Submission to DCCEEW: Native forest biomass in renewable energy target

October 2022

The Conservation Council ACT Region is the peak non-government environment organisation for the Canberra region. Since 1981, we have spoken up for a healthy environment and a sustainable future for our region. We harness the collective energy, expertise and experience of our more than 40 member groups to promote sound policy and action on the environment.

We campaign for a safe climate, to protect biodiversity in our urban and natural areas, to protect and enhance our waterways, reduce waste, and promote sustainable transport and planning for our city. Working in the ACT and region to influence governments and build widespread support within the community and business, we put forward evidence-based solutions and innovative ideas for how we can live sustainably.

At a time when we need to reimagine a better future, we understand that the changes we need will only happen with the collective support of our community.

For further information please contact:

Helen Oakey, Executive Director, director@conservationcouncil.org.au.

Introduction

The Conservation Council ACT Region (the Council) welcomes the opportunity to provide input to the Australian Government's consultation on whether to remove electricity generated from native forest biomass (NFB) from eligibility for support in the Renewable Energy Target (RET).

The Council recommends that electricity from NFB should be removed from eligibility for support under the RET.

Native forests are non-renewable resources and as such they should not be exploited for energy, particularly when there are other more suitable, low-emission sources available. Furthermore, as native forests are under existing pressure from impacts such as climate change, land clearing and invasive species, their protection – rather than their exploitation – should be promoted under federal law. NFB for electricity generation – either domestically or for export – must not be allowed to justify continued logging of native forests.

Australian forests are under pressure from multiple threats

Australia is the only developed nation in the world that is recognised as a deforestation front, which means that our native forests are in critical danger.[1] Since colonisation, Australian forests have been incrementally reduced and fragmented by broadscale clearing for agriculture and urban sprawl.[2] They have been over-exploited for decades by logging for timber and paper products, often at an economic loss subsidised by publicly funded state-owned forestry corporations.[3] Shamefully, approximately 50% of Australia's forests have been cleared in the last 200 years,[4] a tragedy which in no small part has contributed to the current state of the environment as "poor and declining", as detailed in multiple successive national State of the Environment reports.[5]

In addition to the impacts of clearing, anthropogenic global warming is causing weather patterns to change faster than forest species can adapt. Global warming has also brought more frequent and intense bushfires and floods which are damaging forest ecosystems at a rate they are not evolved to withstand.

Deliberately and accidentally imported weeds, feral animals and invasive insects and diseases put further stress on delicate forest ecosystems, degrading the often fragmented sections of forest that are left.

The result of these coalescing threats is that Australia's forests are severely endangered and the plants and animals that they support are at increasing risk of extinction, as recognised by

---

[1] WWF International, 2021, Deforestation fronts: drivers and responses in a changing world, UK, accessed 19 Oct 2022.
[2] Evans, M, 2016, 'Deforestation in Australia: drivers, trends and policy responses', *Pacific Conservation Biology*, vol 22 iss 2 pp 130–50, accessed 18 Oct 2022;
Bradshaw, CJA, 2012, 'Little left to lose: deforestation and forest degradation in Australia since European colonisation', *Journal of Plant Ecology*, vol 5 iss 1 pp 109–20, March 2012, accessed 18 Oct 2022.
[3] Lindenmayer, D, 2018, 'Flawed forest policy: flawed Regional Forest Agreements', *Australiasian Journal of Environmental Management*, vol 25 iss 3 pp 258–66, accessed 18 Oct 2022.
[4] Bradshaw, CJA, 2012, 'Little left to lose: deforestation and forest degradation in Australia since European colonisation', Journal of Plant Ecology, vol 5 iss 1 pp 109–20, March 2012, accessed 18 Oct 2022.
[5] Australian Government, 2021, Australia: State of the Environment, Department of Climate Change, Energy Efficiency and Water, accessed 18 Oct 2022.

the Government's own recent Threatened Species Action Plan.[6] Australia's national environment laws are failing to protect our native biodiversity and Indigenous heritage.[7] It is this history of mismanagement of native forests that means that the RET regulations cannot simply be amended to provide greater certainty and public confidence that NFB comes from ecologically sustainable sources.

Against this backdrop, retaining NFB in the RET is wholly inconsistent with addressing the dire and declining state of our natural environment. Allowing the forestry and energy industries to profit from the destruction of native forests further encourages their demise and is unacceptable at a time when we must instead be protecting and nurturing these ecosystems to give them the best chance of survival.

Burning NFB is neither clean nor renewable

The Government should prohibit any wood-based electricity generation under the RET and Large-scale Generation Certificates on the basis that it is not low-emissions. Combustion of organic material from forests can release more carbon dioxide to the atmosphere than coal, contributing to dangerous climate change. Claims of carbon-neutrality appear to depend on emissions accounting loopholes between energy and land sector accounts.[8] While trees do absorb carbon dioxide from the atmosphere over their lifetime, the notion that this is a carbon-neutral offsetting of the carbon dioxide released when they are burnt is false[9] because these two activities occur over entirely different timescales: multi-decadal sequestration versus hours for release.[10] The degradation of a deforested landscape also diminishes its capacity for long-term carbon sequestration due to loss of vegetation and soil carbon capacity. Biomass is also being used by the fossil fuel industry to extend the life of polluting coal-fired power plants.[11]

Australia's native trees simply do not regrow at a pace commensurate with their sustainable usefulness as a rapidly consumed energy source. Biodiverse primary forests cannot be regrown and replaced – regrowth can only ever be a simplified facsimile of the original. Thus, native

---

[6] Plibersek, T, 2022, 'Minister launches Threatened Species Action Plan: toward zero extinctions', media release 4 October, accessed 18 Oct 2022.
[7] Burnett, P, 2021, 'A major report excoriated Australia's environment laws. Sussan Ley's response is confused and risky', The Conversation, 29 January, accessed 19 Oct 2022.
Lindenmayer, D, & Burnett, P, 2021, 'Biodiversity in court: will the Regional Forest Agreements (RFAs) make the EPBC Act irrelevant?', Pacific Conservation Biology, vol 28 iss 5, accessed 18 Oct 2022.
Feehely, J, Hammond-Deakin, N and Millner, F, 2013, 'One Stop Chop: How Regional Forest Agreements streamline environmental destruction', Lawyers for Forests, Melbourne, accessed 20 Oct 2022.
[8] Brack, D, 2017, 'The impacts of the demand for woody biomass for power and heat on climate and forests', Research Paper, Chatham House, UK, accessed 18 Oct 2022.
Pike, F, 2020, 'Factsheet: Impacts of using native forest biomass for energy', Australian Forests & Climate Alliance Inc, accessed 20 Oct 2020.
Millward-Hopkins, J, and Purnell, P, 2019, 'Circulating blame in the circular economy: The case of wood-waste biofuels and coal ash', Energy Policy, vol 129 pp 168–72, accessed 20 Oct 2022.
[9] Booth, M, et al, 2020, 'It's time to stop pretending burning forest biomass is carbon neutral', GCB Bioenergy, vol 12 iss 12 pp 1036–7, accessed 18 Oct 2022.
[10] Stepukonis, S, and Sheth, S, 2021, Converting biomass to energy: a case study in avoiding greenwashing, World Economic Forum, accessed 20 Oct 2022.
[11] Vorrath, S, 2022, 'More emissions than coal': pressure mounts to rule out forest biomass', Renew Economy, 17 Aug, accessed 18 Oct 2022.
Booth, MS, 2014, 'Trees, trash, and toxics: how biomass energy has become the new coal', Partnership for Policy Integrity, accessed 20 Oct 2020.

forests are not genuinely 'renewable' in the same instantaneous way that a pumped hydro scheme or the endless sun and wind are.

Biomass from other (plantation) forest and agricultural sources should also be excluded from the RET on the same basis of not being carbon-neutral. Also, organic material should be preserved at the greatest possible molecular complexity and cycled through natural nutrient processes rather than destroyed by combustion for energy that could be derived from alternative processes (such as wind, solar, geothermal and pumped hydro).[12] Any such land-based biomass demand for energy is likely to be met at the expense of food production and biodiversity habitat, as well as being less efficient and more polluting than wind, solar or hydro.[13]

Ending native forest logging for all purposes is essential if Australia is to meet its net zero emissions targets: our forests are of much greater value left intact for carbon sequestration.[14]

Electricity can be generated from other sources

Providing financial support to build electricity generators powered by burning forest biomass then creates an ongoing 'feed the beast' demand for more biomass, driving further logging and deforestation. A heat-only boiler with an install capacity of 48 megawatts needs about 408 tonnes of biomass – about 17 truckloads – per day.[15] The EU, a large user of biomass-powered electricity, imports forest biomass to supplement local feedstocks to meet renewable energy targets, driving deforestation in Canada and other countries.[16] Because the energy density of wood is so much lower than coal, the quantity of woody biomass required to replace coal as an energy feedstock is unsustainable either locally or globally, therefore other renewable energy sources that do not rely on forest land area are preferable and critical.[17]

As well as removing NFB from the RET, Australian NFB should not be permitted to be exported for energy generation.

Australia has the unparalleled capacity to produce electricity in many other ways (sun, wind, geothermal, pumped hydro[18]) that are truly endless and zero-emissions[19] and do not require the demolition of habitat.

---

[12] Bos, HL, and Broeze, J, 2020, 'Circular bio-based production systems in the context of current biomass and fossil demand', *Biofuels, Bioproducts and Biorefining*, vol 14 iss 2 pp 187–97, accessed 20 Oct 2022.
[13] Drew, G, et al, 2015, 'Zero Carbon Australia: renewable energy superpower', Beyond Zero Emissions, Fitzroy, accessed 18 Oct 2022.
Farine, DR, et al, 2011, 'An assessment of biomass for bioelectricity and biofuel, and for greenhouse gas emission reduction in Australia', *Global Change Biology–Bioenergy*, vol 4 pp 148–75, accessed 20 Oct 2020.
[14] Giggacher, J, 2022, 'Stopping native forest logging key to getting to net zero', ANU Newsroom, 14 October, accessed 18 Oct 2022.
[15] Stepukonis, S, and Sheth, S, 2021, Converting biomass to energy: a case study in avoiding greenwashing, World Economic Forum, accessed 20 Oct 2022.
[16] Brack, D, 2017, 'The impacts of the demand for woody biomass for power and heat on climate and forests', Research Paper, Chatham House, UK, accessed 18 Oct 2022.
[17] Bos, HL, and Broeze, J, 2020, 'Circular bio-based production systems in the context of current biomass and fossil demand', *Biofuels, Bioproducts and Biorefining*, vol 14 iss 2 pp 187–97, accessed 20 Oct 2022.
[18] Blakers, A, et al, 2017, 'ANU finds 22,000 potential pumped hydro sites in Australia', Australian National University, Canberra, 17 September, accessed 20 Oct 2022.
[19] Drew, G, et al, 2015, 'Zero Carbon Australia: renewable energy superpower', Beyond Zero Emissions, Fitzroy, accessed 18 Oct 2022.

Native forest biomass is not "waste"

The fallen timber, leaf litter and logging 'residues' on the floor of native forests – which includes entire trees not designated as 'sawlogs' or 'pulplogs' – is not 'waste' to be collected and burned.[20] It is organic matter and understory plants that create habitat for ground-dwelling flora and fauna and is a source of nutrients that is gradually consumed by other life and returned to the soil to support new plant growth and carbon sequestration. Removal of biomass, whether it is natural deadfall or the remnants of logging or 'salvage' after bushfires, destroys habitat, increases fire risk, and effectively extracts nutrients from the ecosystem, depleting the landscape's ability to regenerate.[21] Wildlife diversity requires ecological complexity, not the simplified results of 'managing' forests for logging.

True circularity of materials requires keeping them as intact as possible and cycling through their natural systems. That is, biological matter should be cycled through biological systems because only life can generate more life.[22] "Converting" organic matter to energy by burning it actually destroys the complex organic molecules, causing them to be lost forever from the natural nutrient cycle.

Native forests are more valuable left intact

Australia's native forests are important ecosystems, rich in biodiversity. Intrinsically valuable for their beauty, they are also home to First Nations cultural sites. Yet even from a practical environmental services perspective, native forests are of far greater value to us as carbon sinks, air purifiers, water filters, microclimate regulators, soil conditioners, recreation destinations, biodiverse wildlife habitats, and many other functions,[23] than as feedstock for electricity generation. The loss of those ecosystem services is not worth the potential short-term gain in energy production, and should certainly not be subsidised by the Australian Government and public funds.

Summary and Recommendations

The Conservation Council recommends that electricity from NFB be removed from eligibility for support in the RET on the grounds that it encourages destruction of native forests, destroying habitat for native wildlife and creating climate pollution.

Funding for any existing NFB projects should be phased out.

The Australian Government should be supporting the protection and regeneration of biodiverse native forests, not the publicly subsidised destruction of them.

---

[20] Environment East Gippsland, n.d., 'Ten good reasons to reject the inclusion of native forest biomass in the renewable energy target', accessed 20 Oct 2020.
[21] Thorn, S, et al, 2017, 'Impacts of salvage logging on biodiversity: a meta-analysis', *Journal of Applied Ecology*, vol 55 iss 1 pp 279–89, accessed 18 Oct 2022.
GECO, 2022, 'Devastating post-bushfire logging – 2 years in photos', Goongerah Environment Centre, 7 April, accessed 20 Oct 2022.
Lindenmayer, DB, et al, 2008, *Salvage logging and its ecological consequences*, Island Press, Canada, accessed 20 Oct 2022.
[22] Ellen Macarthur Foundation, n.d., 'Regenerate nature' accessed 20 Oct 2022.
[23] Keith, H, et al, 2017, 'Ecosystem accounts define explicit and spatial trade-offs for managing natural resources', *Nature Ecology & Evolution*, vol 1 pp 1683–92, accessed 18 Oct 2022.