Submission to the Productivity Commission: Opportunities in the Circular Economy

Introduction

This submission addresses the Productivity Commission's inquiry into advancing Australia's circular economy, advocating for a unified framework for tracking and accounting materials across their lifecycle. A practical circular economy requires an equitable transition, emphasising both economic and environmental metrics at the material, product, and transaction levels. We propose the inclusion of carbon tracking alongside financial accounting, providing data-driven transparency that aligns economic growth with ecological accountability. This approach would hasten the essential material transition, aiding Australia in meeting its climate commitments.

Key Aspects of the Circular Economy and Dual Metrics

The linear model dominates today's economy, with approximately 90% of materials discarded after a single use. In contrast, a designed circular economy captures value through the iterative use of materials, promoting waste elimination and continuous value retention across cycles. Transitioning to this model requires nature-based metrics beyond traditional financial measures. By adding carbon and lifecycle data as core metrics, we can construct a material and energy accounting system capable of driving resource efficiency, addressing economic and ecological costs more comprehensively. This dual system supports resilient, transparent supply chains that assess true value regardless of product or material composition .

Proposed System: Counting and Accounting for Carbon in Materials

The model proposes a dual accounting approach, where carbon content, physical emissions, and embodied equivalents are documented from resource extraction to end-of-life. Carbon metrics, integrated into transactions, complement financial data and can be implemented through the following strategies:

- **Data Transparency for Carbon**: Given that the Australian government contributes nearly 50% to GDP as a primary consumer, it can lead in setting material and carbon tracking standards, aligning with global commitments to reduce emissions by 2030. A national framework to track material inputs, energy usage, and carbon output at every product stage would enable public procurement to model circular practices .
- **Independent Data Verification**: A network of transparent data systems can verify emissions data at each product lifecycle stage, ensuring reliable assessments that uphold circular economy standards. Verified lifecycle data can enhance decision-making accuracy, avoiding data discrepancies that could undermine circular economy outcomes .
- **Consumer and Supplier Accountability**: Standardised carbon and materials data empower consumers to demand lower-impact goods, aligning product valuation with environmental impact. Transparent information fosters market demand for products with minimised ecological footprints, stimulating the innovation needed for sustainable production. The government's role as a major consumer is pivotal in catalysing this demand and fostering advancements in transition technologies .

Implementation Strategies for a National Circular Economy Framework

- **Sector-Specific Pilot Programs**: Pilots in sectors like solar energy, textiles, and construction materials can establish feasibility. For example, solar panels can act as material banks, documenting energy and material inputs to forecast end-of-use, enhancing planning and innovation while reducing emissions .
- **Collaborative Metric Development**: Establishing standards on data quality and metric consistency is crucial for scalability. By developing carbon-intensity benchmarks and material passport standards, Australia can promote traceability and eliminate ambiguity across sectors. Leveraging existing circular economy models would streamline efforts through shared data protocols and verifiable reporting systems .

Priority Recommendations

1. **Adopt a National Circular Economy Data Framework**: A cross-sector framework would support Australia's goals by providing verifiable lifecycle data across industries. Key components should include:
    - **Carbon and Material Metrics**: Consistent data on embodied carbon and material efficiency across product stages.
    - **Standardised Language and Definitions**: Aligning demand signals across sectors and geographies to foster compatibility.
    - **Product Stewardship Models**: Using products as material banks to encourage reuse and recycling .
2. **Introduce Consumer-Driven Transparency Initiatives**: Carbon labelling would enable informed consumer choices, fostering loyalty to sustainable brands and supporting the transition to low-carbon goods .
3. **Foster Innovation through Government-Industry Collaboration**: Financial incentives and grants can assist Australian businesses, especially SMEs and Indigenous-led organisations, in adopting circular models. Focusing on durable, recyclable products will strengthen a regenerative economy that combines economic growth with ecological stewardship .

Conclusion

This submission advocates a dual-metric framework that balances financial and carbon accounting to drive Australia's circular economy. Aligning material productivity with carbon transparency positions Australia to lead in global circularity standards. This approach addresses environmental imperatives while fostering a resilient, adaptable economy responsive to responsible resource use demands.