

## OBJECTION TO RESTART OF REDBANK POWER STATION SSD-56284960

I am writing to object to SSD-56284960 Restart of Redbank Power Station. The reasons for my objection are as follows:

### FEEDSTOCK ISSUES

This proposal requires 850 000t (wet) of biomass feed. I note that the SEARs require

- *a supply chain assessment demonstrating that the required volumes of feedstock with no higher value use are available;*
- *demonstration that demand for feedstock can be met over the operational lifespan of the plant;*

The EIS provides a range of broad-brush possibilities and ballpark figures, but no specifics about where feedstock will actually come from, now and over the next 30 years, how much it will cost to grow/harvest and transport and whether the whole operation is financially viable. I will be interested to see whether the Planning Department and the EPA believe these requirements from the SEARs have been met.

The EIS says *Fuels for the Redbank Power station will be implemented in two stages. The first stage will involve the start-up of operations using biomass (with no higher order uses) sourced primarily from approved land clearing operations (from existing civil and road works), biomass from invasive native species on agricultural land as approved by Local Land Services NSW and potentially a limited amount of purpose grown biomass.*

I would argue that in the **current climate crisis**, the so-called “*invasive native species*” are providing a higher order use by **drawing down and storing carbon!** Trees are the **only practical, proven, cost-effective carbon capture and storage system** that we currently have and we should be planting more, not allowing them to be cut down and burnt for electricity.

We are also in a **biodiversity crisis** and the leading cause of biodiversity loss is **habitat loss**. So called “*invasive native species*” – regrowth by another name – are providing habitat for feeding, breeding and shelter for native birds and animals. Again, this is a “*higher order use*” than burning for electricity, particularly when there are other genuine sources of renewable energy and storage available.

Further, Appendix M states *Verdant have been working with Western LLS and a local business organisation Western Regeneration Pty Ltd, based in Cobar to enter into a supply agreement for up to 500,000 tonnes per annum of biomass from their approved INS clearing.*

Interestingly, a search for Western Regeneration shows an ASIC “Notice of proposed deregistration” from September 2018, which makes me question their involvement.

Cobar is approximately 600km from Redbank Power Station – a significant distance and a significant cost for transport. Can this operation really be economically viable?

Without Redbank creating a market for wood, it is highly probable that *invasive native species* would be left growing, performing the functions of carbon drawdown and storage and biodiversity support. Instead, Redbank will **accelerate the rate of clearing**, contributing to global heating, biodiversity loss and soil erosion.

From the EIS *The second stage will involve the introduction or increased use of purpose grown biomass which will be further increased over a period of two to four years from approval, and, if approved and declared an eligible waste fuel by the NSW EPA, the introduction and use of DBF.*

Much of the information provided in Appendix M on purpose grown biomass feedstock seems to describe **broad-brush possibilities** rather than actual sources of feedstock. It is suggested that there are vast areas of land surrounding Redbank that are currently used for cropping, grazing, mining/quarries, “transition land” etc that could be used for *short rotation woody crops*. It is hard to see how most of these uses are in fact compatible with growing *short rotation woody crops*. Cattle have a habit of nipping off new shoots and clearly mines are off limits and their buffer zones were made to keep people away from the impacts.

Until the proponent has a contract with a farmer with the required knowledge and experience for the required crop, suitable equipment in the area and legal access to suitable land, he doesn't have any *purpose grown biomass*, let alone 50 000t of the stuff in year 1 and 490 000t of it by year 5. Even with all those things in place, the farmer would then have to deal with stock, hares, rabbits, grasshoppers, frost, drought, fire and herbicide overspray to actually produce a viable crop.

Another missing link in all this conjecture on feedstock is an analysis of processing *invasive native species* or *short rotation woody crops* into a feedstock suitable to feed into the power station. We are told *All processing including drying, chipping and screening will be performed off-site. No fuel processing to specification will occur at the Redbank Power Station.*

As far as I can see, no information is provided about where this processing may occur, what consents may be required, how long the assessment process might take or what costs would be involved.

Many in the community share my concern that when *invasive native species* are found to be too expensive to truck to Warkworth or the *short rotation woody crops* don't work out, that the proponent will come back with a modification to again access native forest "waste" as per his previous application. This would only compound my concerns about climate and biodiversity impacts.

The EIS talks about growing biomass on coal mine buffer lands, but once a market is created, there is no guarantee that this is what will happen. The pricing of *purpose grown biomass* has the potential to incentivise existing farmers to grow these crops, at the expense of food and fodder crops they may already be growing. Conversely, if the price is not high enough, no one will waste their time growing it. There is no information on how this balancing act will be achieved.

There also appears to be no analysis of the impact of any of these variables on the cost of electricity generated, let alone the Levelised Cost of Energy to allow comparison with other sources of energy.

## GREENHOUSE GAS EMISSIONS

The EIS states: *In accordance with conventions and reporting guidelines (e.g. IPCC 2006, 2019; DCCEEW 2023a), the emission factor for CO<sub>2</sub> from the combustion of biogenic carbon was taken to be zero. The actual direct CO<sub>2</sub> emission at the point of biomass combustion would not be zero. However, there is a simplifying assumption in the guidelines that the amount of CO<sub>2</sub> released during combustion is balanced by the CO<sub>2</sub> taken up by the biomass during its life.*

This can only be true if trees are growing at the same rate they are being consumed ie 850 000t per year. It doesn't however, take into account the time taken for trees to grow back to where they were. This could be 30 years for *invasive native species* or 4 years for *short rotation woody crops*. Regardless, we have an urgent need to reduce CO<sub>2</sub> emissions NOW – we can't afford to be waiting 30+ years for new trees to grow to absorb the CO<sub>2</sub> emitted from burning the previous batch.

The other problem is that *invasive native species* and trees cleared for infrastructure projects are not going to be allowed to grow back at all, so the emitted CO<sub>2</sub> from this source is **never drawn down and sequestered**. There is no way that this will be a net zero CO<sub>2</sub> process.

Emissions of CO<sub>2</sub> from the combustion of wood are actually higher than for the combustion of coal – up to 150% higher, for the same amount of power generated. This is partly due to the higher moisture content of wood – claimed here to be 25%. Some of the energy released is required to drive off this moisture leaving less heat to raise steam.

Every coal mine I have ever objected to wriggled out of any responsibility for the CO<sub>2</sub> emissions from burning the coal – that was for the country where the coal was burnt to take into account. It seems unbelievable that this operation which does the burning of biomass to produce electricity has no responsibility for the emissions!

In 2021, the Legislative Assembly Committee on Environment and Planning has released its report on “Sustainability of energy supply and resources in NSW”, including assessing energy from biomass. It concluded that “**Native forest biomass isn't a renewable energy source. It reduces the ability of NSW forests to absorb atmospheric carbon, and produces carbon emissions.**” I can’t see why the same conclusion wouldn’t apply to “*invasive native species*”, which, afterall, are simply regrowth of native species.

Burning biomass for electricity is increasingly discredited overseas. In 2019, 800 scientists from across the world signed a petition condemning burning biomass for electricity. [https://www.pfpi.net/wp-content/uploads/2018/04/UPDATE-800-signatures\\_Scientist-Letter-on-EU-Forest-Biomass.pdf](https://www.pfpi.net/wp-content/uploads/2018/04/UPDATE-800-signatures_Scientist-Letter-on-EU-Forest-Biomass.pdf)

The NSW Government, via the Planning Department, with input from the EPA, need to look at the true CO2 emissions from this plant, likely some 1.3Mtpa, and **decide whether this technology belongs in the NSW roadmap to tackle climate change.**

## **POLLUTION/HEALTH**

The “*Plant and Equipment Modifications to Allow the Use of Biomass as Fuel*” in the EIS doesn’t appear to contain any upgrade of **pollution control equipment for waste gases** from the process. This seems strange when it is widely acknowledged that the **high intensity of emissions** was one of the reasons that Redbank shut down when operating on coal fines.

No information has been provided on the processing and combustion characteristics of *short rotation woody crops*, but on a 4 year rotation, I am imagining a product with high leaf to timber ratio. Anyone who has ever built a fire would understand the impact of putting “green” timber or leaves on it – it smokes like crazy. What assurance do we have that very fine particulates ie 2.5microns or less will not be emitted from this plant and further impact respiratory health in the Hunter Valley?

The EIS states “Annual average PM10 and PM2.5 - the existing background for annual average PM10 and PM2.5 was **already above the impact assessment criteria for 2018**. However, the contribution from the Proposal (biomass firing plus fugitive emissions) to annual average PM10 and PM2.5 was approximately 1% of the impact assessment criteria”. I think most people in the Hunter would say **“Enough is enough! We’re already over the limit - no more!”**

I read somewhere that a Plume Rise Impact Assessment was required due to the proximity of the Hunter Valley Gliding Club at Warkworth airstrip. I query whether any potential impact has been assessed.

## **JOBS OVERSTATED**

The EIS states “An estimated 331 direct full time equivalent (FTE) jobs and 504 indirect production and consumption FTEs during construction;” – whatever that means?

Perhaps the indirect jobs are related to growing/harvesting, processing and transport of biomass to the site. When none of the impacts of these steps are taken into account in this EIS, it seems to be misleading to include the jobs created in that area. No doubt these will be counted again when DAs are put in to establish the processing facilities.

The Hunter needs real jobs to survive and thrive during the transition out of coal – we don’t need fairy stories about job creation.

Please stop and think about how long it takes to burn a tree and how long it took to grow that tree, you will easily see that **this proposal can never be sustainable!**

I urge you to consider the points I have raised above, acknowledge that **biomass is not a renewable, sustainable source of energy**, and **refuse this application once and for all**.

Yours faithfully,

Janet Murray