Nature Conservation Council
The voice for nature in NSW

3 April 2024

NSW Department of Planning
Major Projects
Via online submission form

To whom it may concern,

Submission to the exhibition of the Restart of Redbank Power Station SSD-5628496

The Nature Conservation Council of New South Wales (NCC) is the state's peak environment organisation. We represent over 190 environment groups across NSW. Together we are dedicated to protecting and conserving the wildlife, landscapes and natural resources of NSW.

NCC opposes the project, which we believe will harm our climate and ecosystems.

The public concern that was expressed at the 2021 proposal to reopen Redbank as a forest biomass waste-to-energy facility has not been ameliorated by the new proposal. The current proposal changes the tenure of land from which the fuel is intended to be sourced. This does not avoid the deeply problematic nature of this project for climate, ecosystems, Country and health that conservation groups have been pointing to for years.

Under this proposal, Redbank will be "*fuelled with ecologically sustainable biomass (in compliance with all relevant legislative requirements and excluding native forestry residues from logging) to deliver near net zero CO2 power generation*."[1]

This claim is misleading.

The proposal would have a harmful impact on the urgent need to reduce CO2 emissions and avoid the worst impacts of climate change.

The proponent continues to utilise carbon accounting which considers CO2 emissions from biomass as net-zero.

Verdant claims that because trees sequester carbon when they grow, burning them is 'net zero' and their emissions are accounted for in the land use, land use change and forestry sector.

This claim is broadly disputed and the approach is widely accepted as problematic and inaccurate[2] when considering the below:

- Woody biomass is less energy dense, containing more moisture and less hydrogen than fossil fuel sources. As a result, combustion for energy usually emits more greenhouse gas emissions per unit of energy than fossil fuels sources. Burning green wood chips emits 50% more CO2 per megawatt hour of energy produced than burning coal.[3]

- Emissions from combustion immediately enter the atmosphere, whilst their withdrawal from vegetation re-growth occurs over a number of decades. Given the urgent need to reduce atmospheric concentrations of greenhouse gasses, this is not a climate friendly outcome.
- The proposal is to use biomass from land that has been cleared, not in forests that are going to regrow. Most of the fuel sources proposed are the result of the permanent loss of living carbon via land clearing, particularly the removal of "invasive native species" which there is no intention to allow or foster regrowth.
- Vegetation clearing destroys stable, long-term stores of carbon. Even if the forests do eventually regrow, carbon storage is substantially eroded for many decades, whilst some stores will never recover due to ecosystem collapse and intensified fire activity.
- Complex interactions with soil carbon stocks are also eroded

In February 2021, over 500 scientists from around the world signed an open letter to the leaders of the United States, EU, Japan and South Korea. The letter condemned forest derived biomass because it is not carbon-neutral and because it draws subsidies and investment away from genuine green energy sources.[4]

The project will not, as Verdant suggests, help decarbonise the electricity system. It is an unnecessary distraction from the renewable transition.

The imperative for a rapid renewable energy transition is stronger than ever. To achieve the agreed Paris goal and limit warming to 1.5 degrees, all credible scenarios suggest that advanced economies including Australia must phase out emissions intensive power by 2030.[5]

The Redbank proposal claims emissions of only 5000 tonnes of scope 3 emissions and and 21,200 scope 1 emissions each year.

However, the proposal is predicated upon the accounting trick that implies burning 850,000 tonnes of wood on site to generate electricity will result in no CO_2 emissions. In real time, the proposal will be the cause of more than a million tonnes of scope 1 emissions each year.

This is roughly the equivalent of:

- 255,000 cars on the road
- 73,000 homes

There will be additional emissions from debris and soils at the clearing sites, and from processing and transporting woodchips.

The urgency of the emissions reduction task means that investors and developers concerned with achieving a safe-climate future should be seeking opportunities to accelerate the

deployment of genuinely clean and renewable power generation, not projects that will contribute emissions to the atmosphere year after year.

Nexa Advisory published a report in July 2023[6] confirming that by accelerating new capacity renewable builds, bolstering firming capacity, and supporting distributed energy resources, among other things, NSW will achieve energy security without dirty power. The 2023 AEMO Energy Security Target Monitor report also shows that there is no reliability "gap" out to 2033.[7]

As enough renewables are built to ensure reliability, dirty power plants should close as soon as possible. New power generators that emit carbon pollution should not be part of the mix.

This project risks undermining investment in genuinely renewable energy sources, and tainting NSW's reputation as an investment destination for energy-intensive industries seeking to decarbonise and utilise our abundant renewable energy supplies.

A massive increase in truck movements to deliver fuel to Redbank is another source of emissions and a far-reaching disturbance.

The proponent's plans for sourcing fuel assumes that 42 tonne capacity B-double trucks will take 56 trips to the power station per day to haul the required biomass feedstock. That is more than one truck every half hour on average and equates to 20,238 trips per year per year.

The proponent does not detail the cost or emissions for moving biomass from its site of origin to chipping, storage and collection sites. These sites may be in other LGAs and necessitate Development Approvals in those sites.

Further, are very few "invasive native species" listed in the greater Sydney, Hunter & Coastal regions, certainty not enough to run a power plant.[8] This will necessitate long road journeys from the central west and western NSW.

We also believe that there is a risk that a large proportion of the biomass that will be burnt is likely to be sourced from local land clearing.

The proposal seeks to exploit NSW land management rules that are unequivocally failing nature and that are currently under review.

Clauses under the Protection of the *Environment Operations (General) Regulation 2021* (POEO Regulations) exempt certain types of native vegetation or woody waste from the prohibition on the use of native forest biomaterials in electricity generation.

These exempt materials include:

- materials from various types of plantation forests

- sawdust or other sawmill waste
- waste arising from certain wood processing or manufacturing activities
- trees cleared in accordance with a land management (native vegetation) code under Division 5 of Part 5A of the *Local Land Services Act 2013* and all relevant Codes and Regulations (see Local Land Services).

The proponent is seeking to exploit loopholes in Part 5A of the *Local Land Services Act* 2013. Part 5A contains the self-assessment allowances that are largely responsible for the tripling of habitat clearing since 2016. Under these rules, landholders are allowed to self-assess the ecological value of a piece of land, and then clear it with little to no oversight.

Habitat clearing on freehold land is now the biggest cause of environmental loss in NSW, with 50 million trees and almost 100,000 hectares lost each year. It has labelled “the main threats to the survival of species" in the most recent NSW State of the Environment Report.

Environment organisations, regulators and government organisations have, for many years, been pointing to the deeply problematic nature of the laws that the proponent is claiming make their operation "ecologically sustainable".

A 2019 review by the Audit Office of NSW concluded that the rules may not be responding adequately to environmental risks and identified significant delays in compliance and enforcement activity to address unlawful clearing.

Also in 2019, a review of the land management framework by the Natural Resources Commission (NRC), but not publicly released until late March 2020, found that:

- Clearing rates have increased almost 13-fold from an annual average rate of 2,703ha a year under the old laws to 37,745ha under the new laws
- Biodiversity in 9 out of 11 regions is now at risk
- Unexplained clearing has increased, with the NRC concluding “compliance frameworks are inadequate and high rates of clearing pose a major risk”

In August 2020, Environmental Defenders Office released its report Restoring the Balance in NSW native vegetation law - Solutions for healthy, resilient and productive landscapes. The report identifies 10 areas of regulatory failure and sets out a law reform pathway with 27 recommendations for reform, including an overhaul of Part 5A of the *Local Land Services Act 2013*.

Finally, in 2023 Ken Henry pointed to a lack of regulatory oversight in agricultural land clearing and inconsistent biodiversity outcomes in the statutory review of the *Biodiversity Conservation Act (2016),* in which he found that NSW nature laws are failing.

It is incumbent upon the current Government, and it has publicly committed to, making significant changes to these rules to end excessive land clearing.[9] These changes are anticipated in 2025.

The new proposed fuel source for Redbank power station will create a market to destroy even more habitat.

The proponent's fuel supply and characteristics study assumes that habitat clearing on freehold rural land will stay at current levels in perpetuity; a problematic assumption. First, to meet emissions targets, habitat clearing must end. The expected rate of clearing should be a consistent and steep reduction. Second, in NSW there are potentially millions of hectares of rural land that are approved for clearing but not yet cleared, an opportunity for the proponent to exploit.

Previous experience in southern NSW and in Victoria, according to Professor David Lindenmayer, an Australian National University specialist in forest ecology and logging, is that when markets for waste and chips were developed they tend to become self-sustaining and intensified logging practices."[1011]

This proposal will incentivise the clearing of even more habitat across NSW, further devastating fragmented and at-risk forest ecosystems. The current level of habitat clearing in NSW is completely unsustainable, and in a biodiversity and climate crisis, it certainly cannot increase.

The project is completely inappropriate to meeting climate and species objectives in NSW. It is at odds with Australia's international commitments to halt and reverse deforestation by 2030[12].

The NSW Government has committed to outlawing the very exemption loophole through which Verdant is seeking to source a third of its ongoing fuel.

The EIS Fuel Supply and Characterisation Study (page 41) shows that 30% of the ongoing fuel source for the power station will be biomass from agricultural waste or land clearing activities. NSW Labor has had a longstanding commitment to close the loophole that allows the burning of any native vegetation for electricity.[13] In addition to the uncertainty created by promised reform to land clearing laws, reform to POEO Regulations creates uncertainty about the ongoing viability of the proponent's plan.

Biomass has negative and unjust health impacts including releasing deadly air pollution.

There is evidence that coal fired power harms the health of populations around power stations. However, burning biomass can have even more significant public health impacts. Burning biomass releases:

> "Hazardous air pollutants (HAPs) that... "are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental effects"... Biomass burners commonly emit ten tons or more of the acid gases and from one to five tons of organics each year. Even "clean wood" – that is, forestry-derived wood, as opposed to construction and demolition debris – emits these chemicals when burned. Burning clean wood also emits non-negligible amounts of heavy metals. Burning "urban wood" – a friendly term for construction and demolition debris (CDD) – significantly increases emissions of arsenic, chromium, copper, lead, and mercury, as well as dioxins/furans and pentachlorophenol (PCPs)."[14]

Data from the Drax power station in the UK shows that biomass burning has increased particulate pollution by 400 percent since switching four of six boilers from coal to forest derived biomass, while power output has remained constant.[15]

Conclusion and recommendations

This project is the wrong type of energy source at the wrong point in time.

- There is uncertainty and impending change to the legal frameworks with which the proponent justifies this project. The fact that the rules that permit the use of the fuel sought by Verdant are either actively under review, or have been flagged for reform, demonstrates that the status quo is not sustainable.
- There is no need for it as the energy system continues its essential and rapid transition toward genuine renewables.
- The spirit of intent for energy projects going forward must be to for true zero emissions and to regenerate and improve habitat – this project does the opposite.

We recommend that the consent authority rejects the application on the basis of unacceptable impact on the climate through the potential for degradation of native habitat and greenhouse emissions at the point of combustion.

At the very least, that the project should not be approved until the completion of the review of the NSW land management framework, and a reassessment of fuel availability is undertaken.

Thank you for the opportunity to participate in this consultation.

Your key contact point for further questions and correspondence is Jacquelyn Johnson, Executive Officer, available via jjohnson@nature.org.au and (02) 9516 1488. We welcome further conversation on this matter.

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Yours sincerely,

Jacqui Mumford
Chief Executive Officer
Nature Conservation Council of NSW

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[1] Restart Redbank EIS: https://www.planningportal.nsw.gov.au/major-projects/projects/restart-redbank-power-station

[2] https://www.griffith.edu.au/__data/assets/pdf_file/0026/1642166/BiomassPaper_finalAK.pdf and https://www.chathamhouse.org/2017/02/woody-biomass-power-and-heat

[3] https://www.griffith.edu.au/__data/assets/pdf_file/0026/1642166/BiomassPaper_finalAK.pdf

[4] Statement available at: https://www.dropbox.com/s/hdmmcnd0d1d2lq5/Scientist%20Letter%20to%20Biden,%20von%20der%20Leyen,%20Michel,%20Suga%20&%20Moon%20%20Re.%20Forest%20Biomass%20(February%2011,%202021).pdf?dl=0

[5] International Energy Agency, Net Zero Roadmap, 2021

[6] Report available here

[7] https://www.energy.nsw.gov.au/sites/default/files/2023-12/2023_ESTM_Report_v2.pdf

[8] https://www.lls.nsw.gov.au/__data/assets/pdf_file/0003/740586/Land-Management-Code-Invasive-Native-Species.pdf

[9] https://assets.nationbuilder.com/natureorg/pages/4105/attachments/original/1678771732/Survey_Response_-_Nature_Conservation_Council_and_TEC_-_March_2023_-_NSW_Labor_response.pdf?1678771732

[11] https://www.smh.com.au/environment/conservation/renewable-energy-firm-backs-return-to-woodchip-exports-from-newcastle-20210908-p58pzk.html

[12] https://webarchive.nationalarchives.gov.uk/ukgwa/20230418175226/https://ukcop26.org/glasgow-leaders-declaration-on-forests-and-land-use/

[13] https://assets.nationbuilder.com/nswlabor/pages/820/attachments/original/1707353853/2023_NSW_Labor_Platform.pdf?1707353853 at clause 1.91

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[14] Sigsgaard, T. et al., 2015. Health impacts of anthropogenic biomass burning in the developed world, European Respiratory Journal
Available: https://erj.ersjournals.com/content/erj/46/6/1577.full.pdf
[15] EU Biomass Legal Case, 2019. *Drax (UK): 1000 tonnes of deadly particulate pollution a year, a 400% increase since they switched from coal to biomass.* Available at: *http://eubiomasscase.org/2019/03/08/drax-uk-1000-tonnes-of-deadly-particulate-pollution-a-year-a-400-increase-since-they-switched-from-coal-to-biomass/*