



To the NSW Independent Planning Commission,

I write to submit comments on the proposal to restart the Redbank Power Station, which seeks to burn up to 700,000 tonnes per year of naturally regenerating woody vegetation (native “woody weeds”) to generate 150 MW of continuous electricity.

1. INCORRECT NUMBERS: CLAIMED OUTPUT IS EXAGGERATED

The proposers’ numbers are fundamentally flawed. Recalculating energy output with realistic assumptions reveals that:

- Even with high-quality, dry biomass (~12 GJ/tonne) and peak thermal-to-electric efficiency (~30%), the fuel volume supports only about 80 MW, not 150 MW.
- Independent industry benchmarks show that typical biomass plants operate below 25–30% efficiency and use lower LHV fuel (~10 GJ/tonne), further reducing feasible output to around 55 MW, consistent with energy conversion logic and tables in Griffith University’s analysis of forest biomass energy.

Implication: The project either understates required fuel volumes—potentially allowing up to double the biomass harvest—or significantly overstates expected energy generation. Both would mislead the Commission and the public.

2. BIOMASS BURNING WILL DRIVE FOREST DEGRADATION

Burning native forest or regrowth biomass is not carbon-neutral and often worse than fossil fuels in climate impact:

- The Australian Forests & Climate Alliance states that industrial-scale combustion of native forest biomass emits more carbon per unit of energy than coal and hinders the uptake of emerging clean technologies.
- The Griffith University Climate Action Beacon warns that shifting to forest biomass for energy risks increasing CO₂ emissions and compromising forest ecosystem integrity.
- EU research, including from the Joint Research Centre, finds most scenarios of burning primary woody biomass result in net negative outcomes for climate and biodiversity.

In essence, increasing demand for biomass invariably increases pressure to clear or degrade forests and woodlands (including remnant vegetation on farmlands)—either through intensified harvesting or clearing new areas to supply the fuel volume required to meet energy claims.

3. FUEL SOURCE: NATURAL REGENERATION (“WOODY WEEDS”)

The proposal seems to draw on regrowth or weedy vegetation, rather than plantation slash or harvested residues. However:

- Woody regrowth often resides on land undergoing woody plant encroachment—an ecological process where native shrubs and small trees spread into grasslands and open habitats.
- While some consider harvesting encroached vegetation beneficial, these are unique ecosystems supporting their own biodiversity. Removing them may disrupt soil, hydrological processes, and could inadvertently increase erosion—contrary to standard assumptions of ‘waste removal’.

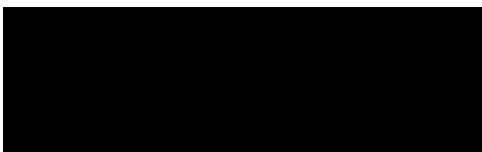
Summary & Recommendation

My central concern—**the flawed maths**—is critical: the claims either require much more biomass than disclosed or cannot deliver the promised energy. This alone justifies requiring a rigorous, independent audit of energy modelling, fuel sourcing volumes, and ecological impacts.

I respectfully urge the IPC to:

1. Require the proponents to clarify their assumptions on fuel heating value, moisture content, and conversion efficiency.
2. Request independent verification of the expected energy output given realistic conversion parameters.
3. Assess the scale of biomass harvesting, its source areas, and the consequent impact on forests, biodiversity, and land condition.

Thank you for considering this evidence-based submission. As both a statistician and an ecologist, I am available to provide further comment or appear at a public hearing if required.



Sincerely,
Maldwyn (John) Evans