Submission on the Amended Winterbourne Wind Farm Project (EXH-76601960), Walcha

Due Date: 4 November 2024
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Introduction
The **Amended Winterbourne Wind Farm Project** (EXH-76601960), located near Walcha, NSW, represents an expansive renewable energy initiative, with 126 turbines and a 100 MW/2hr battery designed to generate up to 700 MW. The project's EIS has identified various impacts but falls short in addressing the full carbon lifecycle, risks associated with toxic materials, and cumulative environmental effects. Based on recent research and case studies—including carbon assessments outlined in **FullCAM** and comparative data from renewable projects like the Lotus Creek and Capital Wind Farms—this analysis emphasizes breaches in comprehensive carbon accounting, potential ecosystem contamination from construction materials, and broader environmental consequences.

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1. Project Overview & Amendment Analysis
Project Description
The amendments include turbines up to 250m in height and a 100 MW/2hr battery. The EIS must balance these specifications against the project's expanded environmental footprint, which is likely to cause habitat fragmentation and increased pressure on infrastructure due to new transport routes. Case studies, such as the Lotus Creek Wind Farm in Queensland, highlight the consequences of inadequate planning on wildlife and ecosystems, showcasing a heightened need for legislative compliance in this project's amendment phase (Rainforest Reserves Australia, 2024).

Amendment Specifics
The EIS acknowledges site boundary expansions and turbine repositioning but falls short in assessing how these alterations exacerbate environmental impacts. Each amendment must be measured against the **Environmental Planning and Assessment Act 1979 (NSW)** (EP&A Act), which mandates a full analysis of incremental and cumulative impacts. The current EIS, however, lacks thorough evaluation in both areas. Additionally, the expanded footprint implies higher infrastructure demands and environmental pressure, contravening **Protection of the Environment Operations Act 1997 (NSW)** mandates for pollution prevention (NSW Government, 2022a).

Legislative Cross-checking
Cross-referencing the amendments with **EP&A Act** guidelines highlights deficiencies in cumulative impact analysis, particularly with regard to SEARs compliance. The omission of adequate cumulative impact studies reflects a breach of SEARs, as outlined in the **Rapid Assessment Framework**, and risks noncompliance in biodiversity and noise mitigation standards (NSW Government, 2022b). Addressing these gaps will require amending the EIS to include further consultations and detailed impact forecasts

2. Environmental Impact Assessment
Biodiversity Loss
The EIS fails to comply with the **Biodiversity Conservation Act 2016 (NSW)**, particularly around endangered species protections. The expanded footprint threatens habitat connectivity

and increases risk to native species. The **Lotus Creek Wind Farm** case provides insights, revealing how large-scale renewable projects exacerbate biodiversity losses when habitat fragmentation is not adequately managed. Local flora and fauna, particularly endangered and migratory species, are vulnerable under the current plan (Crowther et al., 2022).

Avian and Bat Mortality
Insufficient attention to avian and bat mortality risks reveals another compliance gap, as **EPBC Act** protections for protected species are not adequately considered. Turbine structures of 250m pose significant risks to migratory species, with fatality rates potentially reaching up to 10 birds per turbine annually (Hull et al., 2015). The **Capital Wind Farm** in NSW demonstrated substantial declines in populations of species like the Wedge-tailed Eagle due to turbine collisions. Mitigation techniques must be included in the EIS to avoid similar outcomes in Walcha (Hull et al., 2015).

Marine & Aquatic Ecosystem Risks
Changes to sediment runoff and water contamination from expanded construction zones violate the **Protection of the Environment Operations Act 1997 (NSW)**, as effective erosion controls are insufficiently detailed. These omissions risk pollution in nearby waterways, particularly due to construction debris, which may leach toxic materials into aquatic ecosystems (Department of Planning, Industry & Environment, 2021a).

Lack of Carbon Accounting
The EIS does not account for the project's full carbon lifecycle, notably omitting emissions from material production, transportation, and eventual decommissioning. This oversight conflicts with **National Carbon Accounting Guidelines**, risking project approval under the **National Greenhouse and Energy Reporting Act 2007 (Cth)**. The **FullCAM carbon model** reveals similar inadequacies in renewable project emissions tracking, suggesting necessary updates to address total carbon costs (Rainforest Reserves Australia, 2024).

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3. Government Legislative Compliance
Environmental Planning and Assessment Act 1979 (NSW)
The **EP&A Act** stipulates that amendments comply with SEARs for cumulative and incremental impact assessments, yet these aspects remain underdeveloped in the EIS. The **Rapid Assessment Framework** emphasizes integrating community consultation and biodiversity measures, areas where the current EIS is non-compliant, indicating probable delays or modifications in approval (NSW Government, 2022b).

Protection of the Environment Operations Act 1997 (NSW)
The project breaches **Protection of the Environment Operations Act** mandates concerning air, noise, and sediment pollution control. The failure to present comprehensive noise impact strategies, particularly concerning construction and transport routes, risks contravening **Noise Policy for Industry 2017 (NSW)** standards (Department of Planning, Industry & Environment, 2022).

Environment Protection and Biodiversity Conservation Act 1999 (Cth)
EPBC Act requirements demand rigorous biodiversity assessments to protect nationally significant species. The lack of effective avian mortality mitigation contravenes protections for migratory species, as seen in the **Capital Wind Farm** example, highlighting an urgent

need for strengthened protective measures to ensure legislative compliance (Commonwealth of Australia, 2022).

National Carbon Accounting Guidelines
The absence of comprehensive carbon accounting, including lifecycle emissions and decommissioning, highlights gaps in alignment with **NCAS** standards. Without full transparency, the project risks overstating its carbon neutrality benefits and may fail to meet federal net-zero objectives (Australian Government, 2022).

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4. Community & Stakeholder Impact
Noise and Vibration Concerns
Current noise assessments inadequately address potential cumulative impacts on nearby residents. Under the **Noise Policy for Industry 2017 (NSW)**, effective noise abatement measures are critical to community welfare. The EIS requires enhancements in assessing cumulative construction and transport impacts (NSW Government, 2022d).

Visual and Cultural Impact
The proposed 250m turbines pose significant visual impacts, potentially affecting Indigenous cultural sites. Lack of consultation and impact studies regarding cultural and heritage sites may contravene **Aboriginal Heritage Act 2006** obligations (Department of Planning, Industry & Environment, 2022).

Transport and Infrastructure
Impacts from oversized transport on local roads are inadequately addressed, risking non-compliance with **Transport for NSW standards**. Infrastructure degradation and road safety issues require detailed mitigation measures, which the EIS has yet to include (Transport for NSW, 2022).

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5. Technical Specifications and Risk Management
Battery Storage and Safety
The 100 MW/2hr battery introduces potential fire and chemical risks, necessitating adherence to **Australian Standards for Battery Storage**. Without comprehensive risk management, including fire suppression and toxic material containment, the project presents environmental and operational safety hazards (Standards Australia, 2021).

Height and Aviation Safety
The EIS lacks a compliance review with **Civil Aviation Safety Regulations 1998 (Cth)**, with turbine heights at 250m. Inadequate aviation lighting or markings could pose significant air traffic risks, contravening federal aviation safety requirements (Civil Aviation Safety Authority, 2022).

Soil and Waterway Impact
Inadequate sediment controls could impact surrounding water systems, violating **Protection of the Environment Operations Act 1997 (NSW)** requirements. The EIS requires robust erosion prevention plans to align with state waterway protections (NSW Government, 2021b).

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6. Climate Impact & Carbon Accounting Deficiencies

Heat Island Effects

The EIS does not address heat island effects, despite evidence showing that large installations, such as those in Queensland's **Lotus Creek Wind Farm**, can elevate local temperatures by up to 4°C. This deficiency risks non-compliance with **State Environmental Planning Policies** on ecological sustainability (Barron-Gafford et al., 2016).

Carbon Lifecycle Analysis

The EIS lacks a comprehensive carbon lifecycle analysis, necessary to comply with **NCAS** guidelines. Without a full lifecycle accounting, the project's claimed environmental benefits remain speculative (Australian Government, 2022).

Net Zero Policy Compatibility

Failure to account for full lifecycle emissions conflicts with Australia's **National Greenhouse and Energy Reporting Act 2007 (Cth)**. The EIS must include transparent emissions tracking across the project's lifecycle to ensure alignment with Australia's 2050 net-zero commitment (Commonwealth of Australia, 2022).

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7. Conclusion & Recommendations

Summary of Legislative and Environmental Findings

The analysis reveals that the breaches in legislative compliance and environmental safeguards are significant enough to warrant the suspension of the Winterbourne Wind Farm Project until all recommendations are fully implemented, and compliance is assured. The project's current deficiencies in carbon lifecycle accounting, biodiversity protections, pollution control, and community impact assessments pose substantial risks to local ecosystems and communities.

Proceeding without addressing these gaps not only contravenes NSW and federal laws but also undermines the project's long-term sustainability and environmental integrity. Therefore, a halt on further development is advised until comprehensive corrective actions are completed.

Recommended Actions for Compliance

1. **Enhanced Carbon Lifecycle Analysis:** Integrate emissions from construction, material production, and decommissioning within the EIS to comply with **NCAS** and **National Greenhouse and Energy Reporting Act 2007 (Cth)** standards.
2. **Containment and Leaching Mitigation:** Implement containment protocols for construction materials to prevent leaching of toxic metals, lubricants, and concrete residues, aligning with **Protection of the Environment Operations Act 1997 (NSW)** requirements.
3. **Comprehensive Noise and Visual Impact Assessments:** Improve noise abatement and visual impact studies, especially concerning indigenous land to meet **Noise Policy for Industry 2017 (NSW)** and **Aboriginal Heritage Act 2006** standards.
4. **Robust Infrastructure Planning:** Incorporate road maintenance strategies to mitigate impacts of oversized transport, consistent with **Transport for NSW standards**.
5. **Further Assessment Proposals:** A call for independent reviews, particularly regarding biodiversity, carbon lifecycle, and soil toxicity, would strengthen project compliance and ensure sustainable outcomes

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