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[redacted]

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Restart of Redbank Power Station (SSD-56284960). Grounds for objection

1) Air quality

The closest air quality monitoring station is at Warkworth, (4Km) and is the only upper Hunter station to record PM10 over the national annual standard of 25ug/m3 .

Date	WARKWORTH PM10 annual average [µg/m³]
2022	19.3
2023	32.5
2024	28

Looking at PM10 excedences of the daily standard of 50 ug/m3 for 2025 up till 27 July, Warkworth has had 7, MtThorley 3 (8Km SE), Camberwell 2, and all other sites just 1 this year, including the population centres of Singleton (10 Km E) and Muswellbrook. Warkworth is a highly polluted location, and the power station is likely to make it worse through its fuel handling operations in dry and windy weather, and burning wet biomass in wet weather. This is a cumulative impact. The major contributor is the mines, but why examine cumulative impacts if additional impacts are dismissed as being small?

The air quality assessment by EMM 20 October 2021 addresses the wrong question. It is not whether burning wood is better or worse than burning coal, but whether burning wood will harm air quality compared to not burning wood. The plant has not operated since 2014 so to pretend this is just a new fuel source is a convenient fabrication.

Regional air already exceeds standards, and this proposal will make it worse. The argument that the plant contributes only a small fraction of the compliance standard is not relevant. The standard is exceeded.

The proposal is to stockpile biomass in an uncovered holding area. It will be exposed to rain, and in wet weather will have high water content. Wet fuel is likely to burn at lower temperature and create more PAH and VOCs, and particles. It is unlikely to burn cleanly.

The plant does have fabric filters for particle control, but these only work well when properly maintained, and that is expensive to do. The fabric is prone to getting holes, and we know from Vales Point that a power station can run for weeks or months with defective filters.

2 Restricted materials:

It is proposed that one truck per day would be inspected for prohibited materials, out of 70 trucks per day. This is arrangement is ripe for failure due to lack of diligence or due to corruption. Considerable environmental harm would occur if the plant burned treated pine (copper chrome arsenic) or municipal waste that could contain cadmium or lead from batteries or electronic waste. Waste operators have problematic loads that are difficult to dispose of and it would be so easy to send them to Redbank while the yardsman was not looking, or paid to look the other way. Is there any safeguard against radioactive material ending up in the fuel stream?

I note that the EPA commented on this in their April 2024 response "Domestic Biomass is unlikely to be considered an eligible waste fuel because it is likely to contain contaminants and be inconsistent/heterogenous in composition"

I do not trust that inspection of a truck load of waste wood is sufficient precaution to keep prohibited materials out of the waste stream, and when this is one truck out of 70 per day its even less likely. Once a prohibited item eg a plank of copper-chrome –arsenic treated pine gets in the furnace the toxic chemicals, especially the arsenic ends up in the particulate mater leaving the chimney and dispersed over the landscape.

The EMM response dated 20June 24 says they will apply later for permission to use DBF. Domestic Biomass Fuel. (Includes construction and demolition waste)

Restarting the power station creates a population health risk from burning prohibited materials that I don't believe the IPC can guard against by the imposition of conditions on the approval. The EPA has a small number of staff for inspection and enforcement, and great difficulty getting compliance with its good intentions, as evidenced by its "Dust Stop" program.

3)Fuel source

The fuel strategy includes timber from "approved land clearing activities". This means trucks will be arriving with native forest timber. How will it be established that all these trees came from land clearing that was properly approved? This seems a very difficult regulatory proposition. It is not sufficient to place conditions on a project when those conditions are unenforceable.

DEA is concerned about burning established forest as it is not carbon neutral in the time frame that matters. CO2 forcing of global temperature is already occurring. If trees are burned in this power station, the replacement trees that will resorb the CO2 will take 50 years and complex ecosystems take 100 years to grow. The problem is more urgent than that. Irreversible climate tipping points such as serious loss of polar ice cover will be passed in the next 10 years, so removal of CO2 by regrowth over 50 years is too late.

There is a long history of Native Forestry management not living up to public expectations leaving substantial distrust of promises in this area. This proposal is a Trojan horse for the burning of native forest despite the promises in the EIS.

4) The modern electricity grid:

Being a steam generator, Redbank would operate best at a fixed temperature and power output, and would have little flexibility to ramp production up and down to meet the demands of the modern grid. During periods of high wind and solar output thermal generation is not needed, but is unable to reduce output. This is damaging as it leads to curtailment of clean energy and will delay the transition to a fully renewable grid. Wind and solar with battery and pumped hydro storage with a tiny amount of gas can provide all necessary grid services.