

Renewable Energy (Electricity) Amendment Bill 2009

Submission to Senate Economics Committee

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The objects of the Renewable Energy (Electricity) Act (MRET Scheme) are to increase electricity generation from renewable sources, reduce greenhouse gas emissions and ensure that energy sources are ecologically sustainable.

Neither the original Act, nor the amending legislation under review, provides a mechanism to ensure that each eligible energy source meets the Act's objects – that is, that the energy source reduces greenhouse gas emissions and is ecologically sustainable. Energy from some sources is likely to fail these tests. In particular, native forests and other natural ecosystems store large amounts of carbon permanently. Sourcing biomass for energy production from these carbon stores is neither greenhouse positive in any relevant time frame nor ecologically sustainable.

The Carbon Pollution Reduction Scheme (CPRS) will not counter the failings of the MRET Scheme because only selected sources of greenhouse gas emissions are covered. Notably, emissions from logging native forests for wood or energy are not subject to carbon pricing through the CPRS and biomass energy is assumed to be carbon-neutral irrespective of its source. As a result the effectiveness of the MRET Scheme in helping Australia meeting greenhouse gas reduction targets will be diminished, perhaps substantially.

Recommendation. That the Renewable Energy (Electricity) Amendment Bill 2009 be amended to

- (a) require that each energy source should meet a test to demonstrate that it is truly renewable and net greenhouse positive; and
- (b) exclude biomass from native forests and other natural ecosystems, and from remnant native vegetation.

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Supporting notes

1. This submission focuses on biomass energy. As a general comment, a gross feed-in tariff would be a far preferable mechanism to promote the adoption of renewable energy.
2. Energy sources should only be accredited as 'renewable' if they meet a greenhouse test. In broad terms, 'renewable energy' sources can be characterised as organic or non-organic. The net greenhouse gas impact of organic sources (e.g. solar, wind, hydro, tidal, geothermal) could be measured by the energy ratio (system lifetime relative to embodied energy greater than say five times) or the energy payback time (time taken for the system or device to produce as much energy as it consumes to manufacture not greater than say five years). For organic (biomass) sources, the net greenhouse gas impact can also be measured by the energy ratio or by the recovery time (amount of time taken to recover the level of stored carbon in the landscape from which it is derived, plus energy costs of transport and processing, not exceeding say 10 years). Energy sources that do not meet the test should be regarded as non-renewable and ineligible to create renewable energy certificates.²
3. Neither the MRET Scheme nor the Carbon Pollution Reduction Scheme (CPRS) applies a greenhouse test to biomass energy.
 - o The MRET Scheme simply lists 'eligible' renewable energy sources, including most types of biomass energy. The definitions of 'energy crops', 'wood waste' and 'agricultural waste' in the MRET Scheme mean that native forest wood and other native vegetation can be used to generate renewable energy certificates almost unhindered (see table attached). Biomass from logging (wood waste), forest management operations (wood waste), post-sawmill or pulpmill processing (wood waste), and arguably land-clearing (agricultural waste) are all eligible renewable energy sources. The definitions are so broad that characterising the biomass as 'waste' is thoroughly misleading.³
 - o The CPRS defines biomass energy as 'carbon neutral' irrespective of its source; clearing and logging of native vegetation attract no emissions liability.

The combined effect of the two schemes is that biomass from native vegetation has no emissions liability and is eligible to create renewable energy certificates. Furthermore, subject to state laws, land can be cleared for agriculture or plantations and subsequently used to grow energy crops which are eligible to create renewable energy certificates (and which under most circumstances will attract tax concessions under subdivision 40-J of the Income Tax Assessment Act).

4. Recent research has established that native forests and other natural ecosystems store large amounts of carbon accumulated over decades and centuries. Emissions from clearing and logging native vegetation are irreplaceable in any policy-relevant time frame given the widely accepted scientific view that global emissions must peak within the next decade or less. **Biomass from natural ecosystems is not 'renewable' and does not meet the objects of the legislation.**
5. Where Regional Forestry Agreements are in force, forestry operations including those which result in the production of eligible 'wood waste' are immune from scrutiny under the Environment Protection and Biodiversity Conservation (EPBC) Act. In the case of Gunns' proposed pulpmill, the Act also prevents assessment of the adverse impacts of native forest logging while MRET allows pulp processing 'waste' to be an eligible renewable energy source. The interim Hawke report into the EPBC Act calls for greater transparency, compliance with and enforcement of existing processes in order for

² Where the organic source is a gas derived from decaying organic matter (landfill gas, sewage gas) this test is not directly applicable but criteria should be applied that encourage upstream measures to reduce waste, such as re-use, recycling and composting. Other new sources such as algae should be admitted only if they can demonstrate net greenhouse benefit and meet other environmental standards.

³ If the government does not amend the Act or regulations to ensure that biomass energy sources are truly renewable and sustainable, legal action to clarify the situation appears inevitable.

the RFA exemption to continue to apply (ch. 6).⁴ It also points to arguments for better regulation of land clearance:

“Not least of these is the view that the impacts of continued land clearance on the environment are a *nationally* significant issue” (para 7.21).

These conclusions point to the failure of current laws to ensure ‘ecological sustainability’. **Biomass from clearing and logging native forests and other native vegetation cannot be regarded as ‘ecologically sustainable’ under current laws and is contrary to the objects of the Renewable Energy Act.**

5. All states and territories, except the ACT, have existing or proposed biomass power stations.⁵ The Commonwealth Scheme will override State schemes some of which have previously banned the use of native forest wood.

6. The removal of limitations, lack of emissions liability, lack of proper environmental scrutiny and expansion of MRET targets is likely to encourage rapid take-up of biomass energy, well beyond the relatively low level it has so far achieved. Forestry industry lobbying is pushing strongly to this end, as markets for native forest wood decline.⁶ To the extent that biomass energy crowds out sustainable and genuinely renewable energy sources, MRET will fail to achieve its objects. To the extent that biomass energy results in additional emissions from destruction of native vegetation, MRET will be actively counter-productive in reducing Australia’s greenhouse gas emissions.

⁴ <http://www.environment.gov.au/epbc/review/index.html>

⁵ Grows, J, 2009, Biomass energy and the mandatory renewable energy target. Briefing paper for Senator Christine Milne. http://christine-milne.greensmps.org.au/webfm_send/163

⁶ Forestry interests usually argue that their operations are greenhouse positive on two grounds: (a) that forest regrows and is therefore greenhouse neutral – ignoring the time taken to regrow the forest and recapture the CO₂ emissions; and (b) that burning wood produces fewer greenhouse gas emissions than burning fossil fuels – ignoring the total emissions from forest to furnace and the time taken to regrow the forest. Benchmarking against fossil fuel emissions is, in any case, incorrect -- the real comparison is with alternative ways of reducing emissions, through energy efficiency and genuinely renewable energy alternatives.

Definitions of eligible renewable energy relating to native vegetation

Act	Regulation (paraphrased)	Comment
Energy crops	9 Must be biomass from a plantation on land that was not cleared of native vegetation after 31 December 1989 to establish the plantation	Precludes native vegetation clearing to establish energy crops but not biomass from energy crops on land cleared post-1989 for another purpose Excludes native forest wood
Wood waste	1(a) non-native environmental weeds	
	1(b) manufactured wood product or a by-product from a manufacturing process	Includes native forest wood used in pulp and paper making
	1(c) waste products from the construction of buildings or furniture	
	1(d) sawmill residue	Includes native forest woodchips
	1(e) biomass from a native forest that is 2(a) Harvested primarily for a purpose other than energy production; and 2(b) either (i) a by-product of a harvesting operation for which a 'high value process' is the primary purpose ('high value process' means production of sawlogs, veneer, poles, piles, girders, wood for carpentry or craft uses, or oil products); or (ii) a by-product of a harvesting operation that is carried out in accordance with 'ecologically sustainable forest management principles'; and 2(c) either (i) if it is from an area where a RFA is in force – produced in accordance with any 'ecologically sustainable forest management principles required by the agreement'; or (ii) if it is from an area where no RFA is in force – produced from harvesting that is carried out in accordance with 'ecologically sustainable forest management principles that the Minister is satisfied are consistent with those required by a regional forest agreement' <i>ecologically sustainable forest management principles</i> means (a) maintenance of ecological processes within forests (b) maintenance of the biological diversity of forests (c) optimisation of the benefits to the community from all uses of forests within ecological constraints	Includes native forest wood that is a 'by-product of a harvesting operation' for a purpose other than energy production. A 'harvesting operation' could include logging for woodchips or pulplogs; and 'harvesting' for the purpose of fire management, roading, thinning, plantation establishment, or any other management purpose. The requirement for the wood to be produced in accordance with ecologically sustainable forest management principles has no operational force.
Agricultural waste	Putrescible biomass wastes produced during agricultural operations, including livestock husbandry	Arguably includes biomass from land clearing for agriculture