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Submission Regarding the Horsley Park Bioenergy Facility Project

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1. Introduction

This submission is presented in response to the proposed Horsley Park Bioenergy Facility project, located at the Brickworks Plant in Horsley Park, New South Wales (NSW). The project involves the processing of 150,000 tons of waste per annum using anaerobic digesters, with the resulting bioenergy feeding directly into the Brickworks Plant. This submission critically assesses the potential environmental impacts, including the impacts on local flora and fauna, air quality, and emissions, as well as the economic viability and legislative compliance of the project. Additionally, the submission identifies the contradictions between government rhetoric and policy actions, particularly concerning environmental conservation.

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2. Environmental Impact Assessment

Impact on Flora and Fauna

The proposed facility has the potential to impact local ecosystems significantly, particularly through habitat disruption and contamination risks. Local flora and fauna that may be affected include:

- **Flora**: Native vegetation such as *Eucalyptus* species, *Acacia* species, and other indigenous plant communities that may be disturbed or degraded by the facility's construction and operation.
- **Fauna**: Wildlife species including the Eastern Grey Kangaroo (*Macropus giganteus*), the Common Brushtail Possum (*Trichosurus vulpecula*), various bird species like the Superb Parrot (*Polytelis swainsonii*), and reptilian species such as the Eastern Blue-tongue Lizard (*Tiliqua scincoides*).

The Environmental Impact Statement (EIS) acknowledges the potential for habitat loss but downplays the significance by proposing mitigation measures that are often insufficient. According to the EIS, "rehabilitation of disturbed areas will be undertaken post-construction to restore habitats" (Horsley Park Bioenergy EIS 2024, p. 98). However, such measures will not adequately compensate for the initial destruction of critical habitats, particularly for species with specific habitat requirements.

Air Quality and Emissions

The Horsley Park Bioenergy Facility could have significant impacts on local air quality due to emissions from the anaerobic digestion process. The facility is expected to emit biogas primarily composed of methane and carbon dioxide, along with trace amounts of other potentially harmful gases. The Environmental Protection Agency (EPA) notes that "biogas contains hazardous substances, such as hydrogen sulfide, which can pose significant risks if

not adequately controlled" (EPA 2023, p. 18). The facility's proximity to residential areas exacerbates concerns about odor and air pollution, which could have direct health implications for the local community.

Moreover, while the facility aims to mitigate these impacts through biofilters and enclosed processing units, such measures must be rigorously enforced. The EIS claims that "mitigation measures will be sufficient to minimize emissions and protect air quality" (Horsley Park Bioenergy EIS 2024, p. 87), but without stringent oversight, these assurances remain questionable.

Waste Management and Resource Recovery

The project involves processing 150,000 tons of waste per year, converting organic waste into bioenergy. While this aligns with circular economy principles, significant challenges remain in managing such a large volume of waste. "Contaminants such as plastics and metals must be carefully removed to prevent damage to the digesters and to ensure the quality of the digestate" (Horsley Park Bioenergy EIS 2024, p. 112). Failure to do so could lead to environmental contamination and inefficiencies in energy production.

Additionally, the management of digestate, a by-product of the anaerobic digestion process, poses environmental risks. The EIS suggests using the digestate as a soil conditioner, but this application must be carefully regulated to prevent nutrient runoff, which could lead to eutrophication of local water bodies. "The application of digestate to land must be managed to prevent environmental degradation" (Department of Primary Industries 2023, p. 45).

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3. Legislative Compliance and Governmental Hypocrisy

EPBC Act Compliance: The project must comply with the Environmental Protection and Biodiversity Conservation (EPBC) Act 1999, which mandates the protection of species and ecological communities of national environmental significance. The EIS claims that "no significant impacts on threatened species are anticipated" (Horsley Park Bioenergy EIS 2024, p. 178), yet the potential cumulative impacts on local biodiversity remain a concern.

NSW Waste and Resource Recovery Policy: While the project aligns with the NSW Government's Waste and Resource Recovery Policy, which aims to reduce landfill waste, it is essential that this alignment does not come at the expense of local ecosystems. The government has often touted its commitment to environmental sustainability, yet the approval of projects like this, which pose clear environmental risks, highlights a dissonance between policy and practice. Environment Minister Tanya Plibersek's recent statements about protecting biodiversity are starkly at odds with the approval of industrial projects that threaten the very ecosystems she claims to protect. "If we don't act now, future generations may only see native wildlife in zoos" (Plibersek 2023, p. 4) is a sentiment that seems increasingly hollow in light of these decisions.

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4. Economic and Technological Analysis Based on IPA Research

Summary of "The Ruinous Cost of Free Energy" Report

The broader economic context of renewable energy projects, including the Horsley Park Bioenergy Facility, is crucial for understanding their long-term viability. The *IPA Research Report* emphasizes that "renewable energy systems, while environmentally beneficial, often come with hidden costs that must be carefully considered" (Wilson 2024, p. 5).

Key Findings:

1. **Total System Cost**: The report argues that "renewable energy projects must be assessed for their Total System Cost (TSC), which includes infrastructure, maintenance, and integration costs" (Wilson 2024, p. 12). The high costs associated with maintaining bioenergy facilities, particularly in managing waste and emissions, could offset the environmental benefits.
2. **Infrastructure and Maintenance Costs**: "The long-term economic viability of bioenergy projects depends on efficient waste sorting and biogas purification" (Wilson 2024, p. 17). Without proper management, these facilities may become economically unsustainable, placing additional financial burdens on stakeholders.
3. **Policy Implications**: The report underscores the need for a balanced approach to energy policy, one that considers both environmental goals and economic realities. "Policymakers must weigh the full economic impact of renewable energy projects, including potential effects on energy prices and the burden on taxpayers" (Wilson 2024, p. 21).

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5. Nuclear Energy as an Alternative

In light of the environmental and economic challenges posed by bioenergy facilities, nuclear energy presents a compelling alternative. Nuclear power offers stable, low-emission energy production with a significantly smaller land footprint compared to bioenergy and other renewables. As highlighted in previous reports, nuclear energy "requires only a fraction of the land area compared to bioenergy facilities and provides consistent baseload power" (Nuclear Energy Agency 2023, p. 8). This reduced land footprint has profound implications for environmental conservation, allowing for the preservation of critical habitats that might otherwise be disrupted by large-scale bioenergy operations.

The Environmental Impact Statement for the Horsley Park project suggests that "rehabilitation of disturbed areas will be undertaken post-construction to restore habitats" (Horsley Park Bioenergy EIS 2024, p. 98). However, by choosing energy options that require less land disruption, such as nuclear, the need for extensive rehabilitation—and the associated risks to biodiversity—can be significantly reduced.

Given the potential for nuclear energy to provide a more sustainable and economically viable solution, it should be seriously considered as part of a balanced energy strategy. This strategy should prioritize minimizing ecological disruption while ensuring a reliable and cost-effective energy supply, aligning with both environmental and economic objectives.

6. Conclusion and Recommendations

This submission highlights the significant environmental and economic considerations associated with the Horsley Park Bioenergy Facility project. While the project offers potential benefits in terms of renewable energy production and waste management, these must be weighed against the potential environmental risks, including impacts on local flora and fauna, air quality, and long-term economic viability.

Given these considerations, it is recommended that:

1. **Comprehensive Monitoring and Enforcement**: Strict monitoring and enforcement of emissions controls, waste management protocols, and habitat rehabilitation measures are essential to minimize environmental impact and protect local ecosystems.
2. **Lifecycle Emissions and Economic Assessment**: A detailed lifecycle emissions and economic assessment should be conducted to ensure that the project's overall environmental and economic benefits outweigh its costs, particularly in comparison to alternative energy sources such as nuclear power.
3. **Adaptive Management and Policy Alignment**: The project should adopt an adaptive management approach, allowing for ongoing assessment and adjustment of operations to align with evolving environmental and economic policies. This includes ensuring that the project does not breach the EPBC Act or other relevant legislation.
4. **Addressing Governmental Hypocrisy**: The NSW Government must reconcile its public commitments to environmental conservation with its approval of projects that threaten local ecosystems. A transparent review process is needed to ensure that decisions are made in the best interest of both the environment and the public.

7. References

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