



## **The Wilderness Society Inc**

### **Submission to the Senate Economics Committee Renewable Energy Bills**

**July 2009**

#### **Preamble**

This submission is almost identical to The Wilderness Society's previous submission to the Draft Legislation on the design of the expanded Renewable Energy Target Scheme. In particular, this submission explains why it is inappropriate to use native forest wood waste as an eligible energy source under the National Renewable Energy Target.

The Wilderness Society welcomes the opportunity to make comment on this important scheme. We support the increased uptake of renewable energy technologies which will provide value added jobs in Australia and help tackle dangerous climate change. The legislation should ensure that renewable technologies are not contaminated by the inclusion of sources that impact upon the protection of forests and natural ecosystems which play a major role in mitigating climate change.

The Wilderness Society is a not for profit environmental organisation whose purpose is to protect, promote and restore wilderness and natural processes across Australia for the survival and ongoing evolution of life on Earth.

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## Summary

The Wilderness Society supports an expanded national Renewable Energy Target (RET) as an essential component of Australia's climate change mitigation effort. We believe the current target of 20% is too low. It does not provide substantive clarity to the market to undertake massive investment in renewable energy technologies which is vital for future employment in Australia. For Australia to make its contribution to avoiding dangerous climate change, we need to undertake a RET target of at least 40% by 2020 with a goal of reaching a 100% renewable energy future.

Bioenergy fueled by wood taken from native vegetation (especially forests) is unsustainable and should be categorically ruled out across Australia. There are a number of reasons for this:

- Logging in native forest ecosystems in Australia is associated with a high emissions profile and restrains the capacity of the landscape to sequester carbon<sup>1,2</sup>
- The impact on maintaining commodity logging cycles in native forest is an overall reduction in the carbon carrying capacity of between 40% and 60%<sup>2</sup>
- Scientific evidence demonstrates that native forests are carbon sinks that continue to sequester carbon for up to 800 years. Research published in *Nature*<sup>3</sup> “found that old-growth forests accumulate carbon for centuries and contain large quantities of it. We expect, however, that much of this carbon, even soil carbon, will move back to the atmosphere if these forests are disturbed.” Native forests should not be disturbed by logging due to the huge amount of carbon they store and the ongoing role they play in sequestering carbon. The Renewable Energy (Electricity) Act must be updated to reflect the latest science.
- A recent scientific paper, authored by scientists at the Australian National University and published in the Proceedings of the National Academy of Sciences of the United States of America, demonstrates that the forests of south eastern Australia are the most carbon dense on earth<sup>4</sup>.
- Burning native ‘wood waste’ for energy establishes another market for residues which will make it economic to log species and forests which are currently unloggable and would be likely to lead to increases in logging rates or shorten rotation lengths, all of which would generate higher carbon dioxide emissions.
- Native forest biomass is not ‘waste’. In addition to a poor outcome for emissions, so called ‘wood waste’ plays a vital role in maintaining healthy bio-diverse forest ecosystems. The key driver behind native forest logging is pulplog production, mainly for woodchips, not sawlogs. In Victoria, 85% of native forest logging ends up as woodchips, waste and sawdust. In Tasmania, over 90% of native forest logged ends up as woodchips.

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<sup>1</sup> Dean, C., Roxburgh, S. & Mackey, B.G. (2003) Growth modelling of *Eucalyptus regnans* for carbon accounting at the landscape scale. *Modelling Forest Systems* (eds A.Amaro, D. Reed & P. Soares), pp. 27–39. CABI Publishing, Wallingford, UK.

<sup>2</sup> Mackey et al 2008. Green Carbon: the role of natural carbon in carbon storage; part 1 A green carbon account of Australia's south-eastern eucalypt forests and policy implications. ANU E. press. Canberra

<sup>3</sup> Luyssaert, S. (September 2008) Old-growth forests as global carbon sinks. *Nature* 455, 213-215  
<http://www.nature.com/nature/journal/v455/n7210/full/nature07276.html>

<sup>4</sup> Keith, H. et al 2009. Re-evaluation of forest biomass carbon stocks and lessons from the world's most carbon-dense forests PNAS published online before print June 24, 2009, doi:10.1073/pnas.0901970106

- While all mainland state governments except Western Australia have ruled out such projects, the Tasmanian government supports them, and the MRET scheme includes them in its definition of renewable energy.
- The renewable energy market needs to receive clear signals to guide investment in truly renewable industries. The inclusion of native forest biomass allows subsidised native forest logging to compete on a non-level playing field with emerging, value added renewable technologies, including solar and wind.
- Controversy surrounding native forest wood waste will reduce public confidence in renewable energy and the National Renewable Energy Target Scheme.
- The MRET legislation should reflect the same credentials as the current nationally recognised and accredited “GreenPower” program which outright prohibits the use of native forest biomass in green energy programs.

**Recommendation:**

Native forest wood-waste should be added to the list of energy sources that are not eligible renewable energy sources in Section 17(2) of the Renewable Energy (Electricity) Act.

The MRET scheme should not be replaced or phased out unless other mechanisms are established which ensures the intent of the MRET scheme is mandated and maintained, and that renewable energies are further supported and boosted.

## **Background**

In response to diminishing global demand for native forest woodchips, Australia's native forest logging industry is pushing a particularly destructive power generation option. Native forest-based electricity generators are seen as a lifeline to an ailing woodchip industry, but it would result in a huge loss of carbon stored in the forest. Native forest bioenergy would be a perverse outcome for a scheme funded by the community designed to facilitate truly renewable energy options such as wind and solar and reduce greenhouse gas emissions. Industry claims that native forest wood waste is renewable are based on the assumption that no new forest harvesting will occur.

History shows the management of our forests has always been determined by the markets for wood. No clearer example of this is provided than that of the export woodchip industry which lead to radical change in the way forests are logged (from selective logging to clearfell regimes). Woodchipping has helped make it economic to log vast areas of forest that would otherwise have been uneconomic and is now the major driver of native forest logging in Australia. The myth that woodchipping is based on forest residues or waste has long been dispelled. (Dargavel, J., "Fashioning Australia's Forests and Ajani, J., "The Forest Wars"). In December 2008, before the state government's Standing Committee on Finance and Public Administration, VicForests admitted that the industry has traditionally been based on sawlog, but more recently is based on pulplog production. These pulp logs are defined as "residual" by the state government and industry.

Burning native forest biomass to produce electricity will lead to increased logging of native forests and further threatens the survival of threatened species that depend upon them. It will also further aggravate climate change. The Federal Government's promised 20% national renewable energy target, requires that 20% of Australia's electricity supply must come from renewable sources. If burning native forests is included in this target, it would push aside other truly renewable energy sources and undermine Australia's ability to make the deep cuts in greenhouse pollution needed to avoid dangerous climate change.

Energy generated from burning native forests has been ruled out by all state governments except Western Australia and Tasmania. In addition, renewable energy retailer programs such as GreenPower have specifically rejected endorsing native forest-generated power.<sup>5</sup>

## **Current Proposals**

There is an existing wood waste bioenergy proposal in Western Australia that is about to be approved by the Government. This proposal is 100% based on plantation waste and does not have the environmental impacts associated with native forest power generators. However, until a legislated ban on native forest inputs to all bioenergy plants is enacted, there is a risk that future wood inputs may be changed to accept native forest products.

In Tasmania there are three separate proposals for wood-fired power generators which would burn native forests of high conservation value. One of these proposals is at Gunns'

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<sup>5</sup> Simon Miller, Acting Director-General, New South Wales Department of Water and Energy. *Letter to Senator Bob Brown*. August 2007.

controversial Tamar Valley pulpmill. 500,000 tonnes<sup>6</sup> of green forest products would be burnt at the pulp mill each year. The renewable energy subsidy this would receive is an important factor in the profitability of the pulp mill proposal.

Another proposal by South East Fibre Exports at Eden in southern NSW has apparently received funding to be built. This mill will entrench the woodchipping operations in south eastern Australia which have massive impacts on forest biodiversity, water catchments and greenhouse gas emissions.

### **Degradation of the immense Carbon Storage Capacity of Native forests**

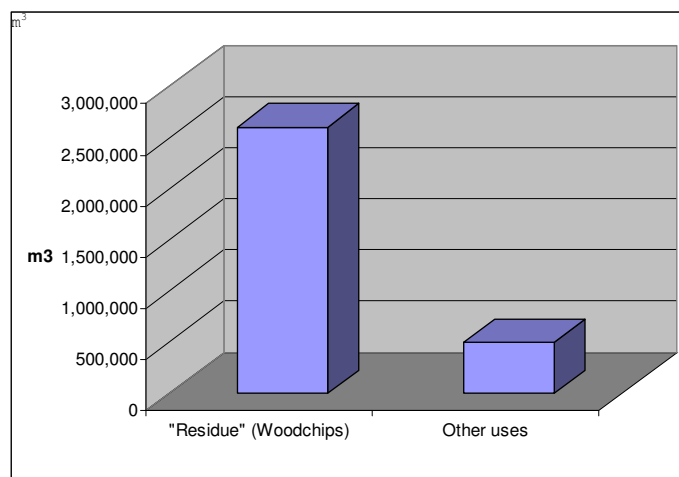
Native forests release huge amounts of greenhouse pollution when they are logged. Logged forests typically contain between 40% and 60% less carbon than unlogged forests. A recent Forestry Tasmania study shows that by 2030, the logging of Tasmania's commercial native forest estate will result in the loss of 28% of the carbon that is currently safely stored as living forest.<sup>7</sup> Given the urgency in the global task of combating climate change, to continue this massive level of carbon emissions for decades is inexcusable.

### **Native forest wood waste will increase the level of logging.**

The logging industry claims that native forest wood waste is carbon neutral because it would only be utilising wood which would burn or rot on the forest floor anyway.

In NSW live trees are classified as waste. In fact most of the wood taken from Australia's native forest is to produce woodchips and officially regarded as residue in *Australia's State of the Forest Report* (2003)<sup>8</sup>. However, this so called residue comprises the majority of logs taken from Australia's native forests. Figure 1 illustrates that the overwhelming majority of logs taken from Tasmania's native forest are used for what is claimed to be a waste product - woodchips.

**Figure 1. Log volumes removed from Tasmania's native forests** (adapted from Figure 14.1 Ajani 2008)



<sup>6</sup> Gunns Ltd (July 2006) Bell bay Pulp Mill, Draft Integrated Impact Statement. Transport and Traffic Assessment, p.69

<sup>7</sup> MBAC (2007), Forestry Tasmania's Carbon Sequestration Position  
<http://www.forestrytas.com.au/uploads/File/pdf/2007-75%20FT%20Report%20Dec%202007.pdf>

<sup>8</sup> Australia's State of the Environment Report. (2003) Dept of Agriculture, Fisheries and Forestry.

Moreover such a statement misses the point that logging per se in native forest is not carbon neutral and that wood waste on the forest floor may take hundreds of years to decompose.

Emissions from burning ‘forest waste’ are likely to be even higher than leaving it on the forest floor because of transport emissions.

The scientific studies quoted by the industry<sup>9</sup> that supports the use of native forest wood waste are based on the assumption that no additional logging will take place. However, this claim is contradicted by the recognition by the native forest logging industry that these so called residues drive the Tasmanian sawlog industry<sup>10</sup>.

On the 10<sup>th</sup> of December, 2008, VicForests, the state government agency responsible for commercial sales of Victoria’s native forests, admitted to the Victorian Government’s Standing Committee on Finance and Public Administration that the industry has traditionally been based on sawlogs but more recently on pulp logs<sup>11</sup>. It is clear that the pulp log logging is the driver of the industry.

The recent history of the native forest logging industry in Australia is that the industry is kept afloat by revenue from a residue product (Ajani 2008). Burning wood waste to generate electricity will only provide another such residue product which will result in more emissions from Australia’s forests.

### **Impact on biodiversity and other environmental services**

It is not only the science of carbon and climate change that is a powerful argument against native forest bioenergy. Biodiversity impacts, especially with invertebrates that rely on the coarse woody debris on the forest floor, will be particularly bad as successive logging rotations reduce the natural structure of the forest and push species closer to extinction.

A 2006 Federal Court ruling found that logging in a Tasmanian forest was not able to ensure the survival of three key threatened species and would push them closer to extinction. Even Forestry Tasmania acknowledge the issue and have said that “*the issue of waste raises interesting issues, as we now understand the importance of maintaining coarse woody debris on the forest floor for future maintenance of forest biodiversity, therefore the retention of logging residues is seen as an environmental necessity*”<sup>12</sup>.

### **Other bioenergy feed stocks**

There are many feedstocks for the production of bioenergy ranging from organic wastes, agricultural and plantation forestry residues and bioenergy plantations. Many forms of bioenergy are sustainable, renewable sources of energy and should be encouraged. As with

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<sup>9</sup> Raison et al (2002) CSIRO Client Report No.1122

<sup>10</sup> John Gay, head of Gunns, Australia’s biggest exporter of woodchips. Nine’s Sunday Show. [http://sunday.ninemsn.com.au/sunday/cover\\_stories/transcript\\_1205.asp](http://sunday.ninemsn.com.au/sunday/cover_stories/transcript_1205.asp)

<sup>11</sup> David Pollard, CEO VicForests, 10<sup>th</sup> December 2008. <http://www.parliament.vic.gov.au/council/SCFPA/DAPO/Transcripts/VicForests%20Transcript%20101208.pdf> pg 22

<sup>12</sup> Hans Drielsma, Executive General Manager. Forestry Tasmania, 22 December 2005. [http://www.forestrytas.com.au/forestrytas/media\\_releases/two\\_visions\\_for\\_tasmania.html](http://www.forestrytas.com.au/forestrytas/media_releases/two_visions_for_tasmania.html)

any source of energy the whole lifecycle of bioenergy production needs to be considered in order to ensure that it is sustainable.

Bioenergy plantations have huge potential in Australia due in part to their ability to grow on marginal lands (provided there is no destruction of native vegetation); to provide numerous ecosystem services including reducing salinity and erosion; and to reinvigorate rural economies. In order to ensure that bioenergy plantations are sustainable it is vital that they only comprise diverse, non-genetically modified native species. These plantations must also be subject to stringent sustainability guidelines created in consultation with the industry, government, environmental groups and other relevant stakeholders.

Currently the Forest Stewardship Council (FSC) certification provides a minimum standard. Other widely promoted forest product certification schemes do not ensure that the forests are sustainably managed.

### **Public perception of wood waste bioenergy**

In March 2001 the Wilderness Society commissioned a Morgan Poll on behalf of environmental groups found that 88% of people opposed the use of native forest wood fired power. In addition only 8% of those polled thought burning native forests was renewable. This compared with 12% who thought that nuclear energy was renewable.

Bioenergy from native forest is deeply unpopular with the public.

Electricity retailers are reluctant to sell electricity from native forest biomass. In our discussions with electricity retailers they see this public awareness of the environmental problems associated with burning native forests as being a major disincentive to the purchase of (REC) Renewable Energy Certificates from power stations which burn native forest material. An industry publication once referred to them as 'dead Koala RECs'.

It is noteworthy that certifiers of GreenPower have stated that they will not certify power from burning native forests as renewable energy.

The controversy associated with native forest bioenergy is a threat to the public image of sustainable biomass and of renewable energy generally. Despite the environment movement repeatedly specifying that it is native forest bioenergy that is causing the environmental problems, continual bad publicity associated with native forest bioenergy projects has inevitably tarred sustainable bioenergy crops with the same brush.

The Commonwealth Government had committed to convening an expert panel to examine the issues around eligibility of native forest wood waste as a renewable energy source under MRET. This commitment was not carried through.

The Senate Committee that reviewed the legislation made the following first recommendation.

"The Committee recommends that non-plantation native forest wood products and wood wastes be specifically excluded from the list of eligible renewable energy sources."

Therefore the Wilderness Society strongly recommends:

Native forest wood-waste should be added to the list of energy sources that are not eligible renewable energy sources in Section 17(2) of the Act.

The case for including native forests wood in any renewable energy scheme is as weak as it was last time it was rejected. Its inclusion is only being considered because of a desire to incentivise the Gunns proposed Tamar pulpmill and prop up the viability of Australia's unnecessary export woodchip sector as buyers seek less controversial sources. The atmosphere does not need the additional emissions that incentivising increased native forest access would create particularly when that access is itself a net emissions generating activity.

The Wilderness Society strongly supports the development of a viable a vibrant renewables energy sector. Bioenergy has a role to play particularly where fiber is being sourced from agricultural waste or plantations established on land cleared before 1990.

The inevitable public controversy that will accompany wood waste bioenergy production will damage public confidence in sustainable bioenergy and also damage the image of the renewable technologies industry in Australia.