ENERGY ROADMAP AMENDMENT BILL 2025

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Submission to the Governance, Energy and Finance Committee on the Energy Roadmap Amendment Bill 2025

This submission supports the repeal of the current renewable energy targets. Moving away from a solely target-driven approach allows for a necessary shift towards a pragmatic and economically viable energy policy. However, to achieve a balanced path forward, the Bill must be amended to embed statutory mandates for comprehensive life-cycle assessments and rigorous spatial planning.

The revised framework must protect the State's critical natural capital by:

1. Mandating Full Life-Cycle Assessment (LCA) for all energy infrastructure.
2. Requiring secured financial assurance for decommissioning and recycling costs.
3. Establishing data-driven planning principles to prevent unacceptable land and biodiversity impacts.

The decision to repeal the targets creates the opportunity to prioritise sustainable siting and responsible resource management over deployment speed.

- Land Use Intensity: Energy policy must acknowledge the significant land footprint of the energy transition. Only 7% of Queensland's land is classified as High-Value Agricultural Land (Class A). The previous planned build-out, estimated to require 580,000 hectares just for generation by 2035, risked conflict with food security objectives.
- Global Planning Mandates (Best Practice): Drawing on the EU's Renewable Energy Directive (RED II), the 'Energy System Outlook' must mandate integrated, multi-criteria spatial planning. This process must strategically identify 'Go-To Areas' (degraded land, industrial precincts) and establish legally binding 'Exclusion Zones' (high-biodiversity areas, prime agricultural land) to ensure responsible development.

For the transition to be genuinely sustainable, the legislative framework must mandate the capture of all environmental costs, from component manufacture to disposal.

- Holistic Carbon and Energy Accounting (LCA): The Bill must require that all energy projects include a comprehensive Life-Cycle Assessment (LCA). This analysis must capture the embodied emissions and energy cost associated with the global supply chain, including the mining, manufacturing, and transportation of critical minerals (e.g., cobalt, lithium) used in components. This prevents the underestimation of the true carbon footprint.
- Quantifying Biodiversity Risk: The framework must address the cumulative impact of project clustering. While infrastructure clearing is small compared to other land uses, its location in sensitive areas is critical. For instance, proposals in North Queensland have risked clearing areas of remnant native vegetation (over 1,000 hectares in some cases), posing a threat to species like the Spectacled Flying Fox. The planning rules must mandate GIS and ecological data modelling to assess fragmentation across multiple projects concurrently.
- Water Consumption and Microclimatic Effects: LCA must extend to water resources. The legislative framework needs to mandate cumulative water consumption and water quality assessments for all energy projects, applying the same rigour seen in major resource project

assessments within water-stressed catchments.

The goal of a cost-effective system requires financial accountability for the entire project life, internalising costs currently borne by the public.

- Decommissioning Financial Security: A significant risk is the lack of secured funding for site remediation. Currently, no specific State legislation requires proponents to provide a financial bond for renewable infrastructure decommissioning. Given that the estimated cost to decommission a single wind turbine can range from $400,000 to $600,000, the total future liability is substantial. The Bill must introduce a statutory requirement for an up-front, secured financial bond to cover 100% of the independently assessed full life-cycle decommissioning costs.
- Producer Responsibility for Industrial Waste: The State faces a pending waste management challenge. The cost of recycling a solar panel in Australia ($10–$28) significantly exceeds the cost of landfilling, creating a financial disincentive for responsible disposal. The framework must draw on the EU's Waste Electrical and Electronic Equipment (WEEE) Directive to mandate a Producer Responsibility Scheme. This ensures manufacturers are financially accountable for the collection and recycling of components (e.g., the 34.6 GW of solar panels projected to reach end-of-life by 2045), protecting the State from massive future waste liability.

The *Energy Roadmap Amendment Bill 2025* must be leveraged to create a new legislative baseline for environmental and economic integrity. A flexible market is only sustainable if it is underpinned by mandatory, data-driven checks and balances.

Recommendation:

1. Amend the 'Strategic Infrastructure Path' objectives to explicitly mandate:
    a. Full Life-Cycle Assessment (LCA) for all projects, including the embodied carbon and energy cost.
    b. Strategic avoidance of High-Value Agricultural Land (HVAL) and critical biodiversity areas based on multi-criteria spatial data.
2. Introduce a statutory requirement for all major energy projects to provide a secured financial bond covering 100% of all third-party Decommissioning and Site Rehabilitation Costs.
3. Mandate the establishment of a Producer Responsibility/Product Stewardship Scheme for end-of-life energy components.