Tasmania's Emissions Reduction and Resilience Plan Submission

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Introduction

Tasmania's **Emissions Reduction and Resilience Plan** presents a pivotal opportunity to address climate change while preserving the state's unique natural heritage. This submission examines the key sectors—**Energy**, **Industrial**, **Agriculture**, and **Forestry**—with a focus on finding sustainable solutions that balance Tasmania's economic needs with the protection of its pristine environment.

While the plan identifies important steps towards reducing emissions, it is crucial to ensure that these efforts do not come at the cost of Tasmania's **biodiversity** or **ecological integrity**. Each sector's impact must be critically assessed, with sustainable and **low-impact solutions** favoured over large-scale industrial projects that could have irreversible effects on ecosystems.

The **Agriculture sector**, in particular, stands as a model for how food production can be balanced with environmental sustainability, and this approach should inform strategies in the other sectors as well.

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1. Energy Sector

Overview

Tasmania is a leader in **renewable energy**, particularly through its extensive use of **hydropower**. While there is potential for further expansion in **wind** and **solar energy**, these developments must be carefully managed to prevent damage to Tasmania's **pristine landscapes** and **fragile ecosystems**. The focus should be on enhancing existing infrastructure and supporting **small-scale** renewable projects that minimize environmental impact.

Breaches and Concerns

- **Environmental Impact on Wildlife**: Large-scale wind and solar projects present significant risks to **wildlife**, particularly to **migratory birds** and **bats**. Wind turbines are known to cause bird and bat fatalities, while solar farms, especially

those sited in sensitive ecosystems, can disrupt habitats and contribute to the **heat island effect**, altering local microclimates (Australian Energy Regulator, 2022).

- **Increased Land Use for Renewable Projects**: Expanding land-intensive renewable energy projects risks disturbing **biodiverse habitats**, particularly in remote or undisturbed areas. This will result in **fragmented ecosystems**, loss of wildlife corridors, and negative impacts on species already vulnerable to climate change (CSIRO, 2021).

Key Recommendations

- **Localized Energy Solutions**: Instead of large-scale wind and solar farms, Tasmania should prioritize **decentralized energy solutions** such as **rooftop solar** for homes and businesses, and **microgrids** for remote communities. These systems can operate independently from the main grid, enhancing energy resilience without compromising large areas of natural habitat.

- **Energy Storage Innovations**: Investing in **energy storage technologies**, such as **pumped hydro**, can help manage the intermittency of renewable energy sources. However, these solutions should be implemented within existing infrastructure rather than expanding into wilderness areas, to avoid unnecessary ecological disruption (Hornsdale Power Reserve, 2021).

- **Siting Wind and Solar Projects Sensitively**: Any expansion of wind or solar projects should undergo rigorous **Environmental Impact Assessments (EIAs)** and be sited away from **high-conservation-value areas**. Special attention should be given to avoiding **bird migration paths** and protecting sensitive habitats from degradation (AER, 2022).

Resilience Measures

- **Modernizing Existing Infrastructure**: Updating the current energy grid to better integrate renewable sources can improve efficiency without the need for new large-scale energy developments. Modernization efforts should focus on **reducing energy loss** during transmission and enhancing grid stability.

- **Community Engagement**: Encouraging community-led renewable projects not only decentralizes energy generation but also empowers local populations to be part of the solution. Supporting community ownership of energy systems can foster long-term sustainability while reducing the environmental footprint.

2. Industrial Sector

Overview

Tasmania's **industrial sector** is a significant source of greenhouse gas emissions, particularly through energy-intensive industries such as **mining**, **manufacturing**, and **processing**. While there is a need to decarbonize these industries, it is essential that new technologies, such as **Carbon Capture and Storage (CCS)** and **green hydrogen**, do not lead to increased industrialization at the expense of Tasmania's natural environment. Industrial strategies should prioritize **sustainability** and **local economic benefits** over large-scale development that risks damaging **ecosystems** and **community well-being**.

Breaches and Concerns

- **New Industrial Infrastructure**: Proposed **green hydrogen** production plants and **CCS facilities** require substantial new industrial infrastructure, which risks damaging previously undisturbed landscapes. These projects would lead to **habitat fragmentation**, increased **resource extraction**, and long-term industrial footprints that undermine Tasmania's natural beauty (Sleipner CCS Project, 2020).
- **Pollution and Resource Use**: Heavy industries, even with emissions-reducing technologies, continue to pose risks to **air quality**, **water resources**, and **local ecosystems**. The expansion of industrial activities, particularly in sensitive environments, would further strain natural systems already facing pressures from climate change (CSIRO, 2021).

Key Recommendations

- **Limiting Industrial Expansion**: Industrial development should be restricted to **existing industrial zones**, avoiding any expansion into **natural landscapes** or **wilderness areas**. Tasmania's rich biodiversity must not be sacrificed for large-scale industrial projects that benefit only a few.
- **Energy Efficiency and Retrofits**: Instead of relying on new technologies like CCS, Tasmania should focus on improving **energy efficiency** in existing industries through **retrofitting** and adopting **best practices** that reduce both emissions and resource consumption.
- **Circular Economy**: Promoting **circular economy** practices—such as recycling, reusing materials, and converting waste into energy—can significantly reduce industrial emissions while contributing to local economies. These practices should be integrated across all sectors to minimize waste and lower the overall environmental footprint (Bonn Challenge, 2020).

Resilience Measures

- **Climate-Resilient Infrastructure**: Industrial facilities should invest in infrastructure that can withstand **extreme weather events** caused by climate change, including **reinforcing structures** to be more resilient to floods, storms, and fires. This reduces long-term economic and environmental costs.
- **Supporting Local, Small-Scale Industries**: Encouraging the growth of **small, locally-focused industries** can diversify Tasmania's economy without the environmental downsides of large-scale developments. Local industries are often more flexible and can adapt quickly to sustainability goals.

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3. Agriculture Sector

Overview

Agriculture is a cornerstone of Tasmania's economy, providing essential food resources while increasingly adopting **sustainable practices** that benefit both the land and the climate. The sector has made significant progress in areas such as **precision farming**, **water management**, and the use of **renewable energy**, reflecting a commitment to sustainability. Importantly, agricultural activities should be restricted to **currently used land** to avoid further encroachment on Tasmania's natural landscapes.

Positive Changes in Agriculture (Continued)

- **Sustainable Farming Practices**: The introduction of **regenerative agriculture**, which emphasizes **soil health**, **biodiversity**, and **carbon sequestration**, has been a significant positive development. Practices such as **no-till farming**, **agroforestry**, and **rotational grazing** help maintain soil structure, improve water retention, and increase biodiversity. These approaches not only support the long-term health of the land but also enhance agricultural productivity without the need for expanding farmland.
- **Methane Reduction in Livestock**: Tasmania's livestock farmers have started using **seaweed-based feed additives**, which have shown significant potential in reducing methane emissions from cattle by up to 80% (CSIRO, 2021). This innovation helps tackle one of the biggest sources of agricultural emissions without disrupting food production.

Breaches and Concerns

- **Land Degradation**: In some areas, **soil degradation** remains a concern, particularly in regions subject to **overgrazing** or **intensive farming**. However,

these challenges can be addressed through sustainable land management practices that prioritize soil health and resilience, rather than restricting agricultural activity altogether.

- **Water Usage**: Agricultural water consumption is significant, and improving the **efficiency of irrigation systems** is essential. While water use can sometimes strain resources, promoting **rainwater harvesting** and **precision irrigation** ensures that agriculture remains sustainable and resilient to climate variability (Rodale Institute, 2020).

Key Recommendations

- **Restrict Agriculture to Currently Used Land**: To protect Tasmania's natural environments, agricultural activities should be confined to **existing farmland**. No further clearing of native vegetation or wilderness areas should be permitted, ensuring that Tasmania's ecosystems remain intact.
- **Promote Regenerative Farming**: Tasmania should continue to support and expand **regenerative agricultural practices** on existing land. This includes **carbon farming** initiatives that increase carbon sequestration and enhance biodiversity. Incentivizing farmers to adopt these methods will ensure long-term sustainability without compromising food production.
- **Improve Water Management**: Investments in **smart irrigation systems**, **drought-resistant crops**, and **rainwater harvesting** technologies will make Tasmania's farms more resilient to water scarcity while reducing the environmental impact of agriculture.

Resilience Measures

- **Soil Health and Carbon Sequestration**: Building and maintaining healthy soils is critical for both **carbon sequestration** and **agricultural productivity**. Policies should support farming practices that regenerate the land and increase the land's resilience to extreme weather.
- **On-Farm Renewable Energy**: Encouraging farmers to adopt **renewable energy solutions**, such as solar power, to run their operations will reduce the carbon footprint of the sector. On-farm energy production can also increase resilience by reducing reliance on external energy sources.

4. Forestry Sector

Overview

Tasmania's forests are globally significant for their roles in **carbon sequestration** and **biodiversity conservation**. However, **deforestation**, **illegal logging**, and unsustainable management practices continue to pose major threats to these ecosystems. While the Emissions Reduction Plan proposes afforestation and sustainable forestry measures, it is crucial to ensure that these projects are carried out in a way that enhances **ecosystem health** and **biodiversity**, rather than focusing solely on carbon storage.

Breaches and Concerns

- **Deforestation and Habitat Loss**: Logging, even when regulated, is still occurring in **high-conservation-value forests**, threatening endangered species and reducing Tasmania's forest cover. The destruction of critical habitats, such as those for the **Tasmanian devil** and **wedge-tailed eagle**, undermines conservation efforts (Forest Stewardship Council, 2021).
- **Commercial Afforestation Risks**: While **afforestation** is encouraged to capture carbon, monoculture tree plantations often degrade biodiversity and alter natural ecosystems. This type of forest management risks turning diverse landscapes into plantations that provide minimal ecological benefits (Bonn Challenge, 2020).

Key Recommendations

- **Strict Protection of Conservation Areas**: No logging or deforestation should occur in Tasmania's **high-conservation-value** forests. These areas should be strictly protected to preserve biodiversity and support long-term carbon storage through natural forest regeneration.
- **Ecological Restoration, Not Just Afforestation**: **Reforestation efforts** must prioritize **ecological restoration** over commercial tree plantations. Planting **native species** and restoring natural habitats will provide greater benefits for biodiversity and carbon sequestration than monocultures.
- **Sustainable Forestry Certification**: Promoting **certified sustainable forestry** through schemes like the **Forest Stewardship Council (FSC)** can ensure that any logging activities are carried out responsibly, with minimal environmental impact, and at sustainable rates (FSC, 2021).

Resilience Measures

- **Bushfire Management**: As climate change increases the risk of bushfires, Tasmania must adopt comprehensive **bushfire management strategies**, including

controlled burns and the establishment of **firebreaks**. These efforts will help protect forests and surrounding communities from catastrophic fire events.

- **Climate-Resilient Tree Species**: Research and investment into **climate-resilient tree species** will ensure that Tasmania's forests can continue to thrive even under changing environmental conditions. This will be vital for maintaining biodiversity and the forests' role in carbon sequestration (CSIRO, 2021).

General Risks Across Sectors

The impacts of **climate change**—including rising temperatures, altered rainfall patterns, and more frequent extreme weather events—pose a significant threat to Tasmania's natural landscapes and economy. However, the proposed solutions in the **Emissions Reduction and Resilience Plan** must carefully consider the balance between development and environmental protection.

- **Climate Disruption**: Unsustainable practices in energy, industrial activities, and agriculture can contribute to **climate disruption**, threatening both human and ecological systems. Tasmania must prioritize **low-impact** solutions that mitigate climate risks while preserving the state's natural environment (CSIRO, 2021).
- **Biodiversity Loss**: Across all sectors, activities that harm **biodiversity** have far-reaching consequences. The extinction of species, particularly **keystone species** like pollinators, can destabilize entire ecosystems and reduce agricultural productivity (Rodale Institute, 2020).
- **Economic and Social Risks**: Failure to protect Tasmania's ecosystems from harmful developments could lead to **economic losses** from reduced tourism, declining agricultural yields, and increased healthcare costs related to **pollution** and **climate-related health impacts** (CSIRO, 2021).

Conclusion

Tasmania has the opportunity to lead the world in showing how environmental conservation can coexist with **economic growth** and **climate resilience**. By prioritizing **small-scale, nature-first solutions**, Tasmania can continue to reduce emissions and adapt to climate change without sacrificing its **pristine landscapes** or biodiversity.

The strategies for energy, industry, agriculture, and forestry must all be rooted in **sustainability** and **ecological protection**. Tasmania's future lies in a balanced approach

that restricts development to already-used areas, enhances **natural resilience**, and avoids large-scale projects that could have irreversible impacts on the environment.

This is a defining moment for Tasmania. By embracing **innovative, low-impact solutions** that protect both nature and communities, Tasmania can secure a future where its environment remains a source of **pride**, **prosperity**, and **well-being** for generations to come.

References

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