Independent Planning Commission (IPC) of NSW
Via submissions@ipcn.nsw.gov.au

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Support for Redbank Power Station Biomass Conversion

Dear Commissioners,

New.E (Hunter New Energy Cluster) welcomes the opportunity to comment on the Restart of Redbank Power Station project. At New.E, we envision a future where the Hunter is Australia's leading new energy hub and technology cluster, demonstrated by excellence in research, innovation, technology and education, production, use, export and employment participation across the new energy supply chains. Through strategic initiatives and partnerships, we are paving the way for regional and statewide economic growth, environmental sustainability, and energy security. We believe the Redbank Power Station Restart embodies this vision. We write to **express our strong support for the project**, and to provide an environmental and clean-energy perspective on why it should be approved. In our assessment, the proposal to convert Redbank from coal-waste to biomass fuel **offers compelling benefits for climate action, renewable energy integration, and regional sustainability,** provided it is executed with the strict environmental safeguards outlined. We urge the Commission to endorse this project, for the reasons detailed below.

1. Accelerating the Clean Energy Transition by Repurposing Fossil Infrastructure:
This project represents a pioneering model of energy transition: taking a decommissioned coal-fired power station and refitting it to run on renewable biomass. It demonstrates how we can creatively reinvent legacy fossil-fuel infrastructure as part of the clean energy revolution, rather than abandoning or demolishing it. The result will be 151 MW of dispatchable renewable capacity feeding into the grid– one of the largest biomass power initiatives in Australia. This is firm, on-demand renewable electricity that will directly replace fossil generation. As such, the Redbank restart will help drive New South Wales' energy transformation, away from coal-fired power toward lower-emission generation. The Department's Assessment Report specifically notes that the project aligns with "transitions away from fossil fuel powered energy to lower emissions technology" as a key benefit.

Strategically, integrating 151 MW of renewable baseload from Redbank is invaluable for our state's clean energy trajectory. It will complement intermittent sources like solar and wind by providing stable output, thus improving grid reliability while retaining a low-carbon profile. This helps resolve one of the energy transition's biggest challenges: ensuring energy security as we decarbonise. By filling in gaps when the sun isn't shining or wind isn't blowing, Redbank's biomass generation will act as a renewable firming resource, reducing the need for fossil peaking plants or expensive battery reserves. In effect, it offers a "best of both worlds" solution – renewable energy that is also dispatchable. The International Energy Agency (IEA) and Intergovernmental Panel on Climate Change (IPCC) have identified sustainable bioenergy as a crucial component of the clean energy mix to achieve net-zero emissions, precisely because of its ability to provide continuous power. This project puts that principle into practice here in NSW.

Moreover, the electricity produced (approximately 1,000 GWh per year) will count toward NSW's renewable energy targets, which include aiming for 70% renewable electricity by 2030. Instead of 151 MW of idle capacity (or worse, reactivated on coal), we will have 151 MW contributing to our renewable goals. Every MWh generated at Redbank on biomass is one less MWh needed from fossil fuels. This is a significant and tangible step on our path to net zero. New.E strongly supports such

innovative retrofits of existing plants – they are faster to deploy than building new facilities from scratch, and they make use of existing grid connections and skilled workforce. With an expected construction period under a year, Redbank could be delivering clean power to NSW by 2026, aiding in the timely retirement of aging coal power elsewhere.

2. Greenhouse Gas Reduction and Climate Benefits:
From a climate change perspective, the Redbank conversion offers a substantial improvement over the status quo. Net greenhouse emissions from the facility will be dramatically lower than those of an equivalent fossil fuel plant. Consider the baseline: Redbank's original approval was to burn coal refuse (coal tailings) for power. If reactivated on coal or if a new coal/gas plant of similar capacity were built, annual CO_2 emissions would be on the order of 1–1.5 million tonnes. By contrast, **biomass is a renewable, carbon-neutral fuel cycle – the CO_2 released during combustion is largely the CO_2 earlier absorbed by the plants as they grew. This closed-loop carbon cycle means no *net* addition of long-lived carbon to the atmosphere, unlike coal where carbon long locked underground is emitted as new greenhouse gas. The project's life-cycle analysis (accounting for cultivation, processing, transport, and combustion of biomass) found a 96% reduction in net CO_2 emissions compared to the previous coal baseline. In fact, overall greenhouse impact is expected to be near zero or negligible in the long term, aligning with NSW's goal of net zero by 2050.

We acknowledge that some submitters dispute biomass carbon neutrality, pointing out the time lag for regrowth and potential emissions from harvesting and transport. These are valid points to examine. However, the feedstocks proposed (INS thickets, farm residues, dead wood, etc.) are mostly materials that will decompose or be burned whether we use them or not. If left unused, they would emit carbon anyway (through rot releasing CO_2/methane or hazard reduction burns releasing CO_2/PM). Capturing that organic carbon for energy displaces the need to burn fossil fuels – a clear climate win. The project includes commitments to rigorous carbon accounting and sourcing only biomass that meets the "no higher order use" test, ensuring that we're not diverting wood that could store carbon in buildings or ecosystems. Additionally, by reducing open-air burning of agricultural waste and land-clearing debris, the facility can lower black carbon and methane emissions that are potent short-term climate forcers.

It is also notable that the proponent will surrender the plant's old development consent to burn coal. This means Redbank can never revert to being a coal-fired emitter – a strong built-in guarantee of its long-term carbon benefit. The Department of Planning has found the project is consistent with NSW Climate Change Policy framework in that it does not impede reaching net zero, especially given the conditions to monitor and manage emissions. In summary, with appropriate safeguards, the Redbank restart will contribute to climate change mitigation by avoiding millions of tonnes of CO_2 that a coal-fired equivalent would produce while enabling more renewable power on the grid.

3. Environmental Sustainability and Safeguards (Biodiversity, Air Quality, Community):
New.E's support for this project is contingent on it being implemented in an environmentally responsible manner. We have examined the key environmental concerns and are satisfied that, with the recommended conditions, the project will uphold high environmental standards.

- No Impact to Native Forests or Biodiversity: We want to clearly emphasise an essential point – **this project will not involve harvesting native forests for fuel**. The proposal explicitly excludes native forest logging residues. The biomass types allowed are limited to: (a) invasive native species (INS) cleared under regulated permits, (b) approved land-clearing biomass (e.g. from infrastructure or agriculture projects that have independent clearance approvals), (c) sustainably cultivated energy crops or plantation timber residues, and (d)

certain wastes (like sawmill offcuts, garden organics) certified under the EPA's resource recovery orders. These sources are, by definition, *by-products* of other activities or proactive land management, **not** the primary harvesting of native ecosystems. Indeed, the clearing of INS is beneficial for biodiversity – these are dense invasive thickets (often species like wattles or scrub oaks that proliferate unnaturally) whose removal allows native flora to regenerate. The Land Management Code expressly encourages INS removal for land restoration, and this project gives landholders a financial incentive to do so, thus restoring thousands of hectares of native woodland and grassland that INS currently suppress.

Fears that Redbank will drive broadscale deforestation are misplaced. No new clearing can occur just for the power station without separate environmental approvals. The Department confirmed that any biomass from land clearing must come from clearing that would happen anyway under existing laws – for example, vegetation removed for a road upgrade or bushfire management. Using that cleared vegetation as fuel is environmentally prudent (better than burning piles on site), and it does not change the underlying land use or conservation status of those sites. Strict conditions and auditing will prevent misuse of this pathway. In essence, the project is piggybacking on other permitted vegetation management activities, not authorising new deforestation. The NSW EPA and Local Land Services will oversee compliance: the fuel suppliers must prove materials are lawful and sustainable. The Department has concluded that with these controls, the project would not significantly impact biodiversity offsite. New.E supports continued vigilance on this front – we encourage the IPC to impose robust fuel supply auditing conditions and to explicitly prohibit any sourcing from high-conservation-value vegetation. With those assurances, we are confident the project aligns with biodiversity conservation principles while utilising problem vegetation and waste for good use.

- Air Emissions and Health: We recognise that communities in Singleton and the broader Hunter are concerned about air quality – our region has a legacy of industrial and mining emissions. Any new emission source must therefore meet the highest standards to protect public health. Fortunately, Redbank's conversion entails a state-of-the-art combustion system with pollution controls. The circulating fluidised bed boiler ensures more complete combustion at lower temperatures, which minimises NO_x formation and particulate matter. High-efficiency baghouse filters or electrostatic precipitators will capture the majority of dust/ash, and there are no sulfur dioxide issues as biomass is low-sulfur. Modeling in the EIS showed ground-level concentrations of pollutants will remain within NSW's strict air quality criteria, a finding verified by the independent air quality expert engaged by the Department. The Department's report plainly states that emissions can meet the relevant assessment criteria and will be closely regulated under an updated Environment Protection Licence (EPL). New.E fully expects the EPA to hold the proponent accountable to best practice emission limits (comparable to, or stricter than, those for modern power stations). Continuous emissions monitoring may be required under the EPL – which we would welcome to provide transparency and confidence to the public.

In short, the plant's emissions will be controlled and monitored to ensure no adverse health impacts. Biomass fuel combustion does emit particulate matter, but the controlled environment of a power station with filtration is vastly cleaner than uncontrolled burn piles or older coal boilers (for context, Redbank operated for years on coal tailings – its rebirth on cleaner fuel with better technology will greatly reduce local pollution potential). It's also worth noting that by generating 1,000 GWh of electricity from biomass, the project helps avoid pollution from fossil fuel power elsewhere. The net effect is a shift to cleaner generation methods statewide. We are satisfied that the community's air quality will be safeguarded, and we encourage ongoing ambient air

monitoring in Singleton to track cumulative air quality trends as coal sources retire and this project comes online.

- Community and Noise/Traffic Impacts: The Redbank Power Station site is relatively remote – it lies in an established industrial zone, 10 km away from the nearest town (Singleton). This distance means no residents are in the immediate vicinity of the plant. Construction noise and activity will be confined to the existing site and are temporary (the rebuild is expected in ~10 months). Once operational, the power station's noise and lighting profile will be similar to when it ran pre-2014, which was found acceptable under its original consent. The main community impact potential is from the increased truck traffic hauling biomass, particularly if some supply comes from farther regions. The project estimates up to ~135 truck round-trips per day at peak (spread over 24 hours). While this is not trivial, it will be dispersed across a wide supply radius and mostly on highways. Singleton Council and the proponent have proactively planned infrastructure upgrades (e.g., an intersection on the Golden Highway) to ensure safe truck movements. We encourage continued coordination with councils on road maintenance and scheduling to avoid peak hour disruptions in towns.

Importantly, the local community seems to have acknowledged these impacts as manageable, given the strong support from local submissions. Many residents see the trade-off as favourable: manageable traffic increases and minor local impacts in exchange for jobs, investment, and a cleaner power source. New.E will support efforts for community consultation throughout the project's life – for example, establishing a community liaison committee to monitor any issues (noise, traffic, etc.) and address them quickly with the operator. With such measures, we are confident that community amenity can be protected, and indeed enhanced by the regional economic uplift this project brings.

4. Alignment with Government Policy and Regional Benefits:
The Redbank restart is well-aligned with NSW Government policies on energy, climate, waste management, and regional development. It supports the objectives of the NSW Net Zero Plan by adding firmed renewable generation capacity, and it complements the NSW Electricity Infrastructure Roadmap which calls for replacing retiring coal power with new clean resources. Additionally, by consuming biomass residues, the project supports the NSW Waste Avoidance and Resource Recovery Strategy – it is effectively a large-scale bioenergy recycling initiative, turning would-be waste into valuable energy. This is precisely the kind of circular economy solution the state has been looking to foster (using resources efficiently and reducing landfill). The project also contributes to the NSW Biobanking and invasive species management objectives by creating an offtake for weed biomass.

From a regional development lens, the Singleton and Hunter region benefit through economic diversification and job creation. As detailed in the proponent's materials and the Department's report, the project brings 330 construction jobs and 60 permanent jobs to an area in need of new employment pathways. New.E is focused on ensuring the Hunter thrives in the post-coal era – that means embracing projects like this which marry our region's industrial skills with sustainable practices. We note that a Voluntary Planning Agreement (VPA) with Singleton Council has been negotiated, meaning the local community will directly share in the benefits (likely through contributions to local infrastructure, community programs, or environmental initiatives funded by the proponent). This indicates the company's commitment to a social licence to operate and to giving back to the community. We also note that local support has been strong – many local businesses and community members see this as a positive opportunity (the Department recorded more submissions in support than opposition from within the Hunter). This local endorsement is

important; it reflects that the project is in step with community aspirations for jobs and sustainability.

5. Conditions and Recommendations:
Given the broad merits of the project, New.E fully supports approval. We do recommend, however, that the IPC consider some specific conditions to solidify environmental outcomes, including:

- Strict Fuel Source Verification: Implement conditions requiring detailed record-keeping and auditing of all biomass fuel sources (e.g. documentation of property and permit for any INS clearing, evidence that no native forest material is included, independent audits). This will ensure compliance with the intended fuel regime and dispel any doubts about sourcing. Annual public reporting on feedstock types and origins could enhance transparency.

- Adaptive Management of Feedstock Supply: A condition recognising that if sustainable biomass supply falls short, the proponent is not to broaden sourcing without further approval. In other words, no automatic rights to use unapproved sources if initial estimates prove optimistic. This keeps commercial pressures in check and forces the operator to remain within sustainable limits (the Department identified feedstock supply risk as a commercial matter that Verdant must manage prudently).

- Enhanced Air Quality Monitoring: Require the proponent to install continuous emission monitoring systems (CEMS) for key pollutants and to contribute to local air quality monitoring stations. Real-time data should be shared with regulators (and possibly publicly) to assure compliance and community reassurance. Given air quality was identified as the key risk to human health by the Department, robust monitoring is warranted.

- Traffic Management Plan: A condition to formalise measures minimising truck impacts – for instance, designated haul routes to avoid residential areas, limits on overnight truck idling near towns, and regular road maintenance reviews with councils.

- Community Engagement: Establish a Community Consultative Committee (CCC) including local council, residents, indigenous representatives, and other stakeholders to liaise with the project during construction and operation. This will help promptly address any community concerns.

We believe the proponent is amenable to these kinds of conditions (many were suggested in the Assessment Report's recommended conditions). With such conditions in place, the project's benefits overwhelmingly outweigh its manageable impacts – a conclusion the Department itself clearly reached, stating the project "would result in benefits to NSW and is in the public interest".

Conclusion:
New.E Hunter New Energy Cluster strongly supports the Restart of Redbank Power Station. To summarise our position: this project is a rare and valuable convergence of environmental, economic, and energy positives. It will: reduce greenhouse emissions relative to the coal alternative, provide renewable dispatchable power that strengthens the grid, utilise waste biomass and foster a circular economy, spur regional economic growth and transition jobs, and do so with carefully controlled environmental impacts that can actually yield environmental co-benefits (such as improved land health from weed removal). In our view, it represents exactly the type of innovation needed to achieve a just transition for regions like the Hunter – leveraging our existing assets and workforce to build a cleaner future that doesn't leave communities behind.

We respectfully ask the Commission to approve the project, confident that it can be done in an environmentally sustainable way. By approving Redbank's restart on biomass, you will help set a precedent for constructive climate action through industry transformation. The eyes of many in Australia's energy sector are on this decision, as it will signal how NSW balances the imperatives of decarbonisation, energy reliability, and economic development. We believe this project strikes that balance. New.E and our members are excited about the prospects of the Hunter becoming a showcase for bioenergy as part of our diverse renewable energy mix.

Thank you for considering our submission. We are available to provide any further information or clarification to assist the Commission. We look forward to a positive outcome that enables the Hunter to continue leading in the new energy era.

Yours sincerely,

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Boris Novak, Industry Advisor HunterNet and Cluster Co-Lead New.E
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New.E supports the emerging new energy economy in NSW by **facilitating connections** and **knowledge sharing** throughout the state and beyond.

The Hunter region is the geographic base for NSW's New Energy Technology Cluster and aims to support the **development** of the new energy and hydrogen **supply chain**, reduce overlaps and **identify gaps** in the development, deployment and commercialisation of new **energy focused** technologies.