To,
The Federal Minister for Climate Change and Energy
The Hon Chris Bowen MP

The Federal Minister for Environment and Water
The Hon Tanya Plibersek MP

RePlanet Australia brings to the government’s attention that the burning of native forest timber (biomass burning) for energy production does not align with the stated goals of the government to reduce greenhouse gas emissions, and believes it should be removed from eligibility under the Renewable Energy Target (RET).

This is due to the fact that the burning of biomass is recognised to have significant associated emissions in the range of 78 – 230gCO2eq/KWh. This puts emissions from biomass at 26 – 57.5 times higher than wind, solar or nuclear energy. (Figure 1.)

Figure 1. What are the safest and cleanest sources of energy?

Death rate from accidents and air pollution
1 terawatt-hour is the annual electricity consumption of 150,000 people in the EU.

- 24.6 deaths per terawatt-hour of electricity production (coal, 36% of global electricity)
- 18.4 deaths per terawatt-hour of electricity production (oil, 3% of global electricity)
- 2.8 deaths per terawatt-hour of electricity production (natural gas, 22% of global electricity)
- 4.6 deaths per terawatt-hour of electricity production (biomass, 2% of global electricity)
- 1.3 deaths per terawatt-hour of electricity production (hydro, 13% of global electricity)
- 0.04 deaths per terawatt-hour of electricity production (wind, 7% of global electricity)
- 0.03 deaths per terawatt-hour of electricity production (nuclear, 10% of global electricity)
- 0.02 deaths per terawatt-hour of electricity production (solar, 4% of global electricity)

Greenhouse gas emissions
1 gigawatt-hour is the annual electricity consumption of 150,000 people in the EU.

- 820 tonnes (coal, 36% of global electricity)
- 720 tonnes (oil, 3% of global electricity)
- 490 tonnes (natural gas, 22% of global electricity)
- 78-230 tonnes (biomass, 2% of global electricity)
- 34 tonnes (hydro, 13% of global electricity)
- 4 tonnes (wind, 7% of global electricity)
- 3 tonnes (nuclear, 10% of global electricity)
- 5 tonnes (solar, 4% of global electricity)

Death rates from fossil fuels and biomass are based on state-of-the-art plants with pollution controls in Europe, and are based on older models of the impacts of air pollution on health. This means these death rates are likely to be very conservative. For further discussion, see our article: OurWorldinData.org/safest-sources-of-energy. Electricity shares are given for 2021.

Data sources: Markandya & Wilkin (2017); UNSCEAR (2008; 2018); Sevcik et al. (2016); IPCC AR5 (2014); Pehl et al. (2017); Ember Energy (2021). OurWorldinData.org – Research and data to make progress against the world’s largest problems. Licensed under CC-BY by the authors Hannah Ritchie and Max Roser.

Source: https://ourworldindata.org/safest-sources-of-energy
The inclusion of native forest biomass eligibility for large-scale generations certifications is in our view an incentive for logging companies to continue to log native forests, threatening biodiversity and climate goals. This is supported by evidence internationally. Germany and the UK, for example, have both shown that native forests are being logged for the purposes of providing biomass for power generation.

This is occurring due to a lack of regulations and as a result of biomass demand outstripping supply from plantation forestry.

Australia could face similar supply issues if biomass were to increase as a share of total energy consumption. (Figure 2)

Compounding potential supply issues is climate related natural disasters such as bushfires, droughts, and flooding, all disasters Australia has been experiencing with increasing severity and frequency.

Figure 2.

The issue of biomass’s inclusion highlights an issue with stipulating that it must be a Renewable Energy Target. Biomass is technically renewable and this gives the public the false impression that it is therefore a clean energy technology and should be part of the target. This provides opportunity for certain interest groups to attack the government and therefore the target itself, potentially hurting Australia’s effort to reduce greenhouse gas emissions.

RePlanet Australia suggests that the government change the target to the Clean Energy Target, remove the renewable requirement and instead legislate an emissions intensity cap. An International example of an emissions intensity cap would be the European Union Sustainable Finance Taxonomy which has a cap of 100gCO2eq/KWh.

Removing the renewable requirement and legislating an emissions intensity cap will allow for a diverse range of energy generation and encourage innovation in the energy sector.

The government’s recent commitments to reduce emissions and for ‘no new extinctions’ are important steps in the right direction and we hope that the government takes these commitments seriously to protect biodiversity and our climate. Removing the eligibility of native forest biomass under the Renewable Energy Target is in the national interest and fits with the government’s commitments, we urge the government to act on this.
We thank you for the opportunity to provide a submission on this important issue

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