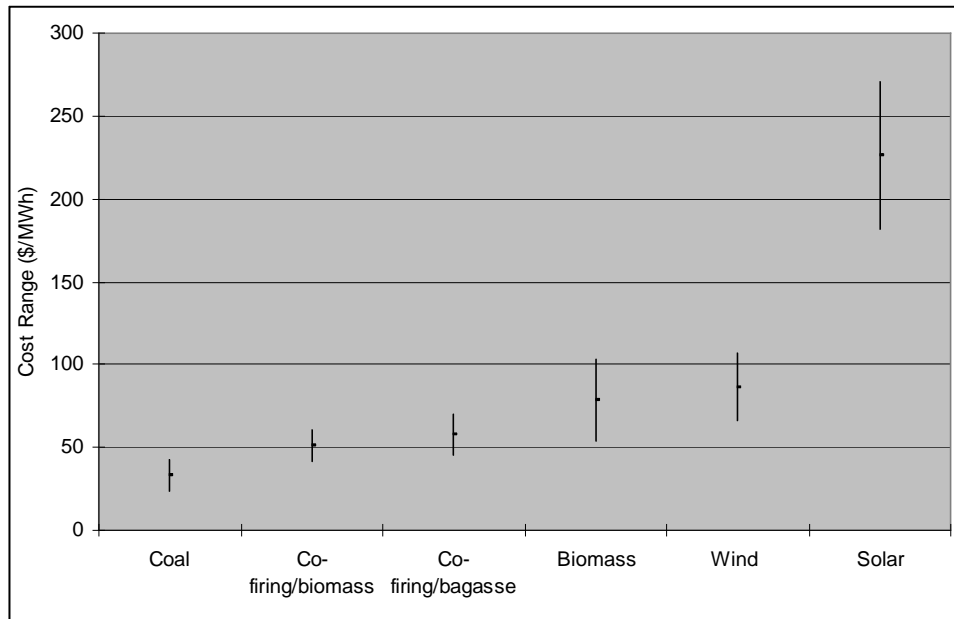
³ MBAC Consulting (2006) *Wood Waste for Renewable Energy* Project funded by FWPRDC and Australian Government

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The relative cost of wood based bioenergy plants compared to coal fired plants has been a major limitation on investment to date. Measures such as mandatory renewable energy targets and emissions trading will be critical in improving the attractiveness and subsequent investment in bioenergy facilities based on wood waste.

Figure 1 below provides a summary of the estimated costs of electricity generation from coal and renewable energy sources. Dedicated biomass facilities could generate renewable energy at a lower cost than either solar or wind facilities, however the most cost-effective renewable energy option is the co-firing of coal with biomass.

Figure 1: Costs of electricity generation from coal and renewable energy sources⁵



Existing regulatory barriers

There are a number of regulatory barriers to greater use of wood waste for renewable energy in Australia. These barriers occur at both the Commonwealth and State level, and are generally focussed on the use of wood residues from native forest harvesting activities (details are provided in the following section).

Unfortunately, the development of these regulations has not always been consistent with Australia's broader policy objective to encourage the substitution of fossil fuel based energy production with renewable energy.

Restricting the use of wood waste for bioenergy production has also created policy inconsistencies amongst and between jurisdictions in Australia. The development of an Expanded National Renewable Energy Target Scheme represents a valuable opportunity to address these policy inconsistencies and maximise the opportunities for renewable energy production from Australia's sustainable forest industry activities.

⁵ MBAC Consulting (2006) *Wood Waste for Renewable Energy* Project funded by FWPRDC and Australian Government

State based regulations

At the state level, there are restrictive regulations, most notably in both New South Wales and Victoria, which do not recognise the use of native forest harvest residues as an eligible source for renewable energy production. These restrictions have been imposed despite the existing legal and regulatory frameworks in place to ensure the environmental sustainability of forestry and wood production activities.

Commonwealth regulations

At the Commonwealth level, there are aspects of the *Renewable Energy (Electricity) Regulations 2001* which are restrictive in terms of permitting the practical use of both native forest and plantation wood waste for renewable energy purposes.

Specifically, there are two requirements of the Regulations which represent significant restrictions in terms of facilitating the practical use of wood waste for renewable energy from sustainable forestry activities. They are as follows:

High-value process - Regulation 8 (2) (b) (i) and 8 (3) - This clause states that ‘the primary purpose of a harvesting operation is taken to be a high-value process only if the total financial value of the products of the high-value process is higher than the financial value of other products of the harvesting operation.’

In practice the high-value process will drastically reduce, and in many cases completely prevent, the potential for wood waste from harvesting operations to be used as a source of renewable energy. The actual effect of this clause is to exclude as eligible, those wood wastes derived from harvesting poorer quality native forests where the proportion of high quality logs to low quality material, may be relatively low.

It is not uncommon for native forest harvesting operations to yield a high proportion of residues or waste products and the utilisation of these products is fundamental to the commercial viability of such operations.

Furthermore, the requirement under the Regulations for the high-value process is an unnecessary contradiction of existing forest policy which stipulates the utilisation of forest products for their highest value end use rather than an aggregated financial value. Such policy exists in RFA areas and in non-RFA areas, given that operations are carried out in accordance with relevant Commonwealth, State or Territory planning and approval requirements.

Specific criteria for eligibility should be based on the sustainability of forest management as determined through existing processes and frameworks (such as RFAs). The application of independent third-party forest certification - such as through the Australian Forestry Standard (AFS), PEFC, or Forest Stewardship Council (FSC) - could also be used as an eligibility requirement.

Native vegetation clearing - Regulation 9 (1) (c) - This clause states that wood biomass from a plantation is ineligible if it is 'taken from land that was not cleared of native vegetation after 31 December 1989 to establish the plantation.'

The policy intent of this regulation is not clear. If the intent of the regulation is to maintain the 'Kyoto' base line at 1989 levels, then it should only recognise wood waste from plantations where there is no intent of changing land use. The current regulation construct penalises the continued use of the land for forestry purposes and hence the continued maintenance of the carbon base line.

If the purpose of this clause is to ensure activities are legal and sustainable, then it is unnecessary, as *Regulation 9 (1) (a)* already states that biomass from a plantation 'must be a product of a harvesting operation approved under relevant Commonwealth, State or Territory planning and approval processes.' Clearing of any native vegetation is subject to government approval processes, and ESD principles incorporated into the Act cover the clearing of vegetation, including remnant vegetation.

This clause creates an unwarranted restriction on growers who have established plantations on land where some form of native vegetation clearing was permitted. For example, since 1990 in Tasmania a large proportion of plantations have been legally established on areas that were converted from native forests.

In other states, partial clearing involving removal of some native vegetation has been an accepted legal practice. Denying eligibility for a sub-set of a plantation estate will only lead to unnecessary waste of resource from that land in perpetuity as the vegetation clearing that has occurred cannot be reversed in any way.

This clause specifically places a condition on plantations that is not applicable to other energy crops or crop wastes. For example, bagasse from sugarcane crops planted on land cleared after 31 December 1989 are eligible sources under the Regulations.

Sustainable forest management in Australia

In dealing with regulations under an Expanded Renewable Energy Target Scheme, there must be appropriate recognition given to Australia's framework for sustainable forest management. It is unfortunate that the development of restrictive regulations regarding the use of wood waste for bioenergy in Australia has often occurred in the absence of due recognition of the existing legal and regulatory framework for forest management.

The development of these regulatory restrictions is largely the result of concerns over the sustainability of forest operations arising from the utilisation of wood waste for electricity generation. There has been a general failure to acknowledge the existing framework for ensuring ongoing sustainability, and that the use of wood waste for bioenergy from native forests can only occur on the basis that this wood waste is a by-product or residual of the production of higher value timber products.

Australia's production forests (both native forests and plantations) are managed in accordance with a world class framework for sustainable forest management. This framework is underpinned by:

- National Forest Policy Statement (1992);
- Regional Forest Agreements (RFA);
- State based regulations and codes of practice, and
- Independent third-party forest certification (i.e. AFS, FSC)

Australia's RFAs provide long-term certainty and security for forest industries and reliant regional communities, on the sustainable production of forest products. Underpinning the RFAs is a scientific, transparent and inclusive approach to decision-making on the use of forest resources aimed at balancing the interests of timber production and conservation.

Also, over recent years, Australia's production forest managers have undertaken extensive efforts to develop independent third party certification of their forests. This has occurred in response to growing market demand in Australia and internationally for wood products which have demonstrably been sourced from sustainably managed forests.

Therefore, consumers of bioenergy based on all forms of forest residues should have full confidence that wood feedstock is sourced from Australia's sustainably managed forests – underpinned by a rigorous and comprehensive regulatory framework and forest certification which provides a commitment to continuous improvement.

Conclusion and Recommendations

Achieving Australia's MRET by 2020 represents a significant challenge. Therefore, it is essential that there are no unnecessary impediments to the uptake and use of all forms of renewable energy. From the forest industry's perspective, the sustainable use of all forms of wood waste represents a valuable source of renewable energy, which should not be unduly restricted.

Therefore, as part of this process to develop an Expanded National Renewable Energy Target Scheme, NAFI recommends:

1. That COAG adopt the existing MRET scheme rules for the treatment of wood waste, as recommended in the Discussion Paper. This must occur only on the basis that the restrictive State and Commonwealth regulations, as highlighted in this submission, are amended to allow eligibility of all forms of wood waste for renewable energy.
2. The eligibility of all forms of wood waste from forest industry activities for renewable energy occurs on the basis that there is due recognition of the existing legal, regulatory and certification frameworks in Australia for sustainable forest management.

NAFI appreciates the opportunity to comment on this important review. If there are any queries in relation to NAFI's submission, or further clarification is sought, please do not hesitate to contact NAFI's Senior Forest Policy Analyst, David de Jongh, on (02) 6285 3833 or david.dejongh@nafi.com.au.