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1. Reduce the cost of meeting carbon targets

1. What could be done to improve the cost-effectiveness and alignment of policies to reduce emissions across the industrial, electricity and transport sectors?

I am proposing a structured, 10-year linear phase-out of 50% of Australia's fossil fuel production subsidies, with the recovered funding—averaging \$4 billion annually—reinvested into cost-effective (and therefore higher productivity) emissions reduction and climate adaptation measures. See attached policy proposal for details.

2. Are there gaps in the emissions-reduction policies in the industrial, electricity and transport sectors which should be addressed?

One large gap relates to the level of funding for policy implementation. I propose a structured, 10-year linear phase-out of 50% of Australia's fossil fuel production subsidies, with the recovered funding—averaging \$4 billion annually—reinvested into cost-effective (and therefore higher productivity) emissions reduction and climate adaptation measures. See attached policy proposal for details.

3. Are there any duplicative emissions-reduction policies in the industrial, electricity and transport sectors which could be streamlined?

Not investigated.

2. Speed up approvals for new energy infrastructure

1. Are planning and approvals processes for large energy infrastructure taking too long? If so, what causes the most delay?

The participant did not respond to this question.

2. How can planning and approvals processes be sped up without unduly compromising regulatory standards?

The participant did not respond to this question.

3. Should clean energy projects be treated differently to other projects for the purpose of environmental and other approvals? If so, how?

The participant did not respond to this question.

4. What can be done to build local community support for new energy infrastructure projects?

The participant did not respond to this question.

5. Please outline any evidence showing the productivity benefits of faster approvals for energy projects.

The participant did not respond to this question.

3. Encourage adaptation by addressing barriers to private investment

1. What are the barriers and enablers impacting decisions by owner-occupiers, landlords and developers about how housing is built and updated over time so that it is resilient to the effects of climate change?

The participant did not respond to this question.

2. What information do people need to make decisions about where to live, how to build and how to upgrade their homes to appropriately factor in climate change?

The participant did not respond to this question.

3. What are the most cost-effective retrofitting options for improving the resilience of Australia's existing housing stock? What are their costs and benefits?

The participant did not respond to this question.

4. What role might minimum standards play in ensuring the resilience of Australia's housing stock?

The participant did not respond to this question.

5. The impacts of climate change are being factored into the regulation of where and how houses are built in different ways around Australia. What does leading practice look like? Where is there room for improvement? Are there lessons we can learn from other countries?

The participant did not respond to this question.

Cover sheet: Supporting document #1

Redirecting Fossil Fuel Subsidies to Lower Australia's Emission Reduction Costs

Executive Summary

This submission proposes a structured, 10-year linear phase-out of 50% of Australia's fossil fuel production subsidies, with the recovered funding—averaging \$4 billion annually—reinvested into cost-effective (and therefore higher productivity) emissions reduction and climate adaptation measures.

The policy would materially reduce the cost to Australian taxpayers of achieving national emissions reduction targets under the Safeguard Mechanism. By financing low-cost abatement options (many under \$25 per tonne of CO₂e) downward pressure is placed on Safeguard Mechanism credit prices by increasing the supply of actual and affordable emission reduction opportunities, and thus lowering the demand for expensive offsets whilst increasing business compliance flexibility. Examples are provided for the industrial, electrical and transport sectors.

The reform's economic impacts would be modest and manageable. Export competitiveness may marginally reduce for some fossil fuel producers, but this will be mitigated by global decarbonisation trends, Australia's strong resource base, and reinvestment in new export industries. State royalty income may be slightly affected in Queensland and Western Australia but offset through clean industry growth (new critical minerals royalty streams, clean hydrogen and renewable energy exports, expanded payroll and economic activity taxes). Federal budget savings of up to \$7.25 billion per year would be redirected to energy transition investments, resulting in no net change to the overall federal budget position, but a more productive and future-aligned allocation of public funds

The reform is socially fair, supporting a just transition for fossil fuel-dependent regions via reskilling, regional investment, and grant programs. Compared to alternative emissions reduction approaches, this strategy ranks highly on cost-effectiveness, speed of impact, and fiscal prudence. It also aligns well with Australia's broader economic and climate resilience objectives.

Policy Proposal

1. Phased Reduction of Fossil Fuel Subsidies

- **Scope:** 50% reduction of fossil fuel producer subsidies (estimated at \$14.5B/year), phased in linearly over 10 years.
- **Schedule:** Reduction begins in FY2025–26 at 10% of the total, increasing linearly to 50% by FY2034–35.
- **Targeted Measures:** Fuel tax credits, capital cost concessions, below-cost infrastructure, and exploration deductions.

2. Reinvestment Strategy

The redirected average annual \$3.99B subsidy saving would be invested as follows:

- **Low-cost emissions reduction:**

- Industrial Energy Efficiency Upgrades (cost: -\$20 to \$10/tCO₂e)**

- **Motor and Pump Efficiency Upgrades**

- Replace or retrofit motors, pumps, and fans with high-efficiency models and variable speed drives.
 - Widely applicable in manufacturing, mining, and processing sectors.

- **Compressed Air System Optimisation**

- Leak detection and sealing, pressure reductions, smarter system controls.
 - Typical payback: <2 years.

- **Waste Heat Recovery**

- Capture heat from furnaces, kilns, or exhausts to preheat process inputs or generate electricity.
 - High abatement potential in food processing, metals, and cement industries.

- **Lighting Upgrades (LED + Sensors)**

- Replace legacy lighting systems in warehouses, factories, and logistics hubs.
 - Simple, fast ROI.

- **Energy Management Systems (EMS)**

- Monitor, benchmark and optimise energy use in real-time across large facilities.

- Why They're So Cost-Effective**

- They reduce ongoing energy bills, so the savings often exceed the capital cost over a short time.
 - Many are low-capital, easy-to-deploy, and supported by existing government or utility rebates.
 - They typically avoid the need for expensive offsets or carbon credit purchases.

- Low-Cost Abatement Opportunities in Transport**

- **Fuel Efficiency Standards for New Vehicles**

- Cost: ~\$0 to \$50/tCO₂e
 - What it does: Mandates improved efficiency for new petrol and diesel vehicles.

- Status: Legislation enacted 2025.
- Why low-cost: Encourages automakers to supply better-performing vehicles with no direct cost to government and reduces fuel bills for drivers.
- **Modal Shift from Road to Rail and Public Transport**
 - Cost: ~\$20–\$60/tCO₂e (varies)
 - Examples:
 - Freight shift from trucks to rail
 - Urban mobility investments in buses, trains, cycling
 - Why low-cost: Reduces congestion, emissions, and vehicle wear; long asset life.
 - Co-benefits: Air quality, reduced road trauma, equity for non-car users.
- **Fleet Transition Support (Government & Commercial)**
 - Cost: ~\$20–\$50/tCO₂e (electric light vehicles and buses)
 - What it does: Accelerates turnover of high-use fleets (e.g. taxis, council vehicles, logistics vans) to EVs.
 - Why low-cost: High vehicle utilisation leads to faster payback from lower fuel and maintenance costs.
- **Smart Urban Logistics and Freight Optimisation**
 - Cost: ~\$20–\$40/tCO₂e
 - Examples:
 - Route optimisation, urban consolidation centres
 - Load matching and anti-idling tech in trucking
 - Why low-cost: Software-based, low capital; avoids unnecessary fuel use.
- **Fuel Switching for Rail and Marine Transport**
 - Cost: ~\$20–\$60/tCO₂e (for electrification or biofuels)
 - Applies to: Diesel-powered regional trains and coastal shipping.
 - Why low-cost: Often driven by modernisation needs anyway; clean alternatives now mature.
- **Grid-scale renewable energy and firming** (cost: \$15–40/tCO₂e)
- **Land sector carbon storage**, including regenerative agriculture and Indigenous-led fire programs (cost: <\$25/tCO₂e)

- **Climate adaptation:** protects low carbon infrastructure, reduces peak energy demand, preserves natural carbon sinks, increases community resilience and support for climate policy, and avoids repeated asset damage under extreme weather events
 - Flood mitigation and infrastructure upgrades (high benefit-cost ratio, up to 5:1)
 - Drought resilience and water infrastructure
 - Early-warning systems and disaster readiness for vulnerable communities

3. Impacts on Government Revenue and Economic Activity

Export Revenue

- Potential \$2.5–5B/year reduction under conservative estimates, concentrated in marginal fossil fuel projects. Average total fossil fuel export value ranged between \$220B–\$240B for the 2021–2024 period.
 - thermal coal exports \$1–2B/year
 - LNG \$0–0.5B/year – mostly delayed revenue
 - marginal metallurgical coal exports \$0.3B–0.6B/year
 - onshore oil and gas exploration \$0.3–0.5B/year in foregone future production.
 - refining and export infrastructure projects \$0.2–0.5B/year in delayed or cancelled growth due to loss of concessional loans or state infrastructure partnerships.
- Partially offset by stimulus to clean export sectors (e.g. green hydrogen, battery minerals, ammonia).

State Royalties

- Likely reduction <\$1.2B/year in QLD and WA.
- Offset with royalty growth from new clean exports and targeted structural adjustment support.

Federal Budget

- Net positive: removal of ~\$7.25B/year in subsidies, partially offset by reduced company taxes from fossil producers.
- Improved fiscal position enables further decarbonisation investment or deficit reduction.

4. Social Equity and Transition Support

- **Regional Transition Authorities:** Empower local solutions in fossil-dependent regions (Hunter, Bowen Basin, Latrobe Valley).

- **Job creation:** Investments in renewable energy, infrastructure, and climate adaptation create long-term employment.
- **Reskilling & Support:** Dedicated training packages, employment services, and safety nets for affected workers.

5. Impact on Safeguard Mechanism and Abatement Cost

The reallocation of subsidies to low-cost abatement measures (average cost <\$25/t) will:

- Significantly reduce the average marginal cost of compliance.
- Expand availability of Australian Carbon Credit Units (ACCUs).
- Lower market price for credits and improve corporate compliance flexibility.

Modelled estimates show a potential reduction in Safeguard Mechanism credit ceiling prices from \$75/t to **as low as \$8.61/t** over 10 years under this strategy.

6. Comparison to Alternative Climate Policies

Policy Option	Cost Effectiveness	Emission Reduction	Feasibility	Equity
Redirect Fossil Fuel Subsidies as per this policy proposal	✓ High	✓ High	⚠ Moderate	✓ High
Carbon Border Adjustment Mechanism	✓ Moderate	✓ High	⚠ Moderate	⚠ Varies
National Energy Efficiency Mandate (buildings, appliances and industry)	✓ High	✓ Moderate	⚠ Moderate	✓ High
Large-scale Industrial CCUS Subsidy (heavy hard to abate industry and fossil fuel projects)	✗ Low	⚠ Uncertain	⚠ Complex	⚠ Varies

7. Conclusion

The proposed phased fossil fuel subsidy reform is a high-impact, cost-effective, and equitable approach to reducing the cost of emissions reduction. It leverages existing expenditure to

support Australia's climate goals while delivering economic and social co-benefits. It should be prioritised among Australia's productivity-enhancing climate reforms.

Supporting References

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2. **BNHCRC / Deloitte Access Economics (2013).** *Building Our Nation's Resilience to Natural Disasters.*
► Identifies flood mitigation and adaptation projects with benefit–cost ratios of 2:1 to 5:1.
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3. **Productivity Commission (2023).** *Productivity Inquiry Report – Volume 6: The Climate Transition.*
► Highlights wide variation in cost per tonne across abatement policies (\$20–\$20,000/tCO₂e).
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4. **CEFC (2023).** *Annual Report 2022–23.*
► Outlines job creation potential and cost-effectiveness of clean energy investment.
<https://www.cefc.com.au>
5. **Treasury (2023).** *Intergenerational Report – Climate Impacts and Economic Growth.*
► Forecasts potential GDP losses from unaddressed climate change impacts.
<https://treasury.gov.au>
6. **Infrastructure Australia (2021).** *Assessment Framework: Guide to Economic Appraisal.*
► Establishes guidelines for cost–benefit analysis in infrastructure and adaptation planning.
<https://www.infrastructureaustralia.gov.au>
7. **DCCEEW (2024).** *National Climate Risk Assessment – First Pass Assessment Report.*
► Identifies economic and social risks of climate-driven disasters.
<https://www.dcceew.gov.au>
8. **Safeguard Mechanism Reforms – DCCEEW (2023).**
► Sets current credit price ceiling at \$75/tCO₂e and outlines market compliance structure.
<https://www.dcceew.gov.au/climate-change/emissions-reduction/safeguard-mechanism>
9. **NEM Wholesale Market Review (2024).** *National Energy Market reforms underway.*
► Highlights complementary efforts to align energy transition and emissions policies.
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10. **Chat GPT** This submission was drafted with assistance from the Chat GPT AI tool