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# Power generation must be climate and nature positive

An opposition to the re-opening of the Redbank Power Station (SSD-56284960).

### The climate challenge

The likelihood of breaching the 1.5 degree global warming threshold this decade should give pause for thought to a proposal to burn an alternative carbon fuel that will emit more  $CO_2$  when burned than coal (Mackey, 2025).

It is our collective challenge to prevent and  $reduce CO_2$  emissions, because the lifetime of a pulse of  $CO_2$  in the atmosphere is decades, to centuries, to millennia. Additional long-term and low-risk carbon sequestration into living biomass is also needed, but short-term fluxes associated with biomass crops will do little to reduce the accumulation of greenhouse gas (GHG) emissions in the atmosphere.

New research, published in the journal of *Climate Resilience and Sustainability*, provides a critical assessment of the claims that burning woody biomass is an effective climate solution - concluding that it is not (Mackey, 2025).

#### A glib approach to assessing GHG emissions

The project's assessment process takes advantage of - and appears to misinterpret - carbon accounting rules in order to hide the  $CO_2$  emissions when biomass is burned. This lack of transparency creates a false impression that burning biomass would have zero  $CO_2$  emissions – misleading decision makers, project investors and energy consumers.

The reliance on a desire to avoid counting emissions in both the energy and land sector, results in a serious problem for comparability with emissions from coal. Similarly, complex land sector carbon accounting rules make it difficult to see the gross emissions from the land clearing that this project will rely on. Land Use Land Use Change accounting rules are difficult to understand and allow netting out which can create the false perception of carbon neutrality. In partial recognition of this problem, the IPCC recommends that facilities that burn biomass include a

footnote in their GHG accounts to ensure that annual  $CO_2$  emissions are transparent. The  $CO_2$  emissions when biomass is burned should be reported by source (tree clearing, crops and waste by source).

Claims that emissions from 'deforestation' count as zero because forests re-grow demonstrates how difficult it is to grasp land sector carbon accounting. Deforestation is a land use change - from forest to non-forest land, either to grazing or cropland. This project relies on land use change. Emissions from land use change are not netted out in the way that is suggested! Gross emissions from deforestation are included in Australia's GHG accounts. Furthermore, it is incorrect to claim that carbon sequestration that would occur anyway, elsewhere in the landscape means that the project is carbon neutral.

Deforestation is a major source of emissions in Australia, including in NSW. Emissions from clearing re-growth woodlands in NSW were estimated by the National Greenhouse Gas Inventory (NGGI) to be 3.1 mtpa CO<sub>2</sub>-e in 2022-2023 (<u>National Inventory Report, Vol. 2</u>). Australia accepts that it is just as important to reduce emissions from deforestation (and forest degradation) as it is to reduce emissions from fossil fuels.

Moreover, the claim that this project will have no effect on land sector emissions is unlikely to be true and if it were true, should not be presented as a project benefit when our challenge is to rapidly and substantially *reduce* emissions by 2030 and thereafter.

Australia, along with every other signatory to the UNFCCC, committed in the mitigation section of the COP 28 decision on the Global Stocktake to increase efforts to end deforestation and forest degradation by 2030 (COP 28, CMA 5 para. 33). This challenge is faced by every relevant state, including NSW.

#### Incentive to clear

The proponents' claim that the project provides no incentive to clear vegetation has not been substantiated. No information is provided on the business case for landholders and other suppliers. Why would anyone enter into a supply agreement with the proponent if there is no economic benefit to them? If there is an economic benefit it will provide an added incentive to clear.

#### Where should emissions from burning biomass be accounted?

The current global approach of treating  $CO_2$  emissions as zero at the stack, on the basis that they are already fully accounted in the land sector, requires closer examination.

If requested, the NGGI could disaggregate land-clearing emissions by region in NSW. When all the supply areas are known, this should be done.

It's also conceivable that the modelled emissions accounted from land clearing could well be less than the actual emissions when biomass is burned.

To check this, it will be important to ground truth the emissions associated with clearing from all sources used to supply the Redbank project. Data provided by a comprehensive on ground assessment of the impact of clearing on  $CO_2$  emissions from all 3 carbon pools – living biomass, coarse woody debris, and soil – would provide an opportunity to refine the FullCam model used

to generate the NGGI and inform Australia's GHG accounts. In the areas where they will obtain biomass, the proponents should be required to conduct scientifically robust on site assessments of the carbon stored in all 3 pools. It is important to assess the volume of  $CO_2$  that will be released from each pool and the associated time frames.

We know that  $CO_2$  emissions at the stack from burning biomass are instantaneous and will be at least 1.16 m.t.  $CO_2$  per year from this project. A comparative analysis of: NGGI estimates of emissions from land clearing; actual emissions from all areas and all pools and over what time frames; and actual, instantaneous emissions from the stack, would be instructive. This would enable an informed assessment of the most accurate way to account for emissions from biomass burning and make it technically feasible to do so in the most appropriate sector – avoiding double counting.

## Biodiversity loss and climate change must be tackled together

The challenge facing NSW is to reduce gross emissions from the land sector and increase net carbon sequestration, while reversing the extinction crisis and improving ecological integrity and connectivity at a landscape scale.

The forests and woodlands subjected to land clearing harbour many species, including those described as 'invasive native species'. All these species - many of which are rare, threatened and endangered - are important for ecological functions and connectivity. Criticism of the term 'invasive native species' from biodiversity experts abound. The Henry Review of the NSW Biodiversity Act made it plain that this term is out-dated and in need of urgent review. Importantly, the Henry Review recommended that biodiversity protection and restoration be the placed above development considerations to ensure we have a chance of halting and reversing biodiversity loss.

The NSW Planning framework is out-dated and in urgent need of reform. The Independent Planning Commission must consider the reason for recommended shifts in policy, including the linkages between the biodiversity and climate crises and the need for integrated action, described below.

#### Minimising the risk to ecosystem carbon reservoirs and sinks

The <u>NSW Net Zero Commission Report (2024)</u> touches on the increasing vulnerability of carbon storage in the land sector due to the interaction of past human use and climate change. This is worthy of significant unpacking as the carbon stocks in our most carbon dense ecosystems - especially our native forests - are at increasing risk of releasing stored carbon to the atmosphere.

Australia, together with the rest of humanity is facing an unprecedented and entwined set of escalating risks as global heating and biodiversity loss escalate. These existential threats to human well-being can only be prevented if we tackle the climate and biodiversity challenges together. As the first ever joint workshop of the scientific advisory bodies to the Climate Convention (IPCC) and Biodiversity Convention (IPBES) noted in 2021, the climate and biodiversity crises amplify each other and urgent synergistic action to protect and restore carbon dense and species rich ecosystems is needed (IPBES-IPCC, 2021). Bringing climate and biodiversity policy and practice together is now an accepted imperative as this decision taken at UNFCCC COP 28 illustrates:

"...the importance of conserving, protecting and restoring nature and ecosystems towards achieving the Paris Agreement temperature goal, including through enhanced efforts towards halting and reversing deforestation and forest degradation by 2030, ...and by conserving biodiversity, ...in line with the Kunming-Montreal Global Biodiversity Framework; " (Para 33 from COP 28 CMA 5).

And, in an historic decision at COP 16 in 2024 the UNCBD (decision 16/22) recognised:

- "That biodiversity and ecosystem integrity play an important role in combating climate change";
- "The essential functional role of biodiversity in underpinning the integrity of ecosystems and ecosystem services"; and
- That "protecting and restoring ecological integrity contributes to addressing both climate change and biodiversity loss, and its impacts".

Parties to the UNCBD were urged to "identify and maximize potential synergies between biodiversity and climate actions, including by prioritizing the protection, restoration and management of ecosystems and species important for the full carbon cycle and contributing to climate change adaptation".

At a crucial time (leading up to 2030), this project is dependent on maintaining the status quo. The foregone opportunity to reduce clearing and improve the outlook for biodiversity and reduce emissions is never considered –a serious weakness in the assessment process.

#### Conclusions

The questions asked by the assessment process do not get to the heart of the problems for climate and biodiversity that this project relies on and would sustain.

Failure to conduct an assessment and provide any actual information on  $CO_2$  emissions, both from land clearing and at the stack, beggars belief. A publicly available, comparative analysis is essential to inform the establishment of a new project dependent on carbon fuel sources - all of which will generate ongoing and substantial  $CO_2$  emissions.

Before approving a project that relies on tree clearing as a source of fuel, consideration should be given to landscape scale biodiversity impacts including ecological processes in regenerating areas; site-specific habitat values; and connectivity requirements of birds and other wildlife.

All the biomass sources and areas where crops would be established have not been determined. The generation of significant amounts of power from crops can require very large areas and be energy intensive input (<u>PFPI, 2021</u>). The environmental impacts of establishing energy crops have not been and cannot be assessed as at this stage.

The project should be ruled out because it reinstates the burning of carbon fuel, relies on the status quo for land clearing and may well provide incentives to increase it, competes with and distracts from genuine sources of clean renewable energy and makes it more difficult to implement much needed clearing reforms.