Transport and Infrastructure Net Zero Consultation Roadmap

Take the survey

Department of Climate Change, Energy, Environment and Water

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Organisation

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The Australia Institute

11 What best describes you or your organisation?

Not answered

12 What sector do you represent?

Not answered

13 What state or territory do you live in?

Australian Capital Territory

14 Postcode

2603

15 What area best describes where you live?

City

16 1. Do you support the proposed guiding principles?

Not answered

17 1.1 Please add details to your response.

Not answered

18 2. Do you support the use of the avoid-shift-improve framework as a tool to identify opportunities for abatement?

Not answered

19 2.1 Please add details to your response.

Not answered

20 3. Do you agree the development of a national policy framework for active and public transport will support emissions reduction?

Not answered

21 3.1 Please add details to your response.

Not answered

22 4. What should be included in a national policy framework for active and public transport and how should it be developed?

Not answered

23 5. What additional actions by governments, communities, industry and other stakeholders need to be taken now and in the future to ensure the movement of people contributes to transport emissions reduction?

6. Support states and local councils to develop infrastructure that encourages safe active transport and the use of e-mobility devices

For the transport sector to reach net zero, simply decarbonising existing public transport networks is insufficient; the incidence of active transportation (which includes walking, cycling, and using e-bikes and other similar devices) must also rapidly expand. The consultation Roadmap identifies active transport as a key part of emissions reduction strategies, including building necessary infrastructure, but it does not include details of how

these goals will actually be reached. Increasing the provision of safe and accessible active transport infrastructure will help reduce emissions and road congestion, and see more people to replace shorter car trips with cycling, walking, e-mobility devices. However, the Commonwealth foregoes ten times as much annual revenue to the Luxury Car Tax than it spends annually through its Active Transport Fund.17 Some states and territories have signalled their intention to increase rates of active transport, but these plans are not always

well integrated with each other or implemented appropriately. Greater policy coordination is

needed within states, and between governments around Australia to account for the importance of active transportation. Moreover, while significant investments in active

transport infrastructure are important, but this needs to be supported by concrete legislative and policy commitments. Further detail is provided in the Australia Institute report
Proactive investment: Policies to increase rates of active transportation.
18
7. Use the tax system to encourage the use of active transport and e-mobility
Jurisdictions across Australia are increasingly interested in reward or incentive schemes to
encourage greater use of active transport. International evidence shows that direct financial
incentives are an effective way to increase rates of active transportation. The Roadmap should learn from these international examples and recommend: cycling mileage schemes (including for e-bikes); schemes that enable old ICEVs to be traded in for cash toward the purchase of an e-bike or public transport tickets;19 and expanded e-bike subsidy schemes.
These policies are discussed more in our report Proactive investment:
Policies to increase rates of active transportation.
20

24 6.1 What additional actions by governments, communities, industry and other stakeholders need to be taken now and in the future to ensure that the movement of goods contributes to transport emissions reduction?

Not answered

25 6.2. How would these actions address the identified challenges and opportunities for emissions reduction in the movement of goods?

Not answered

26 7. Do you agree with the proposed net zero pathway for light road vehicles?

Not answered

27 7.1 Please add details to your response.

Not answered

28 8. The Australian Government is currently developing an Australian New Vehicle Efficiency Standard and has already begun to implement actions in the National Electric Vehicle Strategy.8.1 What additional actions by governments, communities, industry and other stakeholders need to be taken now and in the future to reduce light vehicle emissions?

3. Develop a clear timeline for the phase out of private internal combustion engine vehicles (ICEV).

Through the Glasgow Declaration 31 national governments have pledged to phase out of new ICEV sales by 2040, and even earlier in some jurisdictions.

9 Both the National Electric

Vehicle Strategy and the Consultation Roadmap, however, fail to adequately address the need for explicit supply-side policies to limit and/or phase out the sale of new ICEVs. The Roadmap simply assumes that the use of ICEVs will reduce naturally as a function of increased EV purchases, stating that “fossil fuel demand will continue to decrease until it is only used in light vehicles in very specific circumstances”.10 This assumption is not robust,

and undermines the case for appropriate supply-side regulation of fossil fuel production and

consumption.

11 As such, the Action Plan ought to lay out appropriate timelines for the phase out of ICEVs, including interim targets and measures such as government procurement policies. As the Australia Institute has previously argued, this strategy would need to take into account questions of equity, and tailor policy to the unique needs of regional and remote Australia12 – but this should not stop supply-side policy from driving the transport

sector to net zero

29 8.2 How would these actions address the identified challenges and opportunities to reduce light vehicle emissions?

Not answered

30 9. Do you agree with the proposed net zero pathway for heavy road vehicles?

Not answered

31 9.1 Please add details to your response

Not answered

32 10. The proposed pathway for heavy road vehicles relies on a mix of battery electric, hydrogen fuel-cell and low carbon liquid fuels.Rank from 1 to 3, the order in which these should be prioritised for emissions reduction.

Not answered

33 10.1 Please add details to your response. Why did you rank them in that order?

Not answered

34 11. What role should low carbon liquid fuels play in the heavy vehicle decarbonisation?

The Consultation Roadmap for this net zero "sectoral plan" was relatively ambiguous regarding the future role of low carbon liquid fuels (LCLFs) – especially hydrogen. Figure 11,
for example, projects an "increased use of LCLFs", and "widespread use of battery and hydrogen fuel cell technologies" (emphasis added).15 Research by the Australia Institute –
including the attached report, The hydrogen dead-end: The case for battery powered buses in
Australia – demonstrates that electrification is overwhelmingly preferable to fuel-cell electric
buses (FCEBs) on the grounds of cost, emissions, and efficiency.16 While this report focuses
on buses, its findings are relevant across the transport sector – especially for heavy road vehicles. If green hydrogen supplies emerge in coming years, they must be quarantined for those sectors that truly cannot be electrified. The Action Plan is the ideal place to clarify the
policy and technology direction of the sector, and ensure that time, money, and emissions are not wasted on the hydrogen dead-end.

35 12. What additional actions by governments, communities, industry and other stakeholders need to be taken now and in the future to

reduce heavy vehicle emissions?

Not answered

36 13. Do you agree with the proposed net zero pathway for rail?

Not answered

37 13.1 Please add details to your response.

Not answered

38 14. The proposed pathway for rail relies on a mix of battery electric, hydrogen fuel-cell and low carbon liquid fuels.Rank from 1 to 3, the order in which these should be prioritised for emissions reduction.

Not answered

39 14.1 Please add details to your response. Why did you rank them in that order?

Not answered

40 15. What role should low carbon liquid fuels play in rail decarbonisation?

Not answered

41 16. What additional actions by governments, communities, industry and other stakeholders need to be taken now and in the future to reduce rail emissions?

Not answered

42 16.1 How would these actions address the identified challenges and opportunities to reduce rail emissions?

Not answered

43 17. Do you agree with the proposed net zero pathway for maritime?

Not answered

44 17.1 Please add details to your response.

Not answered

45 18. The Australian Government is engaging in consultation as part of the development of the Maritime Emissions Reduction National Action Plan and those consultations will also inform the final Roadmap and Action Plan. 18.1 What additional actions by governments, communities, industry and other stakeholders need to be taken now and in the future to reduce maritime emissions?

Not answered

46 18.2 How would these actions address the identified challenges and opportunities to reduce maritime emissions?

Not answered

47 19. Do you agree with the proposed net zero pathway for aviation?

Not answered

48 19.1 Please add details to your response.

Not answered

49 20. The Australian Government has already engaged in consultation on aviation decarbonisation through the development of the Aviation White Paper and those consultations will also inform final Roadmap and Action Plan.

Not answered

50 20.1 What additional actions by governments, communities, industry and other stakeholders need to be taken now and in the future to reduce aviation emissions?

Not answered

51 21. Do you agree with the proposed net zero pathway for transport

infrastructure?

Not answered

52 21.1 Please add details to your response.

Not answered

53 22. What additional actions by governments, communities, industry and other stakeholders need to be taken now and in the future to reduce transport infrastructure emissions and ensure that transport infrastructure is ready for and enables low-emission transport modes?

Not answered

54 22.1 How would these actions address the identified challenges and opportunities to reduce transport infrastructure emissions?

Not answered

55 23. What additional actions by governments, communities, industry and other stakeholders need to be taken now and in the future to ensure the energy mix is ready to support transport emissions reduction?

Not answered

56 24. How should the use of low carbon liquid fuels (LCLFs) be prioritised across different transport modes over time to achieve maximum abatement?

Not answered

57 25. What are the best ways for the Australian Government to work collaboratively with industry, business, governments and communities to implement the proposed pathways?

Not answered

58 25.1 What are good domestic or international examples of partnership

and collaboration on transport and transport infrastructure emissions reduction that could inform the final Roadmap and Action Plan?

Not answered

59 25.2 What opportunities can Government leverage to show leadership in Australia and internationally?

Not answered

60 26. What measures and metrics should be used to evaluate the final Transport and Infrastructure Net Zero Roadmap and Action Plan?

Not answered

61 26.1 What other data and evidence could governments use and how could this offer further insights on the pace, scale and location of transport emissions reduction pathways?

Not answered

62 27. Do you have any feedback on the proposed review process?

Not answered

63 28. Do you have any further feedback on the Consultation Roadmap and proposed pathways?

Not answered

64 28.1 Is there anything missing? Are the sections appropriately integrated? Is the Roadmap appropriately ambitious?

Not answered

65 29. Is there any further information or documentation that you wish to be considered with your submission?

Not answered

66 Would you like to upload a document?

Yes

67 Have you removed any identifying information from your submission?

Yes

68 Upload a submission

Australia Institute Transport Sectoral Plan cover letter.pdf

69 Upload a submission

Attachments 1-5.pdf

70 Upload supporting file

Attachments 6-9.pdf

71 Upload supporting file

Policies to increase rates of active transportation.pdf

The Australia Institute
Research that matters.

L1 Endeavour House
1 Franklin Street
Manuka ACT 2603

+61 2 6130 0530
mail@tai.org.au
tai.org.au

ABN 90 061 969 284
ACN 061 969 284

8 July 2024

Transport and Infrastructure Net Zero Team
Department of Infrastructure, Transport, Regional Development, Communications and the Arts
Canberra ACT 2600

Dear Team Members,

Thank you for the opportunity to provide our views on the *Transport and Infrastructure Net Zero Consultation Roadmap*, and to contribute toward the *Transport and Infrastructure Net Zero Roadmap and Action Plan* (the *Action Plan*), also known as the "sectoral plan". With Transport emissions growing, and set to be the largest sector of Australian emissions by 2030, ambitious policy change is urgently needed in this area.[1] Under current government policy, transport sector emissions will remain above the 2005 baseline through to 2030.

The Australia Institute is an independent public policy think tank and has pursued extensive research relevant to the decarbonisation of the transport sector. Attached to this cover letter are several reports which have direct implications for the roadmap. This letter summarises the findings of those reports, and makes several specific recommendations to the Department. The remainder of this letter outlines our recommendations.

Recommendations

1. **Eliminate the Fuel Tax Credits Scheme.**

In 2024-25 the Fuel Tax Credits Scheme (FTCS) will cost the Federal Budget $10.1 billion, which actively supports the use of fossil fuels.[2] While largely benefiting stationary energy users in the mining sector, transport companies that use large vehicles are also significant beneficiaries. The FTCS is considered globally to be a fossil fuel subsidy, by bodies including the Organisation for Economic Cooperation and Development (OECD), the International Energy Agency (IEA), the International Institute for Sustainable Development (IISD) and others. The COP28 Agreement signed in Dubai in 2023, which Australia was a party to, set phasing out fossil fuel subsidies as a goal,[3] and the OECD has called for specifically for reform of Australia's FTCS. Further detail is provided in the Australia Institute reports, *Australia's*

[1] DCCEEW (2024) *Australia's Emissions Projections 2023*, https://www.dcceew.gov.au/climate-change/publications/australias-emissions-projections-2023
[2] Commonwealth Government (2024) *Budget Paper No. 1 – Budget Strategy and Outlook*, p. 216.
[3] UN (2023) *COP28 Agreement Signals "Beginning of the End" of the Fossil Fuel Era*, https://unfccc.int/news/cop28-agreement-signals-beginning-of-the-end-of-the-fossil-fuel-era

Fuel Tax Credits and the debate over fossil fuel subsidies[4] and *Fossil fuel subsidies in Australia 2024*.[5]

2. **Ensure taxation and regulatory systems properly manage the harms caused by larger cars.**

An increasing number of Australians are using large cars such as SUVs and utility vehicles (utes). In 2023 over half of all new car sales were SUVs, while nearly a quarter were light commercial vehicles (predominantly utes). Large cars have higher emissions in their manufacture and use; pose higher safety risks to other cars, pedestrians, and cyclists; and cause more damage to roads. The growing prevalence of these vehicles has led to calls for alterations to infrastructure , including wider streets and larger car parks. This would reduce the physical space potentially available for other amenities – including footpaths, cycleways, urban greenery or additional car parks – and would raise costs for all. Unfortunately, Australia's current taxation and regulatory systems do not properly manage these risks, or ensure that externalities are internalised into the cost of these products. Reforms that would more effectively reduce these costs could include: taxes or fees to internalise the carbon emissions and road damage that bigger cars cause; removing the effective Luxury Car Tax exemption for particular utes; reforming Fringe Benefits Tax enforcement to ensure utes are only exempt if they are used almost entirely for commercial purposes; and increasing safety regulations on these vehicles. Relevant research conducted by the Australia Institute on this policy area includes *In reverse: The wrong way to fuel savings and falling transport emissions*;[6] *SUVs and utes are no longer just work vehicles, but tax-subsidised behemoths*;[7] and *Luxury Car Tax and the Ute Loophole*.[8]

3. **Develop a clear timeline for the phase out of private internal combustion engine vehicles (ICEV).**

Through the Glasgow Declaration 31 national governments have pledged to phase out of new ICEV sales by 2040, and even earlier in some jurisdictions.[9] Both the *National Electric Vehicle Strategy* and the *Consultation Roadmap*, however, fail to adequately address the need for explicit supply-side policies to limit and/or phase out the sale of new ICEVs. The *Roadmap* simply assumes that the use of ICEVs will reduce naturally as a function of increased EV purchases, stating that "fossil fuel demand will continue to decrease until it is

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[4] Campbell, Ryan, and Anderson (2024) *Australia's Fuel Tax Credits and the debate over fossil fuel subsidies*, https://australiainstitute.org.au/report/australias-fuel-tax-credits-and-the-debate-over-fossil-fuel-subsidies/

[5] Campbell, et al (2024) *Fossil fuel subsidies in Australia 2024: Federal and state government assistance to major producers and users of fossil fuels in 2023-24*, https://australiainstitute.org.au/report/fossil-fuel-subsidies-in-australia-2024/

[6] Saunders, Grudnoff and Campbell (2023) *In reverse: The wrong way to fuel savings and falling transport emissions*, https://australiainstitute.org.au/report/in-reverse/

[7] Thrower (2024) *SUVs and utes are no longer just work vehicles, but tax-subsidised behemoths*, https://australiainstitute.org.au/post/suvs-and-utes-are-no-longer-just-work-vehicles-but-tax-subsidised-behemoths/

[8] Thrower (2024) *Luxury Car Tax and the Ute Loophole*, https://australiainstitute.org.au/report/luxury-car-tax-and-the-ute-loophole/

[9] Accelerating to Zero Coalition (n.d.) *Signatories*, https://acceleratingtozero.org/signatories/

only used in light vehicles in very specific circumstances".[10] This assumption is not robust, and undermines the case for appropriate supply-side regulation of fossil fuel production and consumption.[11] As such, the *Action Plan* ought to lay out appropriate timelines for the phase out of ICEVs, including interim targets and measures such as government procurement policies. As the Australia Institute has previously argued, this strategy would need to take into account questions of equity, and tailor policy to the unique needs of regional and remote Australia[12] – but this should not stop supply-side policy from driving the transport sector to net zero.

4. **Support the states to pursue the electrification of all transport, especially public transport.**

The Federal government ought to pursue policy, and distribute corresponding funding, to support the rapid expansion and electrification of public transport. Australia Institute research has shown that electric buses are a proven, cost-effective way to rapidly decarbonise public transport.[13] While Although electric-powered public transport is cheaper to operate, transitioning our existing fleets and rolling out new networks will require significant up-front investment. Relying on the States and Territories to make these investments will slow this necessary transition. While the *Consultation Roadmap* recognizes the need to work with the states and territories, it focuses on coordination, not co-investment.[14] The Australia Institute recommends that the *Action Plan* explicitly state how the rapid expansion of electrified public transport will be implemented and paid for across Australia.

5. **Prioritise the electrification of transport to avoid locking in inefficient "low carbon liquid fuel."**

The *Consultation Roadmap* for this net zero "sectoral plan" was relatively ambiguous regarding the future role of low carbon liquid fuels (LCLFs) – especially hydrogen. Figure 11, for example, projects an "increased use of LCLFs", and "widespread use of battery *and hydrogen fuel cell* technologies" (emphasis added).[15] Research by the Australia Institute – including the attached report, *The hydrogen dead-end: The case for battery powered buses in Australia* – demonstrates that electrification is overwhelmingly preferable to fuel-cell electric buses (FCEBs) on the grounds of cost, emissions, and efficiency.[16] While this report focuses on buses, its findings are relevant across the transport sector – especially for heavy road vehicles. If green hydrogen supplies emerge in coming years, they must be quarantined for

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[10] DITRDCA (2024) *Transport and Infrastructure Net Zero Consultation Roadmap*, p. 39, https://www.infrastructure.gov.au/department/media/publications/transport-and-infrastructure-net-zero-consultation-roadmap

[11] Green and Denniss (2018) Cutting with both arms of the scissors: the economic and political case for restrictive supply-side climate policies. *Climatic Change*. https://doi.org/10.1007/s10584-018-2162-x

[12] Quicke (2023) *Submission: National EV Strategy*, https://australiainstitute.org.au/report/submission-national-ev-strategy/

[13] Denniss, Quicke and Parrott (2023) *Stuck in the Slow Lane: Electrification of buses in Australia*, https://australiainstitute.org.au/report/stuck-in-the-slow-lane/

[14] DITRDCA (2024) *Transport and Infrastructure Net Zero Consultation Roadmap*, p. 79.

[15] DITRDCA (2024) *Transport and Infrastructure Net Zero Consultation Roadmap*, p. 52.

[16] Ryan and Saunders (2024) *The hydrogen dead-end: The case for battery powered buses in Australia*, https://australiainstitute.org.au/report/the-hydrogen-dead-end/

those sectors that truly cannot be electrified. The *Action Plan* is the ideal place to clarify the policy and technology direction of the sector, and ensure that time, money, and emissions are not wasted on the hydrogen dead-end.

6. **Support states and local councils to develop infrastructure that encourages safe active transport and the use of e-mobility devices**

For the transport sector to reach net zero, simply decarbonising existing public transport networks is insufficient; the incidence of active transportation (which includes walking, cycling, and using e-bikes and other similar devices) must also rapidly expand. The consultation *Roadmap* identifies active transport as a key part of emissions reduction strategies, including building necessary infrastructure, but it does not include details of how these goals will actually be reached. Increasing the provision of safe and accessible active transport infrastructure will help reduce emissions and road congestion, and see more people to replace shorter car trips with cycling, walking, e-mobility devices. However, the Commonwealth foregoes ten times as much annual revenue to the Luxury Car Tax than it spends annually through its Active Transport Fund.[17] Some states and territories have signalled their intention to increase rates of active transport, but these plans are not always well integrated with each other or implemented appropriately. Greater policy coordination is needed within states, and between governments around Australia to account for the importance of active transportation. Moreover, while significant investments in active transport infrastructure are important, but this needs to be supported by concrete legislative and policy commitments. Further detail is provided in the Australia Institute report *Proactive investment: Policies to increase rates of active transportation*.[18]

7. **Use the tax system to encourage the use of active transport and e-mobility**

Jurisdictions across Australia are increasingly interested in reward or incentive schemes to encourage greater use of active transport. International evidence shows that direct financial incentives are an effective way to increase rates of active transportation. The *Roadmap* should learn from these international examples and recommend: cycling mileage schemes (including for e-bikes); schemes that enable old ICEVs to be traded in for cash toward the purchase of an e-bike or public transport tickets;[19] and expanded e-bike subsidy schemes. These policies are discussed more in our report *Proactive investment: Policies to increase rates of active transportation*.[20]

8. **Investigate policies to increase fuel security, by decreasing oil consumption, as advocated by the International Energy Agency**

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[17] Thrower (2024) *Luxury Car Tax and the Ute Loophole*, p 4 https://australiainstitute.org.au/report/luxury-car-tax-and-the-ute-loophole/

[18] Adhikari, Ryan and Harrington (2024) *Proactive investment Policies to increase rates of active transportation*, https://australiainstitute.org.au/report/proactive-investment/

[19] Lawe Davies (2023) *Car scrapping premiums: Removing polluting vehicles from Finland's roads*, https://www.nordicpolicycentre.org.au/removing_polluting_vehicles_finland

[20] Adhikari, Ryan and Harrington (2024) *Proactive investment Policies to increase rates of active transportation*, https://australiainstitute.org.au/report/proactive-investment/

In 2022 the IEA published *A 10-Point Plan to Cut Oil Use*. This report offers a range of policy suggestions that would cut oil consumption, primarily in the transport sector, thereby reducing emissions. Some of these recommendations overlap with those outlined above, including Recommendations 7 and 3. The IEA plan does, however, present further policies which would help reduce reliance on private cars for transport, and promote fuel efficiency. The Australia Institute has considered how the IEA *10-Point Plan* could be applied in the Australian context, in our report *Fuel security in Australia and the International Energy Agency's 10-point plan.*[21]

In support of these recommendations, we have appended several recent reports produced by the Australia Institute that are of direct relevance to this consultation. They are:

- *Australia's Fuel Tax Credits and the debate over fossil fuel subsidies*
- *Fossil fuel subsidies in Australia 2024: Federal and state government assistance to major producers and users of fossil fuels in 2023-24*
- *In reverse: The wrong way to fuel savings and falling transport emissions*
- *Luxury Car Tax and the Ute Loophole*
- *Submission: National EV Strategy*
- *The hydrogen dead-end: The case for battery powered buses in Australia*
- *Stuck in the Slow Lane: Electrification of buses in Australia*
- *Proactive investment: Policies to increase rates of active transportation Fuel security in Australia and the International Energy Agency's 10-point plan*
- *Fuel security in Australia and the International Energy Agency's 10-point plan*

We hope that this research is of assistance to the Department as they prepare the *Transport and Infrastructure Net Zero Roadmap and Action Plan*. Without ambitious and rapid policy development, rising emissions in the transport sector may offset emissions reductions in other parts of the economy.

Dr Matthew Ryan
Postdoctoral Research Fellow
The Australia Institute

[21] Campbell (2024) *Fuel security in Australia and the International Energy Agency's 10-point plan*, https://australiainstitute.org.au/report/fuel-security-in-australia-and-the-international-energy-agencys-10-point-plan

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Australia's Fuel Tax Credits and the debate over fossil fuel subsidies

The Fuel Tax Credits Scheme costs the Federal Budget nearly $10 billion per year and largely benefits iron ore and coal miners. Researchers at the OECD, IEA and IISD describe it as a fossil fuel subsidy. The OECD has called for its elimination. Australian Government and mining industry representatives dispute the use of the term subsidy, but not its cost to government or benefit to miners.

Rod Campbell, Matthew Ryan, Lilia Anderson
April 2024

INTRODUCTION

Australia's fossil fuel subsidies, particularly the Fuel Tax Credits Scheme (FTCS), are controversial. They have major fiscal and climate impacts and, back at the 2009 G20 forum, Australia committed to phase them out.

In 2010, Australian public servants identified 17 fossil fuel subsidies, worth $8 billion per year, that were relevant to the G20 pledge, including the FTCS. The public servants' estimates of Australia's fossil fuel subsidies were only made public later, following a Freedom of Information request. The Rudd Labor Government overrode the public servants' work and instead informed the G20 that no such subsidies existed.[1] To this day, Australian Governments acknowledge the cost of the FTCS and other budget items, but simply avoid the term 'subsidy'.

[1] Tingle (2011) *Swan under pressure over fossil fuels*, https://www.afr.com/policy/energy-and-climate/swan-under-pressure-over-fossil-fuels-20110228-il2j3

Australia has not only failed to deliver its G20 promise to end 2009 fossil fuel subsidies, but it continues to introduce new ones. The latest Federal Budget commits $1.5 billion to support new gas exports through Darwin. Again, the Australian Government acknowledges the cost but refuses the term subsidy, even though documents, again obtained under Freedom of Information laws, describe the government's funding as a 'key enabler' of new gas development.[2]

This briefing note explains the basics of fossil fuel subsidies, the FTCS and summarises the views of international and Australian researchers on the scheme and its categorisation as a subsidy.

WHAT IS A FOSSIL FUEL SUBSIDY?

According to the World Trade Organisation (WTO), of which Australia is a member, a subsidy exists when, among other things:

> (i) a government practice involves a direct transfer of funds (e.g. grants, loans, and equity infusion), potential direct transfers of funds or liabilities (e.g. loan guarantees);
>
> (ii) government revenue that is otherwise due is foregone or not collected (e.g. fiscal incentives such as tax credits);

Using the WTO definition of a subsidy, The Australia Institute estimates that Australian Governments, state and federal, provided $14.5 billion in fossil fuel subsidies in 2023-24, the most expensive of which was the $9.6 billion Fuel Tax Credits Scheme.[3]

In addition to The Australia Institute, international organisations that specifically include Australia's FTCS in their calculations of fossil fuel subsidies include the OECD, the International Energy Agency (IEA), the International Institute for Sustainable Development (IISD), Overseas Development International (ODI) and Oil Change International. Their work is described in more detail below.

[2] Davies (2023) *How is Australia trying to sell a major gas expansion? By badging it 'sustainable'*, https://www.theguardian.com/australia-news/2023/may/19/how-is-australia-trying-to-sell-a-major-gas-expansion-by-badging-it-sustainable

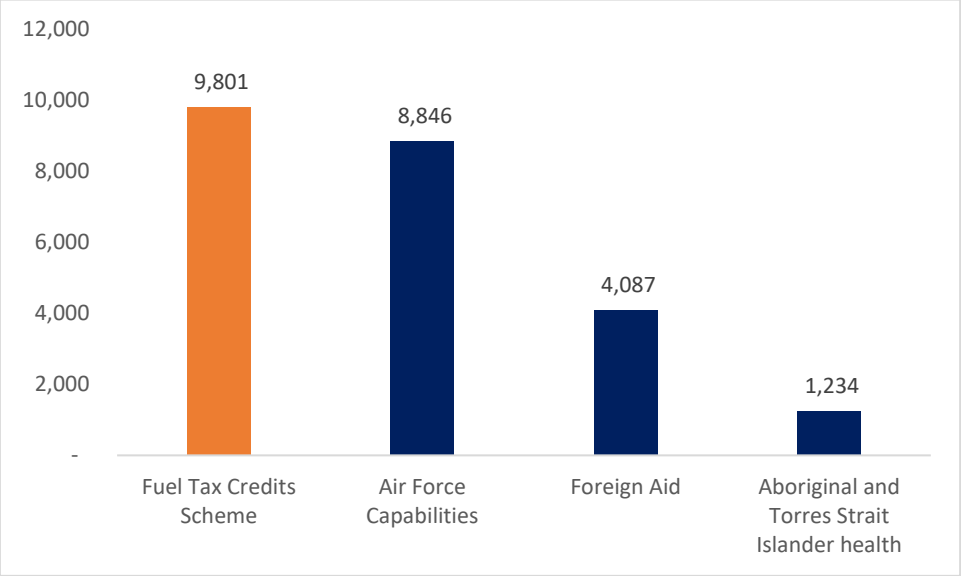
[3] Campbell et al (2023) *Fossil fuel subsidies in Australia 2023*, https://australiainstitute.org.au/report/fossil-fuel-subsidies-in-australia-2023/

WHAT IS THE FUEL TAX CREDITS SCHEME?

Australia charges a fuel tax (also called fuel excise) of around $0.47 per litre for diesel, petrol and most commonly used fuels.[4] This tax will raise around $20 billion in 2023-24, a significant source of revenue for the Australian Government.[5]

The Fuel Tax Credits Scheme (FTCS) refunds fuel tax paid by certain fuel users – mainly businesses using diesel for machinery, vehicles not on public roads and heavy vehicles that do use public roads.[6] The FTCS is budgeted to reduce Australian Government tax receipts by $9.6 billion in 2023-24, making it the 18th largest cost item in the Federal Budget, more than on the Royal Australian Air Force (Figure 1).[7]

Figure 1: Fuel Tax Credits Scheme and other programs, 2023-24



Source: Treasury (2023) *Budget Paper No. 1: Budget Strategy and Outlook*

The overwhelming beneficiary of the FTCS is Australia's mining industry. The benefits of the FTCS are over $1 billion each year to both the iron ore and coal industries, as shown in Figure 2.

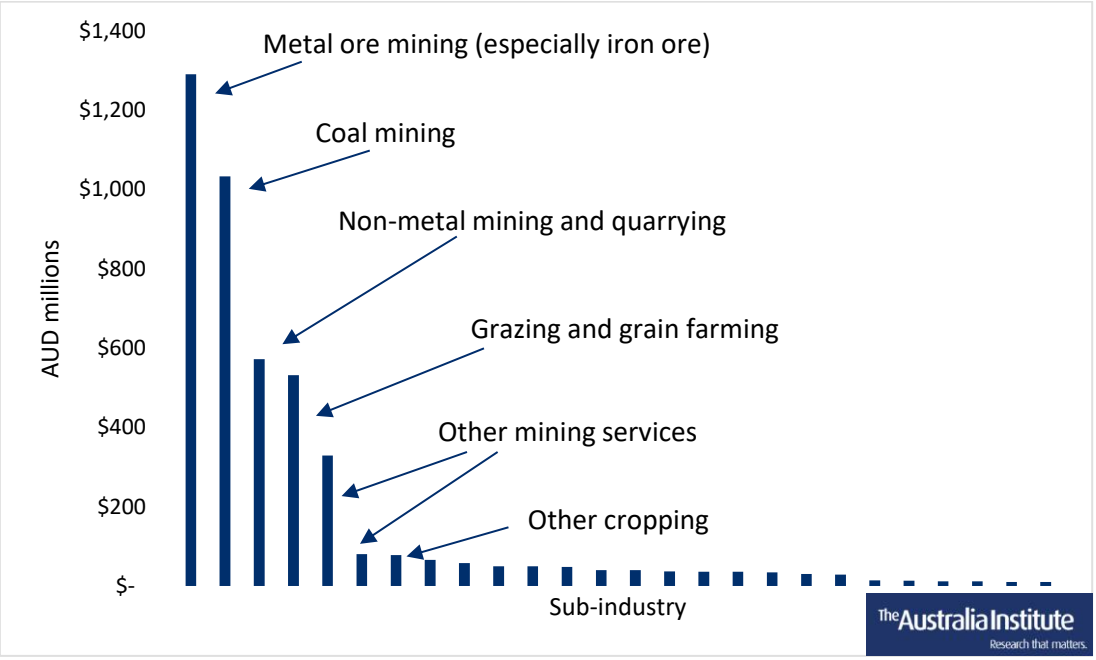
[4] ATO (2023) *Excise duty rates for fuel and petroleum products*, https://www.ato.gov.au/Business/Excise-on-fuel-and-petroleum-products/Excise-duty-rates-for-fuel-and-petroleum-products/

[5] Australian Government (2023) *Budget Paper 1: Strategy and outlook*, https://budget.gov.au/content/bp1/index.htm

[6] ATO (2023) *Fuel tax credits – business*, https://www.ato.gov.au/Business/Fuel-schemes/Fuel-tax-credits---business/

[7] Australian Government (2023) *Budget Paper 1: Strategy and outlook*, see Table 6.3.1.

Figure 2: Fuel Tax Credits Scheme – benefit by selected sub-industry



Source: Australian Tax Office (2022) Taxation Statistics – Excise Table 4: Excise and fuel schemes

Figure 1 shows that while some parts of the agricultural sector are significant beneficiaries of the FTCS, the vast bulk of the benefit goes to the mining industry.

None of these facts or figures are in dispute. What makes the FTCS controversial is that many researchers label it as a subsidy to fossil fuel users and, in the case of the coal industry, a subsidy to production of fossil fuel. This description as a subsidy has been widely reported in the media and plays a significant role in the debate around Australia's approach to climate policy.[8] The Australian Government, mining industry representatives and some researchers reject the term 'subsidy', adding to the controversy.

There is also an argument that maintaining access to the FTCS will delay the uptake of newer, lower-emissions technologies in the mining sector. Then-chairman of Fortescue Metals, Dr Andrew "Twiggy" Forrest argued in 2021 that the FTCS was a fossil fuel subsidy, and that miners should lose access from the FTCS from between 2025 to 2030, thereby encouraging the deployment of alternatives to diesel fuel.[9]

[8] See for example Glenday (2021) *Calls to phase out fossil fuel subsidies after speculation about net-zero emissions target*, https://www.abc.net.au/news/2021-04-26/scott-morrison-climate-change-fossil-fuel-subsidies-net-zero/100094506

[9] Ker (2021) 'Forrest says diesel rebate should go after 2025', *Australian Financial Review*, https://www.afr.com/companies/mining/forrest-says-diesel-rebate-should-go-after-2025-20211123-p59bfk

IS THIS ABOUT ROAD FUNDING?

Defenders of the FTCS commonly claim that fuel excise funds roads and that the FTCS is justified because the fuel use of mining and agriculture is largely off-road. For example, National Party Leader David Littleproud described the Scheme in 2021 as “a rebate to those users that don’t use public roads”. “If you don’t use those roads and you’re fuelling up your machinery with diesel”, he continued, “then the excise would go to building those roads, we are giving you a rebate because you’re not using them". On this basis, Mr Littleproud claimed that the tax was “not a subsidy”.[10]

The view that companies that do not use public roads should not pay fuel tax relies on a link between fuel tax and road building that is heavily exaggerated. Road funding in Australia has not been based on fuel tax since 1955. Since then, road funding has been based on assessed need and funded from general revenue, aside from some minor, and usually temporary, arrangements.[11]

The only exception is the Fuel Indexation (Road Funding) Special Account. This was established in 2015 following the Abbott Government’s decision to reintroduce regular updates to fuel excise in line with inflation. The portion of collected fuel excise that comes from this ‘re-indexation’ decision goes into a special account that is required to be given to the states for road projects as approved by the Federal Infrastructure Minister.[12] In 2023, this account received and disbursed just over $1 billion,[13] or 5% of the total fuel tax collected, or 8% of the net fuel excise revenue.

To be clear, 95% of fuel tax revenue does not go into any dedicated road infrastructure fund. Like almost all tax revenues, fuel tax goes into “consolidated revenue”, which facilitates the funding of the full range of government expenses.

[10] Evans (2021) *Mining and farming industries savage Andrew Forrest’s bid to phase out fuel credit system*, https://www.theaustralian.com.au/business/mining-energy/mining-and-farming-industry-savage-andrew-forrests-bid-to-phase-out-fuel-credit-system/news-story/c9a1048816640cd1d88189451ccf038c

[11] For discussion of these exceptions see Terrill et al (2023) *Fueling Budget Repair: How to reform fuel taxes for business,* Box 5: Fuel tax is not used to pay for roads, https://grattan.edu.au/wp-content/uploads/2023/02/Fuelling-budget-repair-Grattan-report.pdf

[12] Australian Government (2015) *Fuel Indexation (Road Funding) Special Account Act 2015*, https://www.legislation.gov.au/C2015A00103/latest/text

[13] Australian Government (2023) *Special accounts balances and cash flows report*, https://www.finance.gov.au/special-appropriations-special-accounts

Further, the FTCS is not limited to fuel used off road.[14] Heavy vehicles (over 4.5 tonnes) on public roads also receive part of the rebate – or to be precise, they receive a FTC but also pay a road user charge.[15] However, heavy vehicles using public roads cause damage to public roads far in excess of the road user charges that they pay.[16] In this case, the view of the FTCS as a reimbursement for avoided road costs clearly does not apply.

Regardless of any link between road funding and the fuel tax system, taxpayers do not pick-and-choose which taxes they pay to governments based on which services are accessed. In other words, tax is not a user-pays system. Whether an individual or company uses or does not use a particular government service – for example, childcare, aged care, or disability support – has no bearing on whether they ought to be taxed for its implementation. As discussed below, The WTO and other international agencies are clear on this point.

WHO CALLS THE FTCS A SUBSIDY?

In addition to the Australia Institute, a range of Australian and international researchers have either specifically labelled the FTCS a subsidy, include it in their calculation of Australian fossil fuel subsidies, or consider it a support measure in need of reform.

Organisation for Economic Cooperation and Development (OECD)

The OECD publishes regular research on fossil fuel subsidies. It specifically mentions Australia's FTCS and considers it a subsidy,[17] following the World Trade Organisation's definition of a subsidy that includes where "government revenue that is otherwise due is forgone or not collected (e.g. fiscal incentives such as tax credits)."[18] The OECD has

[14] Australian Taxation Office (2023) *Travelling on Public Roads,* https://www.ato.gov.au/Business/Fuel-schemes/In-detail/Heavy-vehicles/?anchor=Travellingonpublicroads#Travellingonpublicroads

[15] National Transport Commission (n.d.) *Road user charges*, https://www.ntc.gov.au/laws-and-regulations/road-user-charges

[16] Grattan Institute (2023) *Fueling Budget Repair: How to reform fuel taxes for business.* See also National Transport Commission (2022) *Heavy vehicle charges consultation report*, https://www.ntc.gov.au/sites/default/files/assets/files/Heavy%20vehicle%20charges%20consultation%20report%202022%E2%80%9323.pdf

[17] OECD (2023) *Fossil fuel support – Aus*, https://stats.oecd.org/Index.aspx?DataSetCode=FFS_AUS

[18] OECD (n.d.) *OECD work on support for fossil fuels*, https://www.oecd.org/fossil-fuels/methodology/

called on Australia to "reduce or eliminate fuel tax exemptions for heavy vehicles and machinery."[19]

International Energy Agency (IEA)

The IEA's recent Energy Policy Review of Australia follows the OECD's approach:

> Fuel tax credits are applied to heavy vehicles for gasoline and diesel and heavy oil use in industry and electricity fuels. Fuel tax credits provide businesses with a rebate of the tax embedded in the price of fuel. In 2020-2021, fuel tax revenue was AUD 19.78 billion and businesses claimed AUD 7.6 billion of fuel tax credits, net of road user charges. This is counted as an indirect fossil fuel subsidy by the OECD…[20]

International research organisations

The International Institute for Sustainable Development (IISD), Overseas Development International (ODI) and Oil Change International consider Australia's FTCS to be a fossil fuel subsidy:

> Australia's fossil fuel companies currently benefit from significant tax breaks through the Petroleum Resource Rent Tax (PRRT) and fuel tax credits, among other measures. Recent reforms have done little to decrease these subsidies.[21]

International Monetary Fund (IMF)

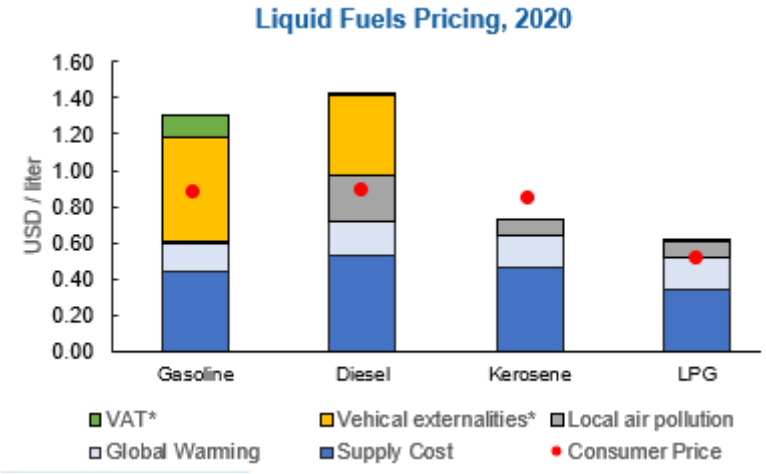
IMF research on Australia's fossil fuel subsidies does not mention the FTCS specifically. The IMF methodology compares the total market and environmental cost of fossil fuels with the consumer price, as shown in Figure 2 below:

[19] OECD (2024) *Achieving the transition to net zero in Australia*, https://www.oecd.org/economy/achieving-the-transition-to-net-zero-in-australia-9a56c9d2-en.htm

[20] IEA (2023) *Australia 2023: Energy Policy Review*, https://www.iea.org/reports/australia-2023

[21] IISD, ODI, Oil Change (2020) *G20 Scorecard of Fossil Fuel Funding: Australia*, https://www.iisd.org/publications/g20-scorecard-australia

Figure 3: Extract from IMF workbook on Australian fossil fuel subsidies



Source: IMF (2021) Still Not Getting Energy Prices Right

The IMF estimates fossil fuel subsidies by the difference between the consumer price (the red dots) and the environmental and supply costs of the fuel (the stacked bars).[22] The FTCS reduces consumer prices for both gasoline (petrol) and diesel, increasing the difference between price paid and total cost, increasing the value of the subsidy under the IMF's approach.

World Bank and World Economic Forum

These organisations do not mention Australia's FTCS specifically, but adopt a definition of fossil fuel subsidy that would certainly include it:

> Nature of [fossil fuel] subsidy and subsidy delivery mechanism**:**
>
> 4. Reduction of taxes paid. Examples include exemptions or reductions from taxes normally applied, such as VAT, tax holidays for petroleum profit tax or corporate income tax, and tax credits…[23,24]

[22] IMF (2021) *Still Not Getting Energy Prices Right: A Global and Country Update of Fossil Fuel Subsidies*, https://www.imf.org/en/Publications/WP/Issues/2021/09/23/Still-Not-Getting-Energy-Prices-Right-A-Global-and-Country-Update-of-Fossil-Fuel-Subsidies-466004#:~:text=IMF%20Working%20Papers&text=Globally%2C%20fossil%20fuel%20subsidies%20were,percent%20of%20GDP%20in%202025.

[23] Kojima and Koplow (2015) *Fossil Fuel Subsidies: Approaches and Valuation*, https://documents.worldbank.org/en/publication/documents-reports/documentdetail/961661467990086330/fossil-fuel-subsidies-approaches-and-valuation

[24] See also Kojima (2015) *What exactly is a fossil fuel subsidy*?, https://www.weforum.org/agenda/2015/04/what-exactly-is-a-fossil-fuel-subsidy/

Grattan Institute

The Grattan Institute is a prominent Australian research organisation, with a well-regarded energy and climate research program. Grattan urges reform of the FTCS "to help repair the budget and reduce carbon emissions," noting that the policy is "out of step with the government's climate goals" which include "the phase-out of inefficient fossil-fuel subsidies."[25]

WHO DOES NOT CALL THE FTCS A SUBSIDY?

The Australian Government and its agencies do not consider the FTCS to be a subsidy. Representatives of the mining industry are also opposed to this description.

Productivity Commission

The Australian Government's Productivity Commission has written:

> One of the largest components of both the OECD's and the Australia Institute's estimates of assistance to the fossil fuel sector is fuel tax credits (FTCs). However, whether FTCs should be considered industry assistance is ultimately a question of the appropriate 'baseline' — what might be regarded as 'normal' policy settings — against which the design and effects of Australia's fuel excise and FTC system should be assessed. The Commission does not regard the baseline used in the OECD's and the Australia Institutes methodologies as a compelling approach to identifying industry assistance for the [Trade Assistance Review].[26]

In our view, just because the FTCS has become 'normalised' does not make it any less of a subsidy under most definitions. Regardless, the Productivity Commission's views are influential on publications from other Australian federal agencies, with one researcher from the Parliamentary Library concluding:

> In summary, the rebate for excise paid on fuel that eligible businesses use as inputs is not a subsidy to fuel use. Rather, the rebate is designed to relieve businesses of input taxes that can reduce output and living standards. The

[25] Terrill et al (2023) *Fuelling budget repair: How to reform fuel taxes for business*, https://grattan.edu.au/report/fuelling-budget-repair/

[26] Productivity Commission (2021) *Trade and Assistance Review 2020-21*, https://www.pc.gov.au/ongoing/trade-assistance/2020-21

> Productivity Commission does not consider the rebate to be a form of assistance.[27]

It is worth reiterating here that to 'relieve business of input taxes', as put by this researcher, falls squarely within the WTO definition of a subsidy. Here again, the disagreement is around the use of the word subsidy, or 'assistance', compared to 'tax relief'. What is not contested is the substantial cost of the FTCS, and the disincentive to decarbonise that flows from this policy.

Minerals Council of Australia

As the main lobby group for the mining industry, the Minerals Council is defensive of the FTCS:

> The credit is not a subsidy, it does not lower the price of fuel paid by users.
>
> There is no cost to taxpayers; it does not equate to spending by governments in other areas.
>
> Just as the GST is rebated on business inputs, the credit removes what is an additional tax on a business input. Budget papers rightly note this for transparency.
>
> Any change to the credit would be an increase in tax.
>
> The repetition of the word subsidy is wrong and misleading.[28]

The Minerals Council is incorrect to claim there is no cost to taxpayers. This cost is significant and quantified in the Federal Budget every year, as discussed above. The key point in contention is around the use of the word subsidy rather than the cost of the policy.

The Minerals Council statement quoted here makes no mention of road use. A separate Minerals Council site focuses exclusively on the debate around the FTCS and road use.[29] That site uses the term "diesel road tax" rather than fuel excise, which it claims "is intended for heavy road vehicles such as large trucks". This ignores the fact

[27] Webb (2012) *Fuel tax credits: are they a subsidy to fuel use*?, https://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/FlagPost/2012/May/Fuel_tax_credits_are_they_a_subsidy_to_fuel_use

[28] MCA (2023) *Fuel Tax Credit is not a subsidy*, www.minerals.org.au/resources/fuel-tax-credit-is-not-a-subsidy/

[29] Fuel Tax Credit Alliance (2022) *Road taxes are for road users*, www.roadtaxesareforroadusers.com.au/

that fuel excise applies to fuels other than diesel and that it is light vehicles that pay the full rate of excise, unlike heavy vehicles that receive partial fuel tax credits.

Further, the comparison to GST is spurious. The GST is explicitly designed as a tax on consumption, hence the exclusion of costs which go into production.

Though it is important to note that the entire minerals sector does not hold the view of the MCA – Dr Forrest, as cited above, has argued that the maintenance of the FTCS subsidy is actually slowing innovation in the mining sector.

CONCLUSION AND CONTEXT

The Fuel Tax Credits Scheme is one of Australia's most expensive government programs, expected to cost $9.58 billion in 2023-24.[30] In comparison, the Australian Government has committed to spend significantly less on Official Development Assistance, which sits at $4.77 billion for the 2023-24 year,[31] which includes:

$44 million allocated to Fiji,

$50 million allocated to Vanuatu,

$11.4 million allocated to Tuvalu,

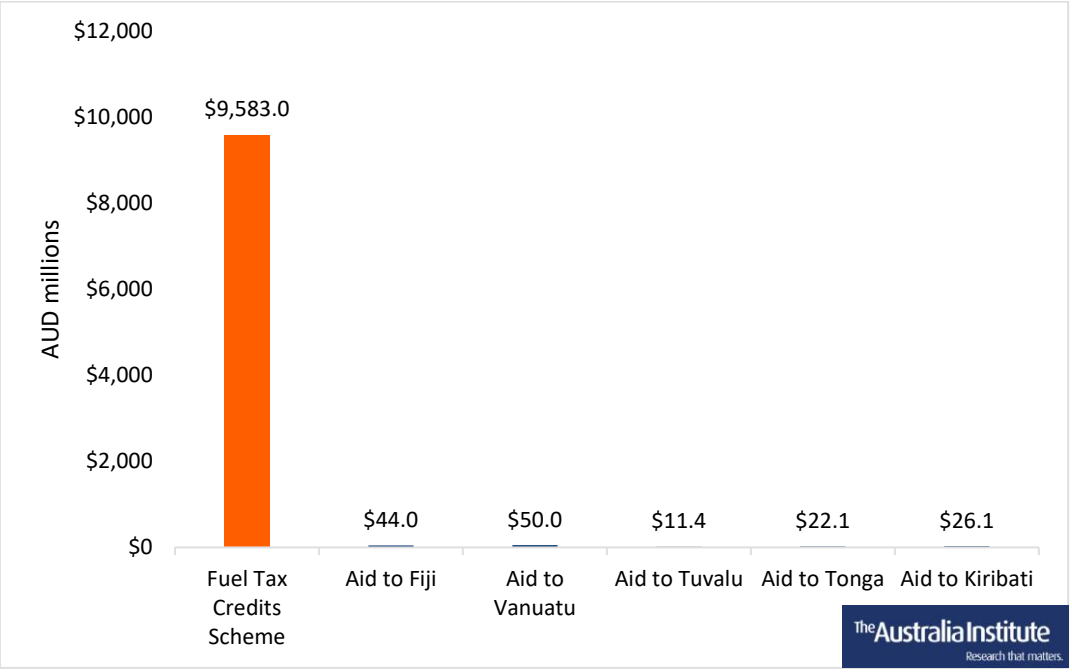
$22.1 million allocated to Tonga, and

$26.1 million allocated to Kiribati (Figure 4).

[30] Listed as the 18th largest expense in Australian Government (2023), *Budget Paper 1*.

[31] Department of Foreign Affairs and Trade (2023) *Australia's Official Development Assistance Budget Summary 2023-24* https://www.dfat.gov.au/about-us/corporate/portfolio-budget-statements/australias-official-development-assistance-budget-summary-2023-24

Figure 4: FTCS compared to select Pacific aid expenditure, 2023-24



Source: Treasury (2023) *Budget Paper No. 1: Budget Strategy and Outlook*; Department of Foreign Affairs & Trade (2023) *Australia's Official Development Assistance Budget Summary 2023-24*

While the government notes that "rising global pressures including climate change" are amongst its primary concerns for the Pacific region, and that it "recognises the urgency and far-reaching implications of the climate crisis", it is still allocating more funds towards subsidising fossil fuels through the Fuel Tax Credits Scheme than towards helping Pacific countries mitigate and adapt to climate change.[32]

Domestic debate about Fuel Tax Credits Scheme remains dominated by the question of whether the scheme counts as a fossil fuel subsidy. However, at least internationally, the debate is settled: the Fuel Tax Credits Scheme is labelled a subsidy by the OECD, the International Energy Agency, the International Institute for Sustainable Development, the Overseas Development International and Oil Change International. Other organisations adopt a definition of subsidy which would include the FTCS.

The Fuel Tax Credits Scheme acts as a disincentive for major fossil fuel users to decarbonise. This portion of forgone government revenue could otherwise be spent on domestic or international efforts to decarbonise or mitigate the effects of climate change. From both a fiscal and environmental point of view it is a damaging policy in need of urgent reform.

[32] Department of Foreign Affairs and Trade (2023) *Australia's Official Development Assistance Budget Summary 2023-24*

The Australia Institute
Research that matters.

Fossil fuel subsidies in Australia 2024

Federal and state government assistance to major producers and users of fossil fuels in 2023-24

In 2023–24, Australian governments provided $14.5 billion worth of spending and tax breaks to assist fossil fuel industries, a 31% increase on 2022-23. Subsidies in the forward estimates have increased from $57 billion to a record $65 billion, a sum 6.5 times greater than the Housing Australia Future Fund.

Rod Campbell, Liz Morison, Matt Ryan, Matt Saunders, Minh Ngoc Le, Alexia Adhikari, Kristen Scicluna, Evie Simpson, Lilia Anderson

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Canberra, ACT 2601
Tel: (02) 61300530
Email: mail@australiainstitute.org.au
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Contents

Summary

Australia's subsidies to fossil fuel producers and major users from all governments totalled $14.5 billion in 2023–24, increase of 31% on the $11.1 billion recorded in 2022–23.

$14.5 billion equates to $27,581 for every minute of every day, or $540 for every person in Australia.

Beyond the 2023–24 budget year, total budgeted fossil fuel subsidies over the longer term have reached $65 billion.

This longer term total is 16 times the balance of Australia's Disaster Ready Fund, and 6.5 times greater than the Housing Australia Future Fund (HAFF). The Federal Government's share of this total is $54 billion, or 5.4 times the HAFF.

The increase to $14.5 billion in 2023-24 from $11.1 billion in 2022-23 was driven largely by the Federal Government's Fuel Tax Credits Scheme (FTCS). The FTCS cost the Federal Budget $9.6 billion in 2023–24, up from $7.5 billion in 2022–23. This represents a return to trend growth in the FTCS as policies put in place in response to the Russia-Ukraine war came to an end. The FTCS is one of the top twenty most expensive items in the Federal Budget, worth more than spending on the Australian Army or Air Force. The FTCS, which is worth around $1 billion to the coal industry alone, is Australia's single largest fossil fuel subsidy.

Other Federal items also contributed significantly to the overall growth in fossil fuel subsidies. Concessions on aviation fuel grew by $430 million, or 36% to a total of $1.6 billion. Concessions on the Petroleum Resource Rent Tax, which benefits major oil and gas producers, cost the Commonwealth an estimated $165 million. In the NT, the Commonwealth Government is spending $1.9 billion to assist the Middle Arm petrochemical hub in Darwin, and $100 million to build roads explicitly for the onshore gas industry. In NSW, the Commonwealth-owned Australian Rail Track Corporation spent $113 million on upgrading Hunter Valley coal railways to help "coal producers to…capitalise on global demand and high prices for thermal coal".

At state level, Queensland provided the highest level of subsidies $1.6 billion in 2023-24 and longer-term commitments worth $5.5 billion. The Queensland Government added significant new subsidies including:

- A $21 million gas exploration subsidy that will provide grants "to unlock significant gas resources in the Bowen and Galilee basins."
- A $520 million, six-year program to "drive emissions reductions, with a focus on the state's highest emitting metallurgical coal mines."

- Spending on abandoned underground coal gasification sites worth up to $19.4 million.

Western Australia provided $419 million in assistance to fossil fuel industries in 2023–24, with longer-term commitments worth $1.1 billion. This is an increase on last year, mainly because of a significant increase in subsidies from the *Department of Jobs, Tourism, Science and Innovation*, particularly its *Investment Attraction Fund*, which funds "identified projects and sectors for strategic development including energy primary industries…".

The NT Government provided $531 million in assistance to the oil and gas industry in 2023–24, with longer-term commitments worth $3.7 billion. However, this does not include the gas that the NT Government, in an announcement made in April 2024, agreed it would purchase from a controversial Beetaloo Basin gas project. This purchase would probably have been impossible without the hundreds of millions of dollars in gas-industry focussed road construction funded by the Commonwealth. The NT's largest assistance measure comes via its Power and Water Corporation's decades-long, loss-making agreement to buy and transport gas from Eni, a multinational oil company. These commitments are currently worth $2.6 billion for gas purchases and $674 million in pipeline commitments.

Victoria provided $21 million in assistance to fossil fuel industries in 2023–24, with longer-term commitments worth $84 million. Two things account for Victoria's spending: the government department that provides data to the petroleum industry and oversees the CarbonNet carbon capture and storage project; and a land tax concession that is applied to mines, particularly coal mines, in the Latrobe Valley.

South Australia provided $35 million in assistance to fossil fuel industries in 2023–24, with longer-term commitments worth $186 million. The most significant spending relates to Port Bonython, a facility used by Santos, which is in the vicinity of proposed hydrogen production and export projects. Concerningly, the SA Government expects an increase in petroleum royalties, "with growth in future years supported by increased petroleum production".

New South Wales provided $60 million in assistance to fossil fuel industries in 2023–24, with longer-term commitments worth $102 million. The NSW Coal Innovation Fund spent $27 million, five times more than the previous year.

No fossil fuel subsidies were identified in the budgets of the Tasmanian or ACT governments.

Australia is not taking serious action on climate change. Instead, the majority of its governments continue to subsidise the fossil fuel industry and greenwash their poor climate policies. Cutting fossil fuel subsidies would not only help achieve genuine reductions in emissions, but would save money that could be spent on public services.

But the coming months bring new opportunities to change course. Budgets will soon be passed for the 2024-25 financial year, and elections will be held in the ACT, Northern Territory and Queensland. A federal election is due in the next 18 months. The costs of Australia's fossil fuel subsidies, both financial and environmental, and the opportunities that their phase out could present, should be front and centre of Australian policy debate.

Introduction

Greenwashing– the pretence that a company, government or other organisation is acting in a sustainable manner when in fact it is not – has become so widespread that that the Australian Senate is holding an inquiry into the practice,[1] and the Australian Competition and Consumer Commission has said it is "concerned" about it.[2] Recognising the problem, the Australia Institute has published several reports and submissions on Australia's state-sponsored greenwash.[3]

This report discusses the fossil fuel subsidies that Australia's state and federal governments attempt to hide with their greenwash. Greenwashing has become more prominent, perhaps because Australia's fossil fuel subsides are becoming more difficult to hide.

Fossil fuel subsidies obscure the true cost of polluting industries, and enable them to continue exploring for, extracting, and burning the coal, oil and gas that causes climate change. They reduce government revenue, which reduces the public's capacity to respond to climate change and the many other challenges the 21st century is presenting. As the world works towards reducing global greenhouse emissions to mitigate climate change, the first thing governments should do is end fossil fuel subsidies.

But, as this report shows, Australian fossil fuel subsidies are increasing – they reached a record $14.5 billion in 2023–24, up 31% from $11.1 billion in 2022–23. This is driven by the largest subsidy, the Fuel Tax Credits Scheme, which is expected to keep growing along with Australia's use of diesel and petrol.

But the Fuel Tax Credits Scheme is not the only fossil fuel subsidy that is increasing. Just a handful of other examples include:

- The Federal tax break on aviation fuel, which is up $430 million, or 36%, as Australians are expected to fly more.
- The Northern Territory Government's recently-announced publicly-subsidised gas deal, which adds to its existing multi-billion dollar gas industry subsidies.

[1] Senate Standing Committee on Environment and Communications (2024) *Greenwashing*, https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Environment_and_Communications/Greenwashing

[2] ACCC (2023) *ACCC 'greenwashing' internet sweep unearths widespread concerning claims*, https://www.accc.gov.au/media-release/accc-greenwashing-internet-sweep-unearths-widespread-concerning-claims

[3] For example, Hemming, Campbell and Venketasubramanian (2022) *State-sponsored Greenwash*, https://australiainstitute.org.au/report/state-sponsored-greenwash/

- The Queensland Government's $520 million subsidy for coal mines to help them comply with emissions standards.
- The NSW Coal Innovation Fund, which spent almost five times more this year than it did in 2022-2023.

Even the South Australian Government states that it is expecting higher petroleum royalties in the future because it anticipates that oil and gas production will increase.

These are not the actions of governments that take the threat of climate change seriously. Climate policies such as the Safeguard Mechanism, vehicle fuel efficiency standards and the Net Zero Authority are far less effective in reducing emissions than Australia's fossil fuel subsidies are in increasing them. These policies attract attention, but this is because they are new and promoted by government, not because they are effective. In contrast, most fossil fuel subsidies are not new, and they are certainly not promoted.

Australia's fossil fuel subsidies are not new, and neither are attempts to quantify them. The first estimate was made in 1994 in a report by the National Institute of Economic and Industry Research (NIEIR). That report estimated the value of subsidies to the Australian energy sector to be $1.995 billion.[4] The University of Technology Sydney's Institute for Sustainable Futures made several estimates around the turn of the century, with a range of between $9.3 billion and $10.1 billion estimated in a 2007 Greenpeace-commissioned study.[5] More recent estimates include:

- The International Monetary Fund (IMF), which put the figure USD $44 billion in 2020, including unpaid costs of air pollution and climate change.[6]
- The Organisation for Economic Co-operation and Development (OECD), which put the figure at $12.4 billion in 2021.[7]
- The Productivity Commission, which estimated that $1 billion was given to sectors that include fossil fuel activities in 2018–19.[8]

[4] NIEIR (1996) *Subsidies to the use of natural resources*, https://catalogue.nla.gov.au/Record/319092/Details

[5] Riedy (2007) *Energy and transport subsidies in Australia: 2007 update*, https://apo.org.au/node/4203

[6] Parry et al (2019) *Still Not Getting Energy Prices Right: A Global and Country Update of Fossil Fuel Subsidies*, https://www.imf.org/en/Publications/WP/Issues/2021/09/23/Still-Not-Getting-Energy-Prices-Right-A-Global-and-Country-Update-of-Fossil-Fuel-Subsidies-466004#:~:text=IMF%20Working%20Papers&text=Globally%2C%20fossil%20fuel%20subsidies%20were,percent%20of%20GDP%20in%202025.

[7] OECD (2022) *OECD Inventory of support for fossil fuels - Australia*, https://stats.oecd.org/Index.aspx?DataSetCode=FFS_FRA; OECD (2019) *Fossil Fuel Support Country note: Australia*, http://www.oecd.org/fossil-fuels/data/; and OECD (2018) *OECD Companion to the Inventory of Support measures for fossil fuels 2018*, https://read.oecd-ilibrary.org/energy/oecd-companion-to-the-inventory-of-support-measures-for-fossil-fuels-2018_9789264286061-en#page4

[8] Productivity Commission (2020) *Trade and assistance review 2018-19*, https://www.pc.gov.au/research/ongoing/trade-assistance/2018-19

This range estimates demonstrates a key issue in any discussion about subsidies: different definitions of "subsidy" make a large difference to the final estimate. The largest estimates, such as those from the IMF, incorporate the uncompensated costs of climate, health and other environmental damage into the definition of fossil fuel subsidies. The lower estimates, like those from the Productivity Commission, take into account a much narrower range of assistance measures to fossil fuel producers, typically direct payments and the estimated value of trade barriers.

In some cases, identifying which budget items meet the criteria of a fossil fuel subsidy is straightforward—in particular, where their title suggests the that intended beneficiaries are fossil fuel industries (for example, Coal Innovation NSW). Other relevant items require further investigation, as their connection to fossil fuel-related activities may not be immediately apparent. This is particularly the case for infrastructure projects on which fossil fuel industries rely, such as rail and port projects. For example, funding for the Darwin Ship Lift is not, at face value, a fossil fuel subsidy. However, a close reading of the relevant budget paper clarifies that this money will assist oil and gas vessels.

The provision of infrastructure represents a major source of subsidies for fossil fuel industries. Australian Governments spend significant amounts of money on ports, railways, pipelines, power stations and other forms of infrastructure that assist in the production, transport and consumption of fossil fuels. While companies often pay to use this infrastructure, and the infrastructure's management may return surplus money to the government that owns the asset, it is government-owned entities that take on the risk and pay up front costs. State treasuries are explicit as to how this provides benefits to the industry, and imposes costs on the community:

> Some costs may be recovered by the government over time if they are directly industry related. However, there is a real opportunity cost for governments in undertaking the initial capital expenditure. Governments face budget constraints, and spending on mining related infrastructure means less infrastructure spending in other areas, including social infrastructure such as hospitals and schools. The opportunity cost of this use of limited funds is a real cost to government and the community. – Queensland Treasury.[9]

> Western Australian Treasury calculated that in 2010 net present value terms, the estimated cost of its commitments to assist the North West Shelf project (e.g. payment of subsidies to the State's power utility to help cover the losses it initially

[9] Queensland Treasury (2014) *Queensland Treasury Response to Commonwealth Grants Commission 2015 Methodology Review*, https://www.cgc.gov.au/sites/default/files/documents/2015%20Review%20Report/General%20Consultation/Commission%20position%20and%20staff%20discussion%20papers/State%20responses/R2015%20-%20CGC%202013-05%20-%20CGC%202013-06-S%20-%20CGC%202013-07-S%20-%20CGC%202013-08-S%20-%20QLD%20Response.pdf?acsf_files_redirect

> incurred under crucial 'take or pay' gas contracts) is estimated to be around $8 billion. – Western Australian Treasury[10]

Our approach to calculating subsidies reflects the same logic as the Queensland Treasury: — if governments choose to allocate scarce resources to fossil fuel industries and not to other government priorities, this represents a subsidy to fossil fuels. The fact that user fees may later be collected does not change the fact that a government has directed resources to one project at the expense of another.

[10] WA Treasury (2017) *Western Australia's Submission to the Productivity Commission's Inquiry into Horizontal Fiscal Equalisation*, https://www.pc.gov.au/__data/assets/pdf_file/0008/218564/sub015-horizontal-fiscal-equalisation.pdf

Methodology

Our estimates of the subsidies and other forms of assistance given to the fossil fuels industry for the 2023–24 budget year are based on items included in state and federal budget papers, as well as the annual reports of relevant departments and agencies. In the small number of cases that data for 2023–24 was not available, and the subsidy would continue to be provided, estimates were based on data taken from the relevant 2022–23 documents. Where appropriate, subsidy or assistance estimates were projected over the forward estimates by compiling multi-year funding packages for non-ongoing projects and capital value of long-term physical assets. Funding for fossil fuel projects or programs that have been announced since the publication of 2023–24 Federal, State and Territory Budget Papers have not been included in this analysis.

The value of industry assistance from ongoing programs—such as long-running tax breaks and established government departments—is taken as the sum of values estimated over the forward estimates. Omitting the longer-term value of such subsidies would result in the counterintuitive situation where the current 2023–24 budget item could be greater than its total/capital value. This method still produces a conservative estimate, as such programs may run for much longer than the next four years, and therefore cost much more. This is most relevant to the Fuel Tax Credits Scheme, which dominates overall results, as the 2023–24 Federal budget indicates that spending on the Scheme will continue to increase in the future. Ongoing programs and items are valued over four years— this includes the current budget year and three years of forward estimates, also known as outyears.

Our estimates include tax concessions that advantage major fossil fuel producers, and that are calculated in budget documents. This approach means the Federal Fuel Tax Credits Scheme is included (it applies only to certain fossil fuel users, and is calculated in budget documents), but the benefit to similar parties provided by the abolition of carbon pricing (no group pays an explicit carbon price, and the lost revenue is not calculated in budget documents).

All items of expenditure have been classified according to which fossil fuel industry it benefitted: coal, gas/oil or various. Items categorised as “various” provided support to several segments or referred to a larger industry investment. For example, many of Queensland’s ports import and export a combination of coal, oil, gas and other products, and have thus been categorised as “various”.

Subsidies were assessed as being wholly, primarily, or partly dedicated to these industries according to the following definitions:

- Wholly dedicated: for the singular purpose of supporting the consumption, extraction, processing, or transport of fossil fuel commodities. An example of this is

the Queensland government's $29 million in funding for the Meandu coal mine, which supplies a state-owned power station.

- Primarily dedicated: the fossil fuel industry received tangible economic benefits from the spending but were not the exclusive beneficiaries. An example is the Queensland government's spending on Gladstone Port (referred to as Gladstone State Development Area), a large liquefied natural gas (LNG) and coal port that also handles some other commodities.
- Partly dedicated: the fossil fuel industry received a tangible economic benefit from the spending, but that benefit was not the primary aim of the project, or it was not clear which stakeholders received the primary benefit. Infrastructure projects often fall into this category as fossil fuel producers may be major—but not primary—users of these resources. For example, the Darwin Ship Lift, which is funded by the NT government and the Federal Northern Australia Infrastructure Facility, will partly benefit ships that service the offshore oil and gas industry, but is also aimed at defence and other marine services.

Cases where spending benefits the fossil fuel industry either incidentally, or at levels too low to be differentiated in official documents, were not included. For example, Victoria's mining exploration program could benefit coal or gas companies but appears to be aimed mainly at other minerals.

Some spending by government departments has been included where:

- The role of the department includes the provision of services (particularly geoscience information) or activities that incentivise and promote investment in and production of fossil fuels. Often these bodies also play a more basic regulatory role or promote not just fossil fuels but also the wider mining industry. In such cases, the spending is considered as only partly dedicated to fossil fuel assistance.
- We have identified a significant under-recovery of regulatory expenses. These include cases in which agencies incur significant costs for providing services to the fossil fuels industry. One clear example is the NT's onshore gas regulator: an independent inquiry in 2018 highlighted the regulatory body's costs and minimal revenue, but the situation has not been addressed despite getting an increased budget allocation. Similarly, Queensland Treasury highlights that "mining regulation expenses are now material".[11] Where regulators make minimal effort to recover such expenses and the under-recovery can be quantified, this has been included as a subsidy.

Generally speaking, we have considered funding for carbon capture and storage (CCS, sometimes including "use/utilisation and storage" and abbreviated as CCUS) as something

[11] Queensland Treasury (2020) *Queensland response to the Draft Report on the 2020 Methodology Review*, https://www.cgc.gov.au/sites/default/files/qld_submission_-_2020_review_draft_report.pdf

that is dedicated wholly to fossil fuel industries. While some climate research suggests CCS will be necessary to reduce emissions from sectors that are difficult to decarbonise, the intended purpose of most CCS projects funded by state and federal governments is to enable the continued operation of fossil fuel industries.

While hydrogen can be derived through a number of different methods – including though the use of renewable energy, by processing fossil gas and through gasification of coal – we have included funding for hydrogen as a partly dedicated fossil fuel subsidy unless it is specified that funding only applies to renewable-derived hydrogen.

Our estimates do not include the cost of environmental pollution or damage caused by the extraction and use of fossil fuels. This omission is not because these costs are unimportant, but because they are difficult to calculate, and are often contested. Furthermore, these wider costs are borne by the community and the natural environment, not just by governments directly. By concentrating on the official figures published in budget papers and similar documents, we have derived an estimate of how government subsidises the major producers and consumers of fossil fuels. This allows us to show how much revenue could be raised or saved if these decisions were reversed.

Overview of results

This section provides an overview of the combined total of subsidies given by Australian governments to the fossil fuels industry. It also discusses of the differences between jurisdictions. More specific details on the assistance provided by each individual government to the fossil fuel sector can be found in subsequent sections.

2023-24 FOSSIL FUEL SUBSIDIES

Every year Australian governments provide subsidies worth billions of dollars to fossil fuel producers and major users. As Table 1 shows, these subsidies cost federal, state, and territory governments a total of $14.5 billion in 2023–24:

Table 1: 2023–24 fossil fuel subsidies by Federal, state and territory governments

	Spending measures ($)	Tax concessions ($)	Total assistance ($)
Federal	229,954,000	11,573,000,000	11,802,954,000
QLD	710,685,000	916,600,000	1,627,285,000
WA	418,573,000	N/A	418,573,000
NT	531,193,000	N/A	531,193,000
VIC	21,000,000	N/A	21,000,000
SA	34,830,000	N/A	34,830,000
NSW	60,499,787	N/A	60,499,787
Total	**2,006,734,787**	**12,489,600,000**	**14,496,334,787**

Sources: Budget papers and annual reports of government entities

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Another way of looking at the results in Table 1 is that every minute of every day in 2023–24, fossil fuel subsidies cost the public $27,581. This represents $540 for every person in Australia.[12]

Table 1 shows that Federal Commonwealth Government tax concessions account for the largest part of overall fossil fuel subsidies. The Fuel Tax Credits Scheme, which refunds fuel tax to specific users, makes up the majority of federal tax concessions. This subsidy represents one of the largest expenses in the Federal Government's budget, costing almost $9.6 billion in 2023–24, more than the expenses of the Army or the Air Force. The Fuel Tax Credits Scheme jumped up a place on the federal budget's top 20 programs by expenses,

[12] ABS (2024) *National, state and territory population*, https://www.abs.gov.au/statistics/people/population/national-state-and-territory-population/sep-2023

from 19th in 2022–23, to 18th in 2023–24. The cost of the Fuel Tax Credits Scheme is likely to rise through the forward estimates.

The totals in Table 1 are a substantial increase on 2022–23, which saw a total of $11.1 billion in budgeted assistance for fossil fuels. The increase was driven primarily by the Fuel Tax Credits Scheme, as well as Federal concessions on aviation fuel. A change in our methodology relating to Queensland rail concessions that benefit the coal industry also contributed to the increase. For further information about this change, see the Commonwealth and Queensland sections of this report.

CAPITAL VALUES AND FORWARD ESTIMATES

The results above refer only to fossil fuel subsidies incurred or provided by governments in 2023–24. However, most of the projects and programs to which these subsidies apply operate over the course of many years. Table 2 below combines the total value of specific projects with the forward estimates values of ongoing programs (see the methodology section for more explanation).

Table 2: Capital values and forward estimates

	2023–24 ($)	2022–23 ($)	2021–22 ($)
Federal	54,323,286,500	49,685,341,000	48,008,200,000
QLD	5,516,591,000	1,757,165,000	1,959,942,000
WA	1,033,650,000	1,425,265,000	838,928,000
NT	3,723,595,000	3,593,147,000	3,656,542,000
VIC	84,000,000	281,600,000	364,800,000
SA	186,740,000	159,764,000	129,999,000
NSW	102,717,667	178,370,000	328,900,000
Total	**64,970,580,167**	**57,080,652,000**	**55,287,311,000**

Source: Budget papers, annual reports and tax expenditure documents

Table 2 shows that Australian governments have budgeted $65 billion over the lifetime of fossil fuel projects and programs listed in 2023–24 budget papers. This represents a $7.9 billion increase from the 2022–23 figure of $57.1 billion.

In contrast with fossil fuel subsidies, the balance of Australia's Disaster Ready Fund was $3.98 billion in December 2023.[13] In other words, total planned fossil fuel subsidies are 16.3 times larger than the nation's disaster response fund.

[13] Australian Government (2023) *Disaster Ready Fund*, https://www.finance.gov.au/emergency-response-fund

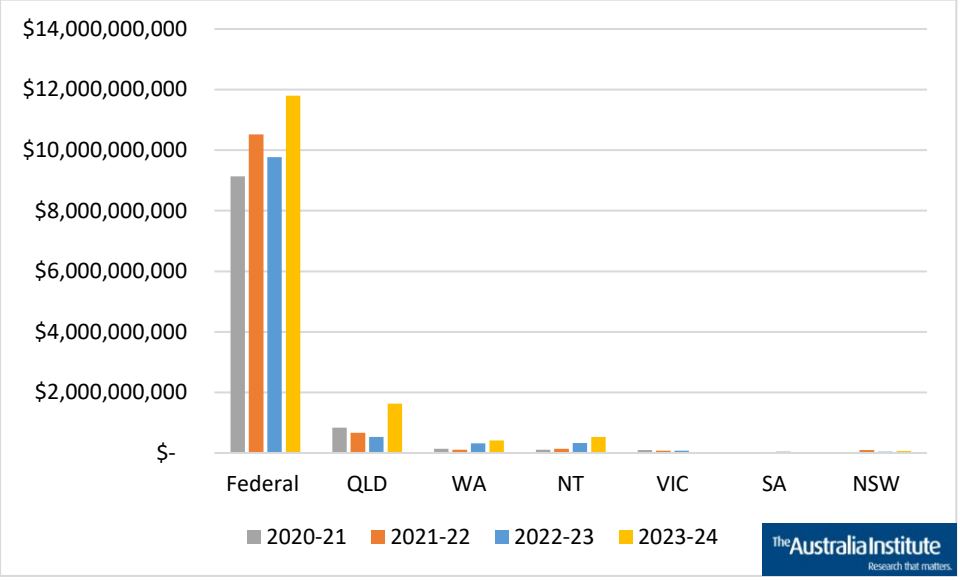
In 2023, the Housing Australia Future Fund was set up with an opening balance of $10 billion.[14] This means that planned fossil fuel subsidies are 6.5 times greater than the Federal Government has budgeted to spend on housing

Table 2 shows that most of this total budgeted assistance comes from the Federal Government, due to the increasing cost of the Fuel Tax Credits Scheme. The Northern Territory has the second highest figure, due to multi-billion gas commitments made by its government-owned Power and Water Corporation. Queensland's total value is driven by rail concessions and capital spending on its state-owned coal fired power stations and coal ports.

COMPARISON TO PREVIOUS YEARS

The 2023–24 total of $14.5 billion represents a 30% increase from 2022–23's total of $11.1 billion. The subsidies provided each year are broken down by jurisdiction in Figure 1 below:

Figure 1: Fossil fuel subsidies 2020–21 to 2023–24 by jurisdiction



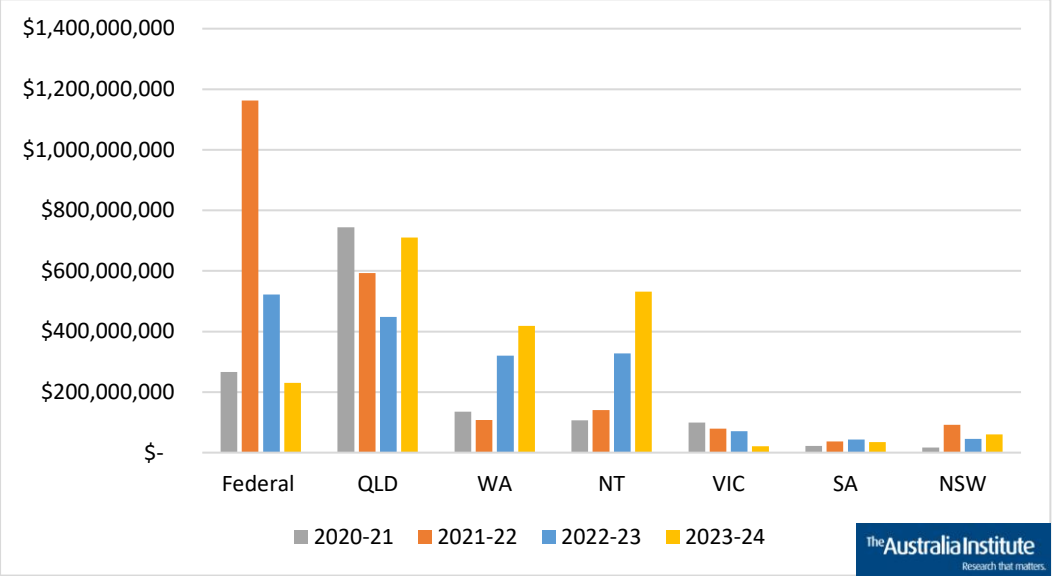
Sources: Budget papers and annual reports of government entities

Figure 1 shows the dominance of the Federal Government in fossil fuel assistance. As discussed above, this dominance is driven by the Fuel Tax Credits Scheme, which declined in 2022–23 due to policy changes, but has now resumed its earlier growth trend.

[14] Australian Government (2023) *Housing Australia Future Fund*, https://www.finance.gov.au/government/australian-government-investment-funds/housing-australia-future-fund

As overall figures are heavily influenced by the Fuel Tax Credits Scheme, in Figure 2 we have removed all tax concessions from total figures, leaving only spending measures. This allows a comparison to be made between years and jurisdictions.

Figure 2: Total assistance by jurisdiction, 2020–21 to 2023–24 (excluding tax concessions)



Sources: Budget papers and annual reports of government entities

Figure 2 shows that beyond tax concessions, Federal Government subsidies to fossil fuel industries declined from $1.16 billion in 2021–22 to $522 million in 2022–23 and again down to $230 million this year. Much of this change reflects the Morrison government's "gas-fired recovery" programs and financing of major items such as the Darwin Middle Arm development, Hunter Power Station (gas-fired) and Olive Downs coal mine being removed from the Federal Government's budget. However, these subsidies to long-lived assets remain on the balance sheet of the relevant government entities, in these instances Snowy Hydro and NAIF.

Figure 2 shows that in 2023-24, the Queensland government provided more assistance to fossil fuel industries than any other government in Australia. Of the $711 million it budgeted, $692 million was spent on government-owned coal and gas power stations, coal mines and ports that export and import fossil fuels.

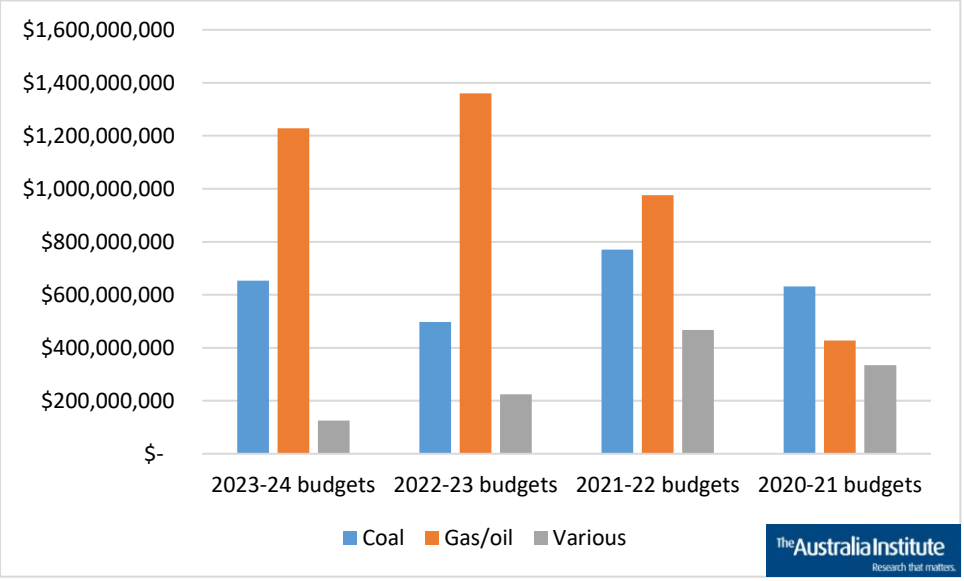
The dramatic increase in the Northern Territory's subsidies largely reflects spending on port infrastructure partly benefiting the offshore gas industry, as well as gas industry-specific road funding that appears in the NT budget, although this is largely funded by the Federal Government. The 2023–24 figures for the NT do not include its agreement to buy gas from the Beetaloo Basin announced in April 2024.

As was the case in previous years, neither Tasmania nor the ACT had identifiable fossil fuel subsidies. While Tasmania has a mining exploration subsidy that has made grants to coal projects in the past, no fossil fuel subsidy was clear in its 2022–23 budget.

2023-24 SPENDING BY INDUSTRY

This report catagorised fossil fuel subsidies according to industry segment: coal, gas/oil or various. As shown in Figure 3, when tax concessions are excluded, gas and oil companies were the main beneficiaries of fossil fuel subsidies.

Figure 3: Budget 2023–24 spending by industry segment, not including concessions



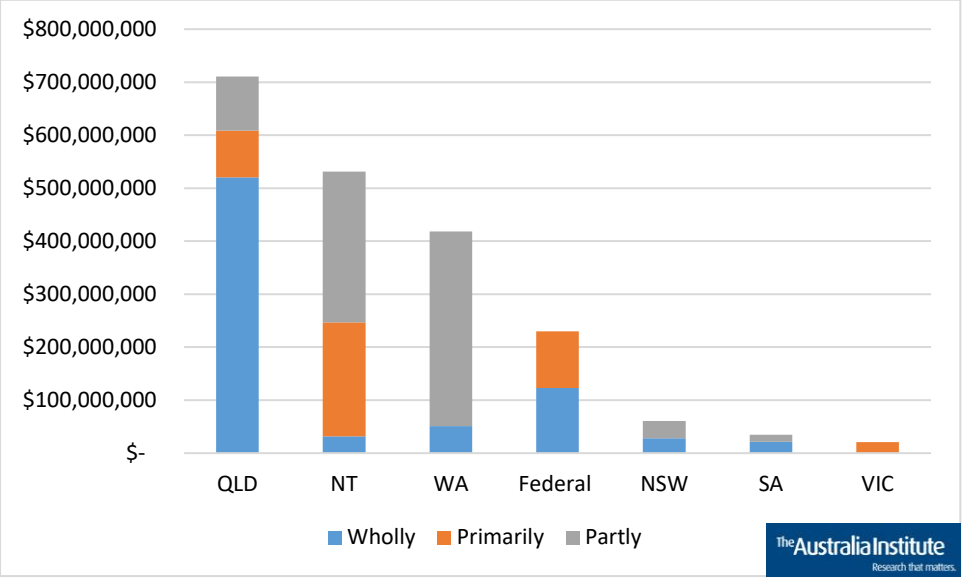
Source: Budget papers and annual reports

Figure 3 shows that in 2020–21, the coal industry received more subsidies than other industry segments, but in the following years the oil and gas industry is easily the largest recipient of fossil fuel subsidies.

2023-24 SPENDING BY DEDICATION

This report classifies budget spending as wholly, primarily or partly dedicated to fossil fuels. **Error! Not a valid bookmark self-reference.**4 shows total Federal, state and territory spending in 2023–24 by dedication, not including concessions.

Figure 4: Budget 2023–24 spending by dedication, not including concessions



Source: Budget papers and annual reports

Figure 4 shows that non-concessional subsidies are largely driven by Queensland's spending on its coal fired power stations and coal ports, most of which are considered wholly dedicated to fossil fuel industries. Subsidies dedicated partly to fossil fuels are where the industry receives tangible economic benefits from the spending, but are not the exclusive beneficiaries. This is the case with much of the NT's recent spending on port infrastructure as well as WA investment attraction funds.

Federal Government

In the 2023–24 Budget, the Federal Government provided $11.8 billion worth of subsidies to fossil fuel producers and major consumers. The largest component of this assistance was tax concessions for major fossil fuel users through the Fuel Tax Credits Scheme. This subsidy was valued at $9.58 billion. Other tax breaks on fuel excise and the Petroleum Resources Rent Tax (PRRT) account for a further $1.99 billion.

The Federal Government also provided a total of $230 million of non tax-based subsidies in 2023–24. Table 3 below sets out the costs of both tax-based and non tax-based subsidies, along with the total assistance provided to fossil fuel industries in 2023–24. (The equivalent figures for 2022–23 are also provided for comparison.)

Table 3: Federal Government fossil fuel subsidies 2022–23 and 2023–24

Dedication to fossil fuels	2023 24 Budget spending ($)	2023 24 tax concessions ($)	Total 2023 24 assistance ($)	Total 2022 23 assistance ($)
Wholly	123,075,000	11,518,000,000	11,641,075,000	9,331,433,333
Primarily	106,879,000	55,000,000	161,879,000	441,522,571
Partly	-	-	-	$800,000
Total	229,954,000	11,573,000,000	11,802,954,000	9,773,755,905

Source: Federal Government Budget Papers 2022–23 and 2023–24, annual reports of Federal Government controlled entities, Tax expenditure and insights statement 2024.

Table 3 shows that Federal Government assistance to the fossil fuel sector in 2023–24 is $2.0 billion more than it was in 2022–23, driven by both the increase in the cost of the Fuel Tax Credits Scheme and aviation fuel concessions.

Over the longer term, the total estimated value of fossil fuel subsidies for 2023–24 Federal projects and programs —including capital value and budget paper forward estimates—is $54.3 billion. This is an increase of nearly $5 billion from last year's total of $49.7 billion, as shown in Table 4 below:

Table 4: Federal Government fossil fuel subsidies—total project/program funding

Dedication to fossil fuels	Total value 2023–24 ($)	Total value 2022–23 ($)
Wholly	51,460,400,000	46,910,166,667
Primarily	2,562,886,500	2,334,074,500
Partly	300,000,000	441,100,000
Total	54,323,286,500	49,685,341,167

Source: Federal Government Budget Papers 2022–23 and 2023–24, annual reports of Federal Government controlled entities, Tax expenditure and insights statement 2024

As discussed below, these totals include the Albanese Government's subsidy for gas export infrastructure at Middle Arm in Darwin, as well as Morrison government projects such as Snowy Hydro's gas-fired Hunter Power station, now slated to cost $950 million. Other government bodies such as the Northern Australia Infrastructure Fund and the Australian Rail Track Corporation continue to fund and invest in fossil fuel expansion.

TAX CONCESSIONS

Fuel Tax Credits Scheme

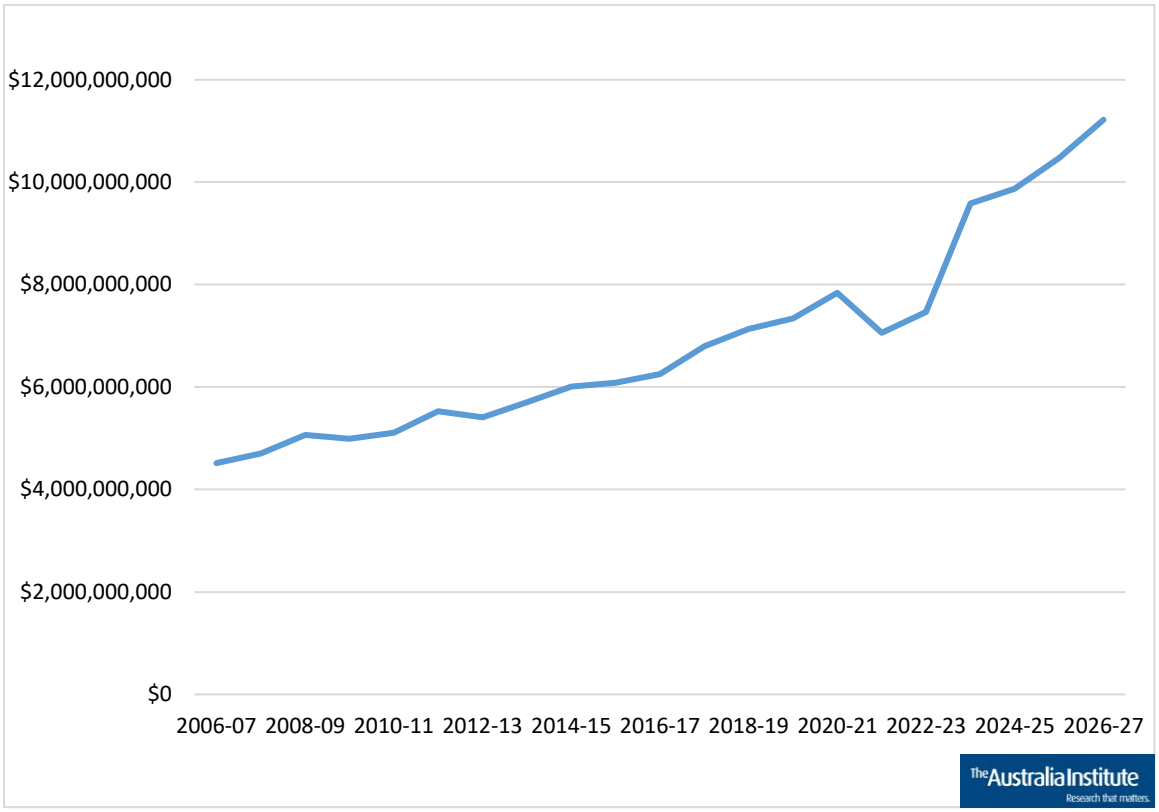
The biggest Federal Government fossil fuel subsidy is the Fuel Tax Credits Scheme. The scheme allows businesses to claim a tax credit on fuel used in machinery, vehicles over 4.5 tonnes and vehicles not used on public roads.[15] This tax break works to make fossil fuel use cheaper for energy-intensive businesses, such as coal mines. It is not available to other businesses and individuals that the same fuels for productive use. Fuel tax is not linked to road funding,[16] as is commonly suggested by recipients of this subsidy; they simply contribute to general revenue, like most other federal taxation. More information about the Fuel Tax Credits Scheme can be found in the accompanying report *Australia's Fuel Tax Credits and the debate of fossil fuel subsidies*.

The cost of the Scheme has increased steadily over the years—nearly doubling from under $5 billion until 2008–09 to $9.58 billion in 2023–24. Further, rapid growth is expected in the coming years: as shown in Figure 5 below, the cost of the Scheme is forecast to reach $11.22 billion in 2026–27:

[15] ATO (2021) *Fuel tax credits – business*, https://www.ato.gov.au/Business/Fuel-schemes/Fuel-tax-credits---business/

[16] The only exception is revenue related to the 2014 re-indexation of fuel excise, which is directed to the *Fuel Indexation (Road Funding) Special Account*. In 2023 this represented around 5% of fuel tax revenues. See Australian Government (2023) *Special accounts balances and cash flows report*, https://www.finance.gov.au/special-appropriations-special-accounts

Figure 5: Total cost of the Fuel Tax Credits Scheme per year



Source: Australia Taxation Office (2022) Taxation statistics 2019-20, Excise and fuel schemes, Table 4; Australia Government (2023) Budget Paper 1.

The impact of the COVID-19 pandemic on diesel consumption was only modest; the Morrison government's decision to cut fuel excise by 50% in response to Russia's invasion of Ukraine, and resulting energy price spikes, had a far larger effect the cost of the Scheme. Had this change not been made, the Scheme's cost was expected to reach $8.07 billion in 2021–22.[17] Following the 2022 election, the Albanese Government kept fuel excise low, returning it to previous levels only in late 2022/early 2023.[18]

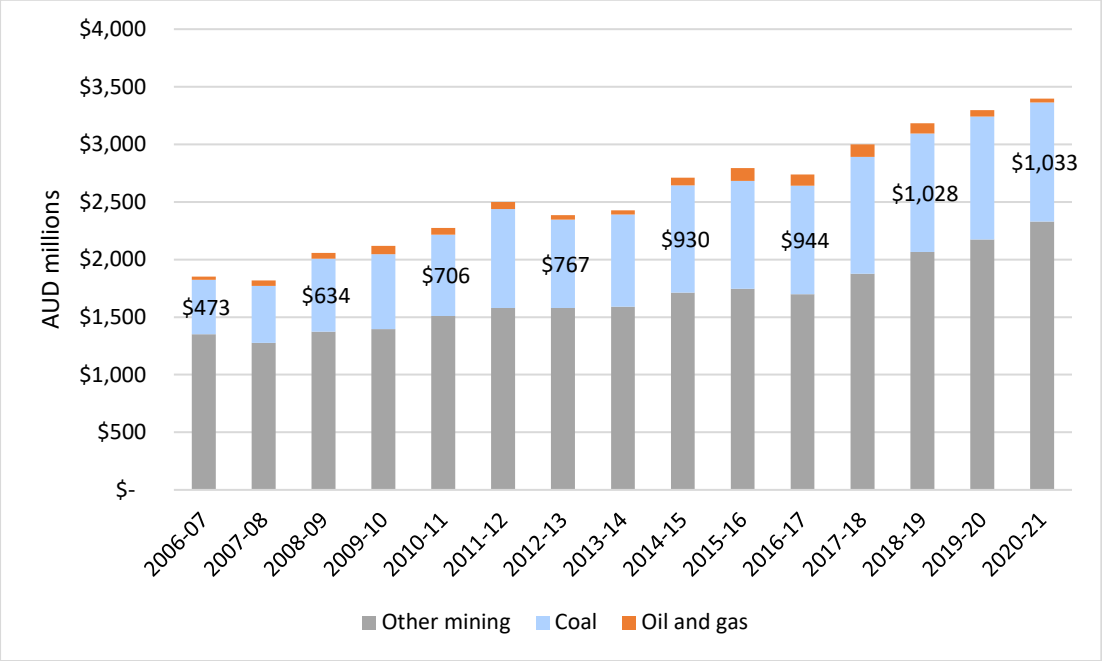
It was this change to fuel excise policy that caused the decline in the cost of the Fuel Tax Credits Scheme, not a decline in fossil fuel use or a reduction in fossil fuel subsidies. With the return to the full rate of fuel excise and with no policy to reduce Australia's diesel use, the cost of the Fuel Tax Credits Scheme is budgeted to increase by 17% from 2023–24 to 2026–27.

The Fuel Tax Credits Scheme not only subsidises the consumption of fossil fuels; fossil fuel producers themselves are key beneficiaries. The total benefits to the coal industry between 2006–07 and 2020–21 are $12.3 billion, as shown in Figure 6 below.

[17] Australian Government (2023) *Budget strategy and outlook: Budget Paper 1*

[18] ATO (2023) *Fuel tax credit rates*, https://www.ato.gov.au/Business/Fuel-schemes/Fuel-tax-credits---business/Rates---business/From-1-July-2022-to-30-June-2023/

Figure 6: Fuel tax credits and the mining industry



Source: Australia Taxation Office (2022) *Taxation statistics*, Excise and fuel schemes, Table 4

Figure 6 shows that as of 2020–21, the Fuel Tax Credits Scheme was worth over $3 billion per year to the mining industry, with over $1 billion going to the coal industry alone. Not surprisingly, the mining industry leads a campaign to maintain this lucrative subsidy.[19]

Other tax concessions

Fossil fuel producers and users receive exemptions from various taxes and excises. Such exemptions serve to reduce government revenue, and also to reduce incentives to minimise fossil fuel use and/or production. The cost of these concessions is estimated in the Tax Expenditures and Insights Statement prepared by the Federal Treasury.[20] For some items, Treasury estimates a range rather than a point estimate. In these cases, our estimates take the midpoint of the Treasury's range.

[19] Fuel Tax Credit Alliance (2020) *Fuel tax credits*, http://fueltaxfacts.com.au/

[20] Australian Government (2023) *2022-23 Tax Expenditures and Insights Statement*, https://treasury.gov.au/publication/p2023-370286

Table 5: Tax-based fossil fuel subsidies 2023–24, excluding the Fuel Tax Credits Scheme

Tax concession	Dedication	Industry segment	Estimated cost ($)
Transport for oil rig and remote area employees exemption	Primarily	Gas/Oil	55,000,000
Concessional rate of excise levied on aviation gasoline and aviation turbine fuel	Wholly	Consumption	1,620,000,000
Excise concessions for "alternative fuels" (including LPG and LNG)	Wholly	Consumption	150,000,000
PRRT—expenditure uplift rate	Wholly	Gas/Oil	55,000,000
PRRT—gas transfer price regulations	Wholly	Gas/Oil	55,000,000
PRRT—starting base and uplift rate for capital assets	Wholly	Gas/Oil	55,000,000
Total			**1,990,000,000**

Source: Tax Expenditures and Insights Statement, January 2024

The largest concession in Table 5 relates to aviation gasoline and turbine fuel. Civil aviation companies pay a lower rate of excise than other fuel users. Other discounts apply to "alternative fuels", a category that includes liquified petroleum gas (LPG) and liquefied natural gas (LNG). As with the Fuel Tax Credits Scheme discussed above, these discounts involve lowering the price of fossil fuels for selected users, and in doing so, they reduce government revenue, transfer costs onto other parties, and reduce incentives to minimise fossil fuel use and related pollution.

This concession has increased substantially from $1.19 billion in 2022–23 to $1.62 billion in 2023–24, an increase of 36%. Forward estimate increases are similarly large. No explanation is provided, but the size of the concession is likely to grow with aviation fuel demand and prices, with the Commonwealth Scientific and Industrial Research Organisation (CSIRO) expecting a 75% increase in jet fuel demand by 2050.[21]

The Petroleum Resource Rent Tax (PRRT) is levied on super profits generated from the sale of oil and gas. However, a range of concessions reduce the amount of PRRT paid by the industry, including credits for any tax losses, the use of a pricing method that undervalues gas, and deductions based on the value of project assets that can be carried forward and uplifted.

[21] CSIRO (2023) *Fuelling Australia's future sustainable aviation industry*, https://www.csiro.au/en/news/All/Articles/2023/August/sustainable-aviation-industry-australia

BUDGETED SUBSIDIES AND COSTS

Working with the Australian Resources Industry on the Pathway to Net Zero

The program 'Supporting Australia's Resources' has changed name this year to 'Working with the Australian Resources Industry on the Pathway to Net Zero'. This program contains five measures that will assist fossil fuel industries, with a total 2023–24 budget of $10.6 million. One part aims to "provide regulatory and administrative certainty for offshore carbon capture and storage projects to enable Australian industry to meet net zero targets whilst delivering domestic energy security and regional energy security". An undisclosed amount will be spent on decommissioning the Northern Endeavour offshore oil and gas facility, which was abandoned by its former owners. No estimate is included in our totals relating to the Northern Endeavour, which is expected to be covered by a decommissioning levy charged on the offshore gas industry.

Geoscience Australia

Geoscience Australia's *Building Australia's resources wealth* program aims to "support investment in exploration and drive new discoveries including a more diverse suite of energy and mineral resources".[22] The funding for this program was $6.8 million in 2023–24, which we have categorised as primarily dedicated to the oil and gas industry.[23]

Gas Industry Social and Environmental Research Alliance (GISERA)

GISERA is a controversial research collaboration between state and federal governments, the gas industry, and the CSIRO. Its research integrity has often been called into question.[24] No exact funding figures are included in budgets or annual reports, but a GISERA fact sheet identifies $13.7 million in Commonwealth funding; this figure has been included in our total estimate of federal fossil fuel subsidies as wholly dedicated to the gas industry, with no 2023–24 estimate included.[25]

[22] Geoscience Australia (2023) Annual report 2022-23, p 16, https://www.ga.gov.au/about/corporate-documents/annual-report

[23] Geoscience Australia (2023) Annual report 2022-23, p 94

[24] See for example Ogge (2020) *CSIR…who? A closer look at recent research on coal seam gas environmental impacts*, https://australiainstitute.org.au/report/csirwho-a-closer-look-at-recent-research-on-coal-seam-gas-environmental-impacts/

[25] GISERA (2022) *About us*, gisera.csiro.au/wp-content/uploads/2022/05/21-00235_GISERA_FACTSHEET_AboutUs2pp-WEB.pdf

Northern Territory

The Federal Government is subsidising a range of measures that assist the oil and gas industry in the Northern Territory. These projects are further discussed in the NT section (see below), although the following Federal funding is included in the estimates set out in Table 5 above:

- Assistance for a petrochemical hub at Middle Arm that will provide demand for NT gas projects;
- $100 million to build roads explicitly for the onshore gas industry; and
- Marine infrastructure—including the Northern Australia Infrastructure Facility-supported ship lift—that will partly assist the offshore gas industry.

Snowy Hydro—Kurri Kurri Hunter Power Project

The Federal Government owns 100% of Snowy Hydro, which is building the gas-fired Kurri Kurri Hunter Power Project. The most recent cost estimate is $950 million, and the project may not include a hydrogen component as previously promised.[26]

Hunter Valley rail network—coal

The Federal Government-owned Australian Rail Track Corporation (ARTC) is responsible for the Hunter Valley Coal Rail Network. The ARTC 2023 Annual Report states that the rail network transported 132 million tonnes of coal for export in 2022–23.[27] This was down from 154 million tonnes the previous year. The rail networks received $113 million of capital investment in 2022–23. The report states that a key focus this year was helping "coal producers to…capitalise on global demand and high prices for thermal coal".[28]

CONCESSIONAL FINANCE

Export Finance Australia

Export Finance Australia (EFA)—previously the Export Finance and Insurance Corporation EFIC)—is Australia's export credit agency. It has a long record of funding disastrous resource projects, including historic involvement in Papua New Guinea's Ok Tedi mine and the

[26] Clennell (2023) *Kurri Kurri gas plant 'a year behind schedule' as costs soar above estimated price*, https://www.skynews.com.au/business/energy/kurri-kurri-gas-plant-a-year-behind-schedule-as-costs-soar-above-estimated-price/video/9992ddc49904c6e93c3f1060264efd6d

[27] Australian Rail Track Corporation (ARTC) (2023) *Annual Report 2022-2023*, p. 13, https://www.artc.com.au/about/reports/annual-reports/

[28] Ibid

Panguna mine that sparked the Bougainville civil war. More recently the organisation—and, therefore, Australian taxpayers—backed the PNG LNG project, which has contributed to armed conflict in PNG's highlands and materially damaged PNG's economy.[29]

EFA has an overall exposure to the LNG industry of $378 million, included as a total value wholly dedicated to fossil fuels.

Northern Australia Infrastructure Facility

The Northern Australia Infrastructure Facility (NAIF) is a $5 billion fund that issues loans to infrastructure projects across northern Australia, including Queensland, Northern Territory and Western Australia.[30] It gained notoriety in 2016 due to links to the Adani coal project, and while it has since distanced itself from similarly controversial projects, it continues to issue subsidised loans to fossil fuel projects.

NAIF's 2023 annual report includes funding to support the Perdaman Urea Project, which will be a major consumer of gas from nearby projects. NAIF will assist with $220 million in subsidised loans for related water and port infrastructure. We consider all of this to be wholly dedicated to fossil fuels.

NAIFs assistance to other fossil fuel projects is also included in our total figures:

- A $168 million loan to the new Olive Downs Coal Mine;
- $300 million in finance for the Darwin Ship Lift, which will partly assist the offshore oil and gas industry (the balance of the project is funded by the NT government—see the NT section for more detail.);
- A $16.8 million loan that was "integral" to the Onslow Marine Support Base, which services the offshore oil and gas industry; and
- A $37 million loan to the owners of the gas-fired Hudson Creek Power Station in the NT.

[29] Fletcher & Campbell (2017) *Submission: Export Finance and Insurance Corporation Amendment (Support for Commonwealth Entities) Bill 2016 [provisions]*, https://australiainstitute.org.au/report/export-financeand-insurance-corporation-amendment-support-for-commonwealth-entities-bill-2016-provisions/; Fox (2018) *Papua New Guinea's massive LNG project fails to deliver on economic promises*, https://www.abc.net.au/news/2018-04-30/png-lng-project-fails-to-deliver-on-economic-promises/9710136.

[30] NAIF (n.d.) *Investing for impact across the north*, https://naif.gov.au/

Queensland

Queensland produces the most coal of any state and more gas than every state except Western Australia.[31] Queensland has the most coal mines currently operating,[32] as well as the most proposed mines – of the 56 new coal projects listed on the Australian Government's Major Projects list, 38 are in the state.[33]

The Queensland Government, via various state-owned corporations, owns and operates coal and gas-fired power generators, coal mines and is even developing a new gas field. It is these assets that receive the bulk of the Queensland Government's spending on fossil fuel subsidies and assistance, which in 2023–24 totalled $711 million as shown in Table 6 below:

Table 6: Queensland Government 2023–24 fossil fuel subsidies

Dedication to fossil fuels	2023–24 Budget spending ($)	Concessions ($)	Total 2023–24 assistance ($)
Wholly	520,477,000	N/A	520,477,000
Primarily	87,860,000	47,300,000	135,160,000
Partly	102,348,000	869,300,000	971,648,000
Total	**710,685,000**	**916,600,000**	**1,627,285,000**

Source: Queensland Government (2023) Budget Papers 2023-24

Table 6 also lists 'concessions'. This is a somewhat unique feature of Queensland's budget, which lists the cost of under-pricing state services. Concessions relevant to fossil fuel industries relate to the use of the major coal and gas export ports and also to rail infrastructure used by the coal industry. As shown in Table 1, the concessions sum to $917 million, with $869 million of this relating to rail network infrastructure funding.

The way that this report treats rail infrastructure spending and concessions has changed in this year's edition, . This is discussed under the 'rail' heading below. This makes it difficult to compare the subsidies Queensland made in 2023-24 with Queensland's 2022–23 fossil fuel

[31] Australian Government – Department of Climate Change, Energy, the Environment and Water (2023) *Australian Energy Update 2023*, Table I: Australian production of primary fuels, by state and territory, physical units, https://www.energy.gov.au/publications/australian-energy-update-2023

[32] Australian Government - Department of Industry, Science and Resources (2023), p. 51, 61, *Resources and Energy Quarterly - September 2023*, https://www.industry.gov.au/publications/resources-and-energy-quarterly-september-2023

[33] Australian Government – Department of Industry, Science and Resources (2023) *Resources and energy major projects:* 2023, https://www.industry.gov.au/publications/resources-and-energy-major-projects-2023

assistance totals ($448 million in spending, $84 million in concessions for a total of $532 million). Nevertheless, direct spending alone has increased by 59%.

The total estimated value, including capital values of non-ongoing projects and forward estimates for ongoing 2023–24 projects and programs, is $5.5 billion. This is shown in Table 7, by dedication to fossil fuels. This is the amount that the Queensland Government anticipates it will spend in the longer term on projects that were funded this year.

Table 7: Queensland Government total value of 2023–24 projects/programs

Dedication to fossil fuels	Capital values/ forward estimates ($)
Wholly	1,158,400,000
Primarily	451,221,000
Partly	3,906,970,000
Total	**5,516,591,000**

Source: Queensland Government (2023) Budget Papers 2023-24

The total in Table 7 is also affected by the change in methodology regarding rail infrastructure, which makes comparison with last year's result of $1.8 billion difficult.

Even without the change in methodology, fossil fuel subsidies in Queensland have clearly increased. This was driven by costly repairs to the coal-fired Callide Power Station, which was damaged in an explosion in 2021, as well as significant outlays to construct the new Brigalow Peaking Power Plant.[34] Ongoing maintenance of other coal-fired power stations – including the Kogan Creek Power Station (coal), Stanwell Power Station (coal) and Tarong Power Station (coal) – also drove up subsidies. Some new fossil fuel subsidies have also contributed, particularly a program to fund reduced methane emissions from coal mines.

NEW QUEENSLAND FOSSIL FUEL SUBSIDIES

Several new subsidies have been added to this report for the first time, although they may have existed in earlier Queensland Budgets.

- The Frontier Gas Exploration program, which will cost $21 million over two years. This program will provide grants "to support appraisal activities to unlock significant gas resources in the Bowen and Galilee basins."[35]
- The Low Emissions Investment Partnerships Program, which will provide $520 million over six years to "drive emissions reductions, with a focus on the state's highest emitting

[34] Evans (2023) 'Callide coal catastrophe delays demand an explanation', *The Australian*, https://www.theaustralian.com.au/business/mining-energy/callide-coal-catastrophe-delays-demand-an-explanation/news-story/af39498845438227d356c7b7d49f9dea

[35] Queensland Government (2023) *Budget Paper 4: Budget Measures*, p79

metallurgical coal mines."[36]

- Queensland's Abandoned Mine Sites Program, which will spend $19.4 million over two years, primarily to "continue decommissioning activities at the underground coal gasification project sites at Hopeland (formerly Linc Energy) and Bloodwood Creek (formerly Carbon Energy)."[37]

COAL MINES AND POWER STATIONS

Swanbank E Power Station

Swanbank E is a 385 MW gas-fired power station in South East Queensland operated by state-owned CleanCo.[38] Swanbank E was mothballed in 2014, but brought back online in 2017 with financing from the Queensland Government.[39] In March 2023, the Queensland Government announced plans to transform Swanbank E into a Clean Energy Hub, which will include green hydrogen infrastructure.[40] This year's budget allocates $12.9 million to Swanbank E (up from $4.3 million in 2022–23) for overhauls, maintenance and upgrades of generator units, including preparing for an overhaul of the gas turbines. It is not yet clear if these turbine upgrades will allow the plant to run on 100% hydrogen, or merely allow it to run on a blend of gas fuels, including some hydrogen. As there is currently nowhere near a sufficient enough supply of green hydrogen to power this plant, it is most likely that these turbine upgrades will simply facilitate the continued use of natural gas, and possibly some gas-derived "grey" hydrogen. This is why we have classified this project as primarily dedicated to fossil fuels. CleanCo have also been allocated $41.5 million to build and install battery storage at the Swanbank site – this funding is not considered a fossil fuel subsidy.

Kogan North Gas Field

Gas from the Kogan North Gas Fields in the Darling Downs Region will supply the Swanbank E gas-fired power station, operated by CleanCo.[41] The development is a joint venture

[36] Ibid, p161

[37] Ibid, p79

[38] CleanCo Queensland (n.d.) *Factsheet Swanbank E Power Station*, https://cleancoqueensland.com.au/wp-content/uploads/Documents/Assets_and_Projects/Factsheet_Swanbank-E.pdf

[39] Morrison (2021) *Queensland writes off Swanbank E gas-fired power plant*, https://www.argusmedia.com/en/news/2184709-queensland-writes-off-swanbank-e-gasfired-power-plant

[40] The Hon Mick de Brenni, Mr Lance McCallum (2023) *250MW Swanbank Battery as SEQ joins Clean Energy Hub revolution*, https://statements.qld.gov.au/statements/97331

[41] CleanCo Queensland (2021) *CleanCo Annual Report FY21*, https://www.cleancoqld.com.au/wp-content/uploads/2021/09/CleanCo-Annual-Report-20214.pdf

between CleanCo and Arrow Energy, agreed to in October 2020.[42] The budget allocates $29.6 million to the project, which we have classified as wholly dedicated to fossil fuels, more than double the previous year's $13.6 million.

CS Energy – Callide, Kogan Creek, and Brigalow

Callide Power Station is a 1,525 megawatt (MW) black coal-fired power station in Biloela, Central Queensland, operated by government-owned CS Energy.[43] Callide Power Station comprises three power stations – Callide A, Callide B and Callide C – that deliver energy to the National Electricity Market.

In May 2021, an explosion and fire at unit C4 at Callide C Power Station caused widespread blackouts affecting almost 500,000 homes from southern Queensland to Cairns for several hours.[44] Callide C is one of the state's newest power stations, a "supercritical" plant built in 2001, which broke down eight times in 2020.[45] Energy lost in the blackout was replaced by energy from the Wivenhoe pumped-hydroelectric power station and Swanbank E gas-fired power stations.[46]

In September 2021, after the failure of unit C4, CS Energy reported a net loss of $266 million and paid no dividends to the government in 2022–23.[47] C4 is not expected to come back online until July 2024, a delay from the initially announced date of May 2023.[48]

The 2023–24 budget allocates $185 million to Callide Power Station for "overhauls, enhancements and refurbishments to existing infrastructure", up from $45 million in 2022–23.

[42] Ibid.

[43] CS Energy (n.d.) *Callide Power Station*, https://www.csenergy.com.au/what-we-do/generating-energy/callide-power-station/callide-power-station

[44] Smee (2021) *Queensland power plant explosion causes mass outages across state*, https://www.theguardian.com/australia-news/2021/may/25/queensland-power-plant-explosion-causes-mass-outage

[45] Smee (2021) *Coal-fired power plant that caused Queensland blackouts broke down eight times in past year*, https://www.theguardian.com/australia-news/2021/may/26/coal-fired-power-plant-that-caused-queensland-blackouts-broke-down-eight-times-in-past-year

[46] Smee (2021) *Coal-fired power plant that caused Queensland blackouts broke down eight times in past year*

[47] Peel (2021) *Queensland energy generator dividends slump*, https://www.theaustralian.com.au/nation/politics/queensland-energy-generator-dividends-slump/news-story/8f29a7e8a6e37065362ec0ee3784a03b

[48] CS Energy (n.d.) *UPDATE ON PROGRESS IN RETURNING CALLIDE C POWER STATION TO SERVICE*, https://www.csenergy.com.au/news/update-on-progress-in-returning-callide-c-power-station-to-service; Ludlow (2023) *Still no answer to 'catastrophic failure' at Callide power station*, https://www.afr.com/companies/energy/still-no-answer-to-catastrophic-failure-at-callide-power-station-20230125-p5cfha

Kogan Creek Power Station is a 750 MW black coal power station in South West Queensland.[49] The Kogan Creek Mine supplies Kogan Creek Power Station, with run of mine (ROM) coal production of 2.8 Mtpa.[50] The budget allocates $20.1 million to Kogan Creek Power Station and $14.4 million to Kogan Creek Mine, totalling $34.5 million, which we have classified as wholly dedicated to fossil fuels.

On behalf of the Queensland Government, CS Energy has also begun development of the Brigalow Peaking Power Plant, which is adjacent to the Kogan Creek Power Station.[51] The 2023-24 Queensland budget allocated $33.4 million to this project, which has an expected total value of $190 million. This total includes $85.5 million from the Queensland Renewable Energy and Hydrogen Jobs Fund, which we have classified as primarily dedicated to fossil fuels.[52] The Queensland Renewable Energy and Hydrogen Jobs Fund is a $4.5 billion dollar fund, and this overall figure is not treated as a fossil fuel subsidy; this smaller payment, however – where a payment from the Fund is going toward a primarily-fossil fuel energy project – is.[53] The Brigalow Peaking Power Plant is a gas peaking plant that has been described as "hydrogen ready", because it is designed to allow for a blended fuel mix of up to 35% hydrogen and 65% natural gas.[54] Hydrogen will be supplied by the nearby Kogan Creek Renewable Hydrogen Demonstration Plant, but this plant only has a 1MW electrolyser. Compared to the 400MW capacity of the peaking plant, it would seem unlikely that this plant will use green hydrogen in quantities anywhere near its technically-possible 35/65 blend. Instead, it will rely on fossil gas from the Roma-to-Brisbane Pipeline.[55] The Plant may also use grey or black hydrogen if available. Being derived from natural gas and/or coal, these forms of hydrogen are also fossil fuels. As the fraction of green hydrogen involved in this project is likely to be very small, we have classed the expenditure on this peaking plant as primarily a fossil fuel subsidy.

The Queensland Government has also put $1.1 million toward the Kogan hydrogen plant – with the total project cost being $15 million. While this has not been included as a fossil fuel subsidy in this report, it is worth noting that this small green hydrogen plant is playing a more important role in greenwashing a new fossil fuel project (Brigalow) than it is providing a meaningful contribution to renewable energy generation.

[49] CS Energy (n.d.) *Kogan Creek Power Station*, https://www.csenergy.com.au/what-we-do/thermal-generation/kogan-creek-power-station

[50] CS Energy (2016) *Overview of Kogan Creek Mine*, https://www.csenergy.com.au/who-we-are/reports-and-publications/all-reports-and-publications?dfaction=search&dfdtitle=kogan%20creek

[51] Queensland Government (2023) 'Queensland's first hydrogen ready power plant to use GE technology', https://statements.qld.gov.au/statements/99113

[52] Queensland Government (2023) *Budget Strategy and Outlook*, p. 161, https://budget.qld.gov.au/files/Budget_2023-24_Strategy_Outlook.pdf

[53] Queensland Government – Treasury (2022) *Queensland Renewable Energy and Hydrogen Jobs Fund*, https://www.treasury.qld.gov.au/programs-and-policies/queensland-renewable-energy-and-hydrogen-jobs-fund/

[54] CS Energy (n.d.) *BRIGALOW PEAKING POWER PLANT*, https://www.csenergy.com.au/what-we-do/firming-and-storage/brigalow-peaking-power-plant

[55] CSIRO (2023) *Brigalow Peaking Power Plant (Renamed Project and Fully Updated)*, https://research.csiro.au/hyresource/brigalow-peaking-power-plant/

The Queensland Government has also announced a skills study at Kogan Creek, with a view to develop the industry workforce for future hydrogen energy.[56]

Stanwell Power Station

Stanwell Power Station is a 1,460 MW coal power station that supplies electricity to the National Electricity Market using black coal sourced from the Curragh Mine in Blackwater, Central Queensland.[57]

In April 2021, Stanwell Corporation revealed plans to transition away from fossil fuels and towards renewables, including trying to increase flexibility of electricity supply and the possibility of coal generating units being taken offline for parts of the year.[58]

The budget allocates $60.9 million to Stanwell Power Station to replace and refurbish existing infrastructure, which is up from $50.4 million in 2022–23.

Meandu mine & Tarong Power Station

Meandu coal mine, which is operated by the state-owned Stanwell Corporation, and services Stanwell's coal-fired Tarong Power Stations. Meandu has five working pits and produces up to seven million tonnes of coal each year.[59] Meandu mine is also used to deposit ash waste from Tarong Power Stations.[60] Stanwell committed to expand the Meandu mine in August 2021, increasing pit size by 7% but maintaining the mine's total production rate, to ensure feedstock for Tarong and Tarong North power stations.[61] The budget allocates $29.5 million to Meandu Mine, which we have classified as wholly dedicated to fossil fuels – up from $21 million un 2022–23.

Tarong Power Stations are among Queensland's largest electricity generating sites, comprised of four units capable of producing 350 MW and one 443 MW unit.[62] In December 2020, Stanwell Corporation wrote down the value of both Tarong Power Stations and

[56] Queensland Government (2023) *Hydrogen skills study underway at Kogan Creek*, https://statements.qld.gov.au/statements/97087

[57] Stanwell (n.d.) Stanwell Power Station, https://yhejitl3sl24wn203q4vn14z-wpengine.netdna-ssl.com/wpcontent/uploads/FactSheet-Stanwell-MAY-2018.pdf

[58] Smee (2021) *Australia's third-largest carbon emitter says it must transition to renewables and curtail coal plants*, https://www.theguardian.com/australia-news/2021/apr/21/stanwell-corporation-australia-third-largest-carbon-emitter-says-it-must-transition-to-renewables-and-curtail-coal-plants

[59] Stanwell (n.d.) Meandu Mine, http://www.stanwell.com/wp-content/uploads/Fact-sheet-Meandu-MineAUGUST-2016.pdf

[60] Ibid.

[61] Hunt (2021) *Stanwell to expand Meandu coal mine*, https://www.miningmonthly.com/life-cycle-end-of-life-management/news/1415088/stanwell-to-expand-meandu-coal-mine

[62] Stanwell (n.d.) *Our power stations*, https://www.stanwell.com/energy-assets/our-power-stations/

Stanwell Power Station by a total $719.5 million.[63] The budget allocates $77.2 million, up from the previous year's $66.7 million, to Tarong Power Station for the replacement and refurbishment of existing infrastructure, which we have classified as wholly dedicated to fossil fuels.

PORTS

Fossil fuel subsidies in the Queensland budget include funding for a number of ports. Queensland's port sector is a significant recipient of budget infrastructure funding intended to support both imports and exports. Port-related budget funding is granted to the Port of Townsville Limited, Far North Queensland Ports Corporation Limited, Gladstone Ports Corporation Limited and North Queensland Bulk Ports Corporation Limited. These port companies manage both fossil fuel (gas, coal, oil/petroleum products) and non-fossil fuel imports and exports, such as timber, sugar, cargo, agricultural and food products, and minerals.

Far North Queensland Ports Corporation Limited

Far North Queensland Ports Corporation Limited, trading as Ports North, owns and manages the Port of Cairns and other small ports in Far North Queensland, and trades a range of products. In the 2021–22 financial year, the Port of Cairns imported over 500,000 tonnes of petroleum products.[64] Funding of $5.9 million in the budget for Far North Queensland Ports Corporation is partly dedicated to fossil fuels and goes to general cargo consolidation, plant, equipment, minor works and site decontamination, increased from $1.4 million in 2022–23.

Gladstone Ports Corporation Limited

Gladstone Ports Corporation Limited operates the Port of Gladstone and Port Alma. Fossil fuel trade occurs primarily through the Port of Gladstone, which is by far the largest of all Gladstone ports. Coal and LNG make up 91% of exports from the Port of Gladstone while also importing a small amount of LP gas, petroleum coke and other petroleum products.[65] Relevant funding for the Gladstone Ports Corporation goes to the RG Tanna Coal Terminal Projects ($85 million, which we have classified as wholly dedicated to coal), as well as information systems projects, pilot projects, and plant, equipment, and minor works totalling $18 million, which we have classified as primarily dedicated to fossil fuels.

[63] Mazengarb (2020) *Queensland budget delivers $500m renewables fund, as coal plant revenues slump*

[64] Ports North (2023) *Ports North Annual Report 2022 | 2023*, p 17, https://documents.parliament.qld.gov.au/tp/2023/5723T1464-ED43.pdf

[65] Gladstone Ports Corporation Limited (2023) *Cargo Statistics Selections*, https://content3.gpcl.com.au/viewcontent/CargoComparisonsSelection/

North Queensland Bulk Ports Corporation Limited

North Queensland Bulk Ports Corporation operates the Ports of Mackay, Weipa, Abbot Point and Hay Point. Hay Point is the largest metallurgical coal export port in the world and Abbot Point is the Australia's northern most coal export port.[66] Petroleum is the largest throughput for the Port of Mackay.[67] Overall trade through North Queensland Bulk Ports increased by 4.8% in 2022–23, with coal making up 88% of throughputs for all North Queensland Bulk Ports. 80% of coal exports through the Ports are metallurgical coal and 20% is thermal coal.[68]

Fossil fuel funding in the budget goes to projects for Abbot Point, Hay Point and the Port of Mackay for general development, business improvements and a range of small projects including dredging. Works on the Middle Breakwater fuel line at the Port of Mackay are designed to increase resilience of refuelling services to storm damage.[69] Funding for Abbot Point and Hay Point projects are classified as wholly dedicated to fossil fuels, while other projects are classified as primarily or partly dedicated to fossil fuels. Funding for the Louisa Creek Acquisition Program is also included – the Louisa Creek residential area near Hay Point is soon to have a number of houses demolished to allow for expansion works.[70] Fossil fuel subsidies for the North Queensland Bulk Ports Corporation were $18.5 million in the budget, an increase from $8.7 million in 2022–23.

Port of Townsville

The Port of Townsville is a major Queensland port, through which companies including Shell, Mobil, Caltex, BP, and Ampol have been importing oil and petroleum products since the 1930s.[71] The Port of Townsville imports and exports a range of products, including cement, vehicles, sugar, timber, agricultural products and minerals.[72] Liquid fuel was the largest import in 2022–23, comprising 51% of total imports, up 9% from 2020–21.[73] The Townsville

[66] North Queensland Bulk Ports Corporation (2023) *North Queensland Bulk Ports Annual Report 2022/23*, https://nqbp.com.au/__data/assets/pdf_file/0024/39750/NQBP-annual-report-2022-23.pdf

[67] North Queensland Bulk Ports Corporation (2023) *North Queensland Bulk Ports Annual Report 2022/23;* North Queensland Bulk Ports Corporation (2024) *Throughputs*, https://nqbp.com.au/trade/throughputs

[68] Ibid.

[69] North Queensland Bulk Ports Corporation (2023) *Port of Mackay Community Reference Group meeting*, https://nqbp.com.au/__data/assets/pdf_file/0020/39215/Mackay-CRG-Presentation-9-March-2023.pdf

[70] Petith & Miko (2022) *From 200 to 31 homes: The town that may soon disappear*, https://www.couriermail.com.au/news/queensland/mackay/nqbp-to-demolish-8-louisa-creek-homes-for-coal-terminal-expansion/news-story/b2a1cdaab722df70561790bb207f8ab4

[71] Port of Townsville (n.d.) *Port History*, https://www.townsville-port.com.au/about/port-history/

[72] Ibid.

[73] Port of Townsville (2021) *Annual Report 2020-21*, https://s3-ap-southeast-2.amazonaws.com/os-data-2/townsville-port-2/bundle13/annual_report_2020-21.pdf

Hydrogen Hub for green hydrogen is also currently in its early stages, and will use Port of Townsville infrastructure.[74]

The channel capacity upgrade remains the largest fossil fuel subsidy to the Port of Townsville, as it has for the past three years. This year's allocation of $60.7 million is an increase of about a quarter from last year's $47.8 million. The channel capacity upgrade is classified in this report as partly dedicated to fossil fuels. The Townsville Channel Capacity Upgrade (TCCU) will deliver 62 hectares of reclaimed land for port operations and widen the shipping channel to allow access to larger vessels and increase trade capacity for the region. The TCCU has also previously received funding from the Australian Government.

Other funding for the Port of Townsville totalling $11.3 million goes to plant, equipment and minor works, road network upgrades and wharf facilities upgrades, all classified in this report as primarily for fossil fuels.

INDUSTRIAL PRECINCTS

Gladstone State Development Area

The Gladstone State Development Area connects major rail and roads to processing facilities and ports for large industrial activities, including a number of fossil fuel-related activities. The Gladstone State Development Area includes Australia Pacific LNG, Santos Gladstone LNG, Queensland Curtis LNG and Southern Oil's northern oil refinery.[75] The budget dedicates $18.2 million to the Gladstone State Development area, increasing thirteen times on the $1.4 million dedicated in 2022–23.

Salisbury Plains Industrial Precinct

The Salisbury Plains Industrial Precinct is located within the Abbot Point State Development Area and is identified by the Queensland Government as suitable for supporting infrastructure for the Adani/Carmichael Rail, Adani Abbot Point Coal Terminal, GVK Hancock Rail and Queensland Coal Investment projects.[76] Industries considered suitable for the area include an LNG facility, fuel storage and associated infrastructure, and extractive

[74] Australian Government – Department of Climate Change, Energy, the Environment and Water (2023) *Townsville Region Hydrogen Hub grant guidelines available*, https://www.dcceew.gov.au/about/news/townsville-region-hydrogen-hub-grant-guidelines-available

[75] Queensland Government (n.d.) *Gladstone State Development Area*, https://www.statedevelopment.qld.gov.au/coordinator-general/state-development-areas/current/gladstone-state-development-area

[76] Economic Development Queensland (n.d.) *Salisbury Plains Industrial Precinct*, https://industrial.edq.com.au/Salisbury-Plains-Industrial-Precinct-property-for-sale

industries.[77] The budget dedicates $200,000 to the Salisbury Plains Industrial Precinct and identifies a capital value of $9.2 million, classified in this report as primarily dedicated to fossil fuels.

Townsville Regional Industrial Estate

Budget papers refer to spending on the Townsville Regional Industrial Estate, which appears to be within the Townsville State Development Area. The Townsville State Development Area serves the Port of Townsville and nearby roads and rails that provide access to industrial and resource development areas.[78] The Townsville State Development Area is currently home to a number of industrial facilities, including Origin Energy's Mt Stuart gas-fired peaking generator plant.[79] The budget dedicates $200,000 to the Townsville Regional Industrial Estate, the same amount dedicated in the previous budget, and identifies a capital value of $6.6 million, classified in this report as primarily dedicated to fossil fuels.

RAIL

The Australia Institute's first report on state government assistance to the wider mining industry, included Queensland's Rail Network and Infrastructure Funding concession as a cost to the budget that partly assisted the coal industry.[80] This concession represents funding to Queensland Rail, without which rail access charges "would be significantly higher", including both freight (which is dominated by coal) and passenger services. In 2023–24, this cost is estimated at $867 million.

Previous editions of this fossil fuel subsidies report (as distinct from the original 2014 report on the wider mining industry) did not include this concession, and focussed instead on capital spending on particular rail lines that are used by the coal industry, such as the West Moreton Rail Line. This approach likely omits significant Queensland Government spending on (or unrecovered costs from) various parts of the rail network.

Including both the concession and other network spending projects separately identified in the budget would risk double counting. As a result, for this year's estimates we have decided to include the concession and omit other projects. This concession is, of course, only partly dedicated to the coal industry - the budget papers make clear it also assists other freight users and passenger services. Given coal is the largest part of freight on

[77] Economic Development Queensland (n.d.) *Salisbury Plains Industrial Precinct*

[78] Queensland Government (n.d.) *Townsville State Development Area*, https://www.statedevelopment.qld.gov.au/coordinator-general/state-development-areas/current/townsville-state-development-area

[79] Ibid.

[80] Peel, Denniss and Campbell (2014) *Mining the age of entitlement: State government assistance to the mining and fossil fuel sector*, https://australiainstitute.org.au/report/mining-the-age-of-entitlement/

Queensland's rail network, the coal industry is likely the largest beneficiary, but no further information is provided in budget papers.

CONCESSIONS

Concessions in the Queensland budget include targeted discounts, rebates and subsidies for Queenslanders and businesses. These are listed in the Concessions Statement and include both direct budget outlays (fee subsidy payments) and forgone revenue (i.e. revenue lost through reduced fees and charges). Only concessions above the minimum materiality threshold of $50,000 forgone revenue are included in the Concessions Statement.[81]

Fossil fuel subsidies include concessions by port corporations to organisations and businesses. Concessions delivered by Government-Owned Corporations (GOC) related to fossil fuels include:

- Rail Network and Infrastructure Funding, which we determine to be partly dedicated to fossil fuels (various), worth $867.3 million;
- Far North Queensland Ports Corporation Limited, which we determine to be partly dedicated to fossil fuels (oil), worth $2 million;
- Gladstone Ports Corporation Limited, which we determine to be primarily dedicated to fossil fuels (various), worth $39.3 million;
- North Queensland Bulk Ports Corporation Limited, which we determine to be primarily dedicated to fossil fuels (various), worth $1.4 million; and
- Port of Townsville Limited, which we determine to be primarily dedicated to fossil fuels (oil), worth $6.6 million.

All of the above GOCs also provide concessions via Concessional Leases (Industry, Commercial and Community) to industry participants that are below commercial rates. Gladstone Ports Corporation Limited also provides Concessional Port Charges where port charges are contracted at significantly below market rates.[82]

The largest relevant item in the Concession Statement relates to rail network and infrastructure funding. Including this item is a change in the methodology of this report compared to 2022–23, but it seems likely that this item relates almost wholly to the coal industry, as concessions relating to public transport and agricultural freight are covered in other lines of the concession statement. However, we have categorised this item as only

[81] Queensland Government (2023) *Queensland Budget 2023-24 – Budget Strategy & Outlook | Budget Paper No. 2*

[82] Ibid.

partly related to fossil fuel industries, as the description in the Concession Statement includes reference to other users.[83]

The Concessions Statement identifies that GOC concessions below the minimum materiality threshold of $50,000 forgone revenue were also delivered by CS Energy, Stanwell and CleanCo, which own and operate fossil fuel related projects and sites as detailed previously.

[83] Queensland Government (2023) *Queensland Budget 2023-24 – Budget Strategy & Outlook | Budget Paper No. 2*, p. 219.

Western Australia

Analysis of the most recent Western Australian (WA) Government budget papers suggests subsidies and assistance measures for the fossil fuel industry are projected to be $418.6 million in 2023–24. Over the full budget projection period to 2026–27 total assistance to the fossil fuel industry is expected to be around $1 billion.

Given that WA is the nation's largest oil and gas producing state, the vast majority of the assistance, 90% or $378.1 million, is directed to the oil and gas industry. A small amount of assistance is directed to the remaining coal-fired electricity generating assets owned by the WA Government-owned electricity supplier.

A significant majority, 90% or $375.9 million, of the assistance provided by the WA government is only 'partially targeted' at the fossil fuel industry. This is targeted at industry development assistance and investment promotion schemes that notionally support all industries, and/or the transition to net zero emissions, but which often explicitly support further gas industry development, or carbon sequestration activities.

Conversely, only 12% or $50.8 million is wholly aimed at the fossil fuel the industry, with no assistance identified as primarily targeted. Table 8 outlines the breakdown of the subsidies by fossil fuel and scope for 2023–24 and for total subsides over the projection period.

Table 8: Western Australia fossil fuel assistance, by fuel and scope

	2023–24 Expenditure ($)	Forward estimates ($)
Gas/oil	378,093,000	913,807,000
Coal	26,945,000	66,941,000
Various	13,535,000	52,902,000
Total	**418,573,000**	**1,033,650,000**
Wholly	50,804,000	182,740,000
Primarily	N/A	N/A
Partly	367,769,000	850,910,000
Total	**418,573,000**	**1,033,650,000**

Source: Government of Western Australia (2023) Budget Papers

Compared to 2022–23, subsidies and assistance measures are projected to be higher in 2023–24, up $98.5 million compared to the $320 million – this is an increase of 31%. The increase in projected subsidies is mainly the result of a significant increase in assistance from the *Department of Jobs, Tourism, Science and Innovation*. Further details on the expected increase in subsides and assistance are outlined in following sections.

ASSISTANCE BY DEPARTMENT AND ORGANISATION

In Western Australia assistance for the fossil fuel industry is spread across a number of government departments and government business enterprises (GBE). Table 9 summarises the allocation of subsidies and assistance measures by government departments and GBEs.

Table 9: Fossil fuel assistance by Department and GBE and scope

Department	Wholly ($)	Partly ($)	Total ($)
Jobs, Tourism, Science & Innovation	1,350,000	265,000,000	266,350,000
Primary Industries & Reg. Development		16,900,000	16,900,000
Water & Environmental Regulation		2,900,000	2,900,000
Mines, Industry Regulation & Safety		10,600,000	10,600,000
Planning, Lands & Heritage	3,800,000	1,800,000	5,600,000

GBE	Wholly ($)	Partly ($)	Total ($)
Synergy	45,700,000		45,700,000
Kimberley Ports Authority		34,000,000	34,000,000
Pilbara Ports Authority		26,300,000	26,300,000
Fremantle Port Authority		10,300,000	10,300,000

Source: Government of Western Australia (2023) Budget Papers

Among the government departments the largest share of assistance, 88% or $266.4 million in 2023–24, comes from the Department of Jobs, Tourism, Science, and Innovation. In turn, vast bulk of that assistance, $140 million, comes from the *Investment Attraction Fund* that partially supports the fossil industries by "prioritising identified projects and sectors for strategic development including energy primary industries… and mining equipment".[84] The second ranked department in terms of assistance is the Department of Primary Industries and Regional Development, which in 2023–24 is expected to provide almost $17 million to the *Pilbara Hydrogen Hub* that, while notionally focused on green-hydrogen, does include an aim to expand port-capacity and infrastructure in a major LNG exporting region.[85] As such, this subsidy is treated as partial.

Fossil fuel assistance provided by WA GBEs is for the most part delivered by a number of port authorities supporting the further development of primarily LNG exporting seaports. As a share of all fossil fuel assistance 17%, or $71 million, is expected to be provided by WA port authorities in 2023–24. This type of assistance is classed as 'partly assisting' since the

[84] WA Government (2024) *Investment Attraction Fund,* https://www.investandtrade.wa.gov.au/opportunities/investment-attraction-fund

[85] Pilbara Development Commission (2024) *Pilbara Hydrogen Hub,* https://www.pdc.wa.gov.au/our-focus/projects/pilbara-hydrogen-hub.aspx; WA Government (2024) Western Australia State Budget 2023-24, Budget Paper 2, Vol 1, p.218 https://www.ourstatebudget.wa.gov.au/budget-papers.html

aims of the identified projects is often to expand port facilities to support a range of industries but situated in major LNG ports. For example, the Pilbara Ports Authority's $4.9 million to "support future development of the multi-user facilities" is being spent at the Port of Ashburton, a port whose main purpose and original reason for development was the exporting of LNG and condensate.[86]

Coincidently, another WA government program, *Strategic Industrial Areas,* which receives money via the Department of Jobs, Tourism, Science, and Innovation, and broadly aims to further develop and diversify the industrial base around a number of existing LNG exporting areas could also be considered as support related to seaports and the LNG industry.[87] For 2023–24 it was estimated that $44.8 million, mainly from this department, was likely supporting the fossil fuel industry via the *Strategic Industrial Areas* program.

There is also significant support for fossil fuels from the government owned electricity producer, Synergy. In 2023–24, it is expected that will $45.7 million will be spent supporting fossil fuels, both coal and gas, via various upgrades and maintenance projects to electricity generating assets. Interestingly, the vast majority of fossil fuel support that we have classified as 'wholly' supporting fossil fuels comes from Synergy. Furthermore, the only assistance that supports coal is Synergy expenditure on the remaining coal-fired generators in at the Muja and Collie power stations.

Table 9 also highlights how, at the department level, nearly all the assistance is only 'partially' aimed at the fossil fuel industry. This often happens under the cover of general industry assistance or industry facilitation. Examples of these types of programs in WA, and their annual expenditures, include the *Investment Attraction Fund ($140 million)*, *Invest and Trade Western Australia ($7.3 million)*, *New Industries Fund* ($7.3 million) and the *Project Facilitation* programme ($37 million).[88]

An important point in the analysis of fossil assistance in WA is that in an economy so influenced by mining and fossil fuel extraction, 45% of GSP in 2022–23, any general industry assistance or facilitation program is likely going to support the fossil fuel industry to some degree.[89] Moreso, any industry assistance aimed at transitioning the economy to net zero emissions or similar targets is unlikely to be directly aimed at shutting down nearly half the economy. For example, the *Future Energy Exports Cooperative Research Centre* program ($1.2 million) suggests support for a broad range of new and cleaner industries, yet the

[86] WA Government (2024) *Western Australia State Budget 2023-24, Budget Paper 2, Vol 2, p 651* https://www.ourstatebudget.wa.gov.au/budget-papers.html; Pilbara Ports (2024) *Port of Ashburton - Port Profile*, https://www.pilbaraports.com.au/ports/port-of-ashburton/about-port-of-ashburton/port-profile

[87] WA Government (2024) *Strategic Industrial Areas – Western Australia*, https://siawa.com.au/

[88] WA Government (2024) *Western Australia State Budget 2023-24, Budget Paper 2, Vol 1* https://www.ourstatebudget.wa.gov.au/budget-papers.html

[89] ABS (2023) *Australian National Accounts: State Accounts*: Table 6. https://www.abs.gov.au/statistics/economy/national-accounts/australian-national-accounts-state-accounts

associated website is full of pictures of LNG infrastructure, and lists all the major fossil fuel companies as partners.[90]

TOP 15 ASSISTANCE MEASURES

Across all departments and GBE's the top-15 subsidy and support measures, representing 86% of total subsidies (by value) or $374 million in 2023–24 are summarised in Table 10.

Table 10: Top 15 fossil fuel assistance programs for 2023–24

Organisation	Program	Type	Fuel	2023–24 funding ($)
Dept. of Jobs, Tourism, Science & Innovation	Investment Attraction Fund	Facilitation	Oil & Gas	140,900,000
Dept. of Jobs, Tourism, Science & Innovation	Project Facilitation	Facilitation	Oil & Gas	37,500,000
Dept. of Jobs, Tourism, Science & Innovation	Ashburton North Social & Critical Infrastructure Funds	Infrastructure	Oil & Gas	33,500,000
Kimberley Ports Authority	Supply Base	Infrastructure	Oil & Gas	30,000,000
Pilbara Ports Authority	Dampier Cargo Wharf Extension	Infrastructure	Oil & Gas	21,400,000
Dept. of Primary Industries & Reg. Develop.	Pilbara Hydrogen Hub (Administered)	Infrastructure	Oil & Gas	16,900,000
Synergy	Muja Power Station	Infrastructure	Coal	14,300,000
Synergy	Pinjar Power Station	Infrastructure	Oil & Gas	14,100,000
Synergy	Collie Power Station	Infrastructure	Coal	12,600,000
Dept. of Jobs, Tourism, Science & Innovation	Burrup Water System Subsidy	Infrastructure	Oil & Gas	11,700,000
Fremantle Port Authority	Kwinana Bulk Terminal - Outer Harbour	Infrastructure	Oil & Gas	10,300,000
Dept. of Jobs, Tourism, Science & Innovation	Burrup Port Infrastructure Subsidy	Infrastructure	Oil & Gas	8,700,000
Dept. of Jobs, Tourism, Science & Innovation	New Industries Fund	Direct transfer	Oil & Gas	7,300,000
Dept. of Jobs, Tourism, Science & Innovation	Invest and Trade Western Australia	Facilitation	Oil & Gas	7,300,000
Dept. of Mines, Industry Regulation & Safety	Sustainable Geoscience Investments	Various	Various	7,200,000

Source: Government of Western Australia (2023) Budget Papers

Across Table 10, the predominance of assistance measures from the Department of Jobs, Tourism, Science & Innovation is noticeable, along with the various port authorities and Synergy. While the two largest measures, namely the *Investment Attraction Fund* and

[90] FEnEx CRC (2024) *Future Energy Exports Cooperative Research Centre, https://www.fenex.org.au/*

Project Facilitation program, focus on facilitating new industries and investment projects close to half relate to the development of fossil fuel related infrastructure.

Outside the top-15, another 24 assistance measures were discovered, representing close to $53 million in annual support.

GROWTH IN SUBSIDIES

Subsidies and support for the fossil fuel industry projected for 2023–24 have increased significantly compared to 2022–23. Projected subsidies for 2023–24 are projected to be $107 million higher compared to those identified subsidies in 2022–23.

A significant share of the increase in the subsidies is related to the *Investment Attraction Fund* administered by the Department of Jobs, Tourism, Science and Innovation. Expenditure in this program, which is only partially aimed at the fossil fuel industry, is projected to increase to $140 million in 2023–24, up from only $20 million in 2022–23, an increase of $120 million.[91] As previously noted, the *Investment Attraction Fund* is the largest single support measure identified in the budget papers. Together with other changes, support from the Department of Jobs, Tourism, Science and Innovation has increased by $135 million compared to 2022–23.

Offsetting the increase in assistance from the Department of Jobs, Tourism, Science and Innovation, assistance from the Pilbara Ports Authority is expected to be around $68 million less in 2023–24 compared to last year. This is driven by a significant reduction in expenditure on the *Dampier Cargo Wharf Extension.*

A number of new or additional subsidies and assistance measures have been identified and included in this edition of the report. Some of these newly identified measures include:

- $7 million for the *Oakajee Strategic Industrial Area Access Road,* a new industrial area and deep-water port with natural gas identified as a target industry.
- A $4 million loan converted to a grant to Oribtal Corporation Ltd to continue development of fossil fuel fired internal combustion engines.
- $2.5 million of for the *Pilbara Strategic Industrial Areas* to aid industry development around a major LNG exporting port.

[91] WA Government (2024) *Western Australia State Budget 2023-24, Budget Paper 2, Vol 1*, p.202 https://www.ourstatebudget.wa.gov.au/budget-papers.html

NOT QUITE SUBSIDIES

A final important area of consideration for subsidies to the fossil fuels industries in WA relates to policies and assistance measures aimed at the development of green-hydrogen projects.

A unique trait of assistance measures aimed at the development of green-hydrogen infrastructure, or the industry more generally, is that if the 'green' aspect of green hydrogen fails to be successful, the infrastructure can likely still be used for other forms of less-green, hydrogen, such as blue-hydrogen produced from natural gas.

What that means is that the subsidies for green hydrogen could end up being subsidies for the fossil fuel industries, and the production of hydrogen from natural gas.

The WA budget papers identify three programmes related to green hydrogen:

1. *Hydrogen Hubs* with $7.1 million of projected expenditure in 2023–24.
2. *Hydrogen Fuelled Transport* at $5 million a year as part of the Climate Action Fund.
3. *Renewable Hydrogen* expenditure of $1 million, also part of the Climate Action Fund.

Within the Budget papers, and related websites, the focus of these programmes is expressly on green or renewable hydrogen. As such, it is difficult to include them as subsidies for the fossil fuel industries. However, Woodside has received grants under the *Hydrogen Fuelled Transport* scheme potentially hinting at the true motive for the fossil fuel company's engagement in the programme.[92] Nonetheless, without additional evidence it is methodologically weak to include them as subsidies just on the hunch, or even likelihood, that these expenditures will be seen as fossil fuels subsidies in retrospect sometime in the future.

Future editions of this report will continue to closely monitor the documented government assistance to green hydrogen initiatives and the likelihood they are evolving into explicit fossil fuel subsidies.

[92] WA Government (2024) *Western Australian Renewable Hydrogen Grants,* https://www.wa.gov.au/organisation/department-of-jobs-tourism-science-and-innovation/western-australian-renewable-hydrogen-grants

Northern Territory

In late April 2024, the NT Government announced that it had agreed to purchase gas from a controversial Beetaloo Basin gas project.[93] This announcement brings into focus the wide range of subsidies that NT Governments have lavished upon the gas industry for decades, from multi-billion dollar purchase commitments, through the millions in investment promotion, to the under-charging of administrative fees and unrecovered costs.

Little gets done by Territory Governments without Commonwealth assistance, and subsidising the gas industry is no exception. The Beetaloo announcement would probably have been impossible without hundreds of millions in gas-industry focussed road construction, funded by the Commonwealth. And of course, the Commonwealth has put $1.9 billion into assisting petrochemical industries with infrastructure at Middle Arm, a proposal that is opposed by many civil society organisations in the NT and beyond.

Table 11 below shows that the NT Government will provide $531 million in assistance to the oil and gas industry in the 2023–24 budget year, with $3.7 billion budgeted over the longer term. While this represents a considerable increase on last year's $328 million estimate ($3.5 billion longer term), it does not yet include the Beetaloo purchase agreement that will no doubt add at least hundreds of millions to these figures.

Table 11: NT government 2023–24 fossil fuel subsidies

NT budget fossil fuel assistance	2023–24 expenditure	Total/forward estimates
Wholly	31,818,000	3,401,295,000
Primarily	214,800,000	N/A
Partly	284,575,000	322,300,000
Total	**531,193,000**	**3,723,595,000**
Coal	N/A	N/A
Oil and gas	531,193,000	3,723,595,000
Various	N/A	N/A
Total	**531,193,000**	**3,723,595,000**

Sources: NT Government Budget Papers, Power and Water Corp annual reports

[93] Dick, Fitzgerald and Morgan (2024) *NT government signs deal with Tamboran Resources to buy Beetaloo Basin gas*, https://www.abc.net.au/news/2024-04-23/nt-beetaloo-basin-power-nt-generators/103757000

COMMONWEALTH COLLABORATION

The Commonwealth subsidises gas industry infrastructure, including an export precinct, other shipping facilities that benefit the offshore gas industry, and funding roads to facilitate onshore gas extraction.

Middle Arm Sustainable Development Precinct

The Morrison government's March 2022 Budget included a $7.1 billion Energy Security and Regional Development Plan, which was intended to "turbocharge" the economies of regional hubs—including an NT industrial hub.[94] The Albanese Government's October 2022 federal budget included $1.9 billion for the development of the Middle Arm Sustainable Development Precinct. The Precint was originally described as a "new gas demand centre",[95] but "not a petrochemical plant".[96] This is despite contradictory information on many of the NT government's websites and other promotional materials, and FOI evidence that staff were instructed to try to remove the word "petrochemicals" from official material.[97]

The Government has already committed $1.9 billion for Middle Arm (included in the Federal Government section), but recent documents obtained by the ABC show that the federal government is considering increasing their spend on the facility to more than $3.5 billion, to include a carbon capture and storage facility.[98]

The NT government budgeted to spend $13 million on business case development and preliminary works, included in this year's NT budget figures.

[94] Federal Government (2022) *March Budget Paper 2*, p133

[95] Gibson (2022) *Business case for Middle Arm Sustainable Development Precinct triggers climate concerns from critics*, https://www.abc.net.au/news/2022-12-29/nt-middle-arm-sustainable-development-precinct-climate-concerns/101809178

[96] Walsh (2022) 'Factually wrong': Fyles says no petrochemical plant for Middle Arm: govt website contradicts her, *NT Independent*, https://ntindependent.com.au/factually-wrong-fyles-says-no-petrochemical-plant-at-middle-arm-govt-website-contradicts-her/

[97] Gibson (2023) *Emails confirm staff in NT chief minister's department deleted references to 'petrochemicals' from Middle Arm websites*, https://www.abc.net.au/news/2023-04-06/middle-arm-nt-petrochemicals-term-deletion-chief-minister-staff/102157920

[98] Slezak (2023) *Darwin Harbour Middle Arm expansion plan slammed by critics as 'extraordinary fossil fuel subsidy'*, https://www.abc.net.au/news/2023-12-15/darwin-harbour-extension-plan-slammed-as-fossil-fuel-subsidy/103215782

Darwin ship lift

The NT government, in conjunction with the Federal Government's Northern Australia Infrastructure Facility (NAIF), is building ship maintenance facilities, including a ship lift capable of lifting 5,500 tonnes, which will partly benefit the oil and gas industry.

Budget papers state that the project has a total capital value of $515 million, with $248 million to be spent in the 2023–24 budget year. This has been included in Table 9 above in 2023–24 spending partly attributable to fossil fuel industries. The NAIF's $300 million contribution is included in the Federal Government section.

Gas roads

The Morrison government first planned to subsidise onshore gas by funding the NT Gas Industry Road Upgrades. This year's budget aims to "upgrade and or seal gas industry roads to support economic development ($214.8 million)". This spending and the longer term program total have been split between the Commonwealth and NT Governments in our estimates.

POWER AND WATER CORPORATION

The largest item in Table 11 above is the purchase agreement that the state-owned Power and Water Corporation ("PWC") has in place to purchase gas from the Blacktip project, which is located off Wadeye in the Bonaparte Gulf and owned by Italy-based oil company Eni. As highlighted in the NT budget papers:

> Power and Water Corporation's gas business has significant market-related risks arising from its long-term gas purchase, sales and transportation agreements. The corporation's board oversees a gas sales strategy to address future market opportunities and position the corporation to ensure costs are covered by revenue, and any risks are appropriately mitigated.[99]

It is this risk around uncertain purchase volumes that has brought large problems to PWC and the NT Government. The Blacktip project has been under-performing since at least early 2022, meaning that sales to Queensland via the Northern Gas Pipeline have also been limited.[100] PWC's agreement with Blacktip is supposed to run to 2034.

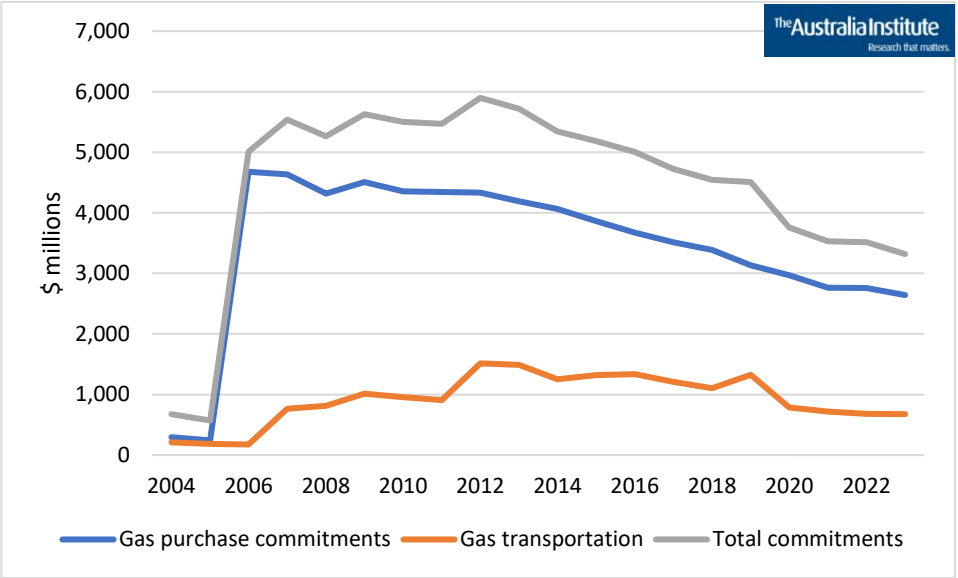
[99] NT Government (2022) *Budget Paper 2,* p84

[100] Fitzgerald (2022) *NT's Blacktip gas field production drops, forcing shutdown of Northern Gas Pipeline*, https://www.abc.net.au/news/2022-10-22/blacktip-gas-field-production-problems-power-and-water/101555526

The PWC's multi-billion dollar commitment to gas purchases from Blacktip was essential for the project's development. It was in order to sell some of this excess that the Northern Gas Pipeline was constructed, again with PWC subsidising the project via gas transport commitments.

The latest of the PWC's annual reports shows that its gas purchase commitment has declined to $2.64 billion and $674 million in gas transport commitments, as shown in Figure 7 below:

Figure 7: Power and Water Corporation gas commitments



Source: PWC annual reports

Figure 7 shows that gas commitments are largely unchanged from last year, partly due to unexpected reductions in supply from the Blacktip Project. The reductions in supply reduced the PWC's gas sales by some $25 million[101] and saw the PWC take legal action against the operators, Eni.[102] This is somewhat ironic as the problem with the Blacktip Project has traditionally been not a lack of gas, but too much of it. This was clear to PWC and NT government decision-makers at the time the agreement with Eni was made, with the NT Utilities Commission noting in 2006:

> Contract quantities available from Blacktip will be in excess of projected requirements under the Commission's high growth scenario through to 2015–16 and beyond.[103]

[101] PWC (2022) Annual Report, p57

[102] Fitzgerald (2022) *NT's Blacktip gas field production drops, forcing shutdown of Northern Gas Pipeline*,

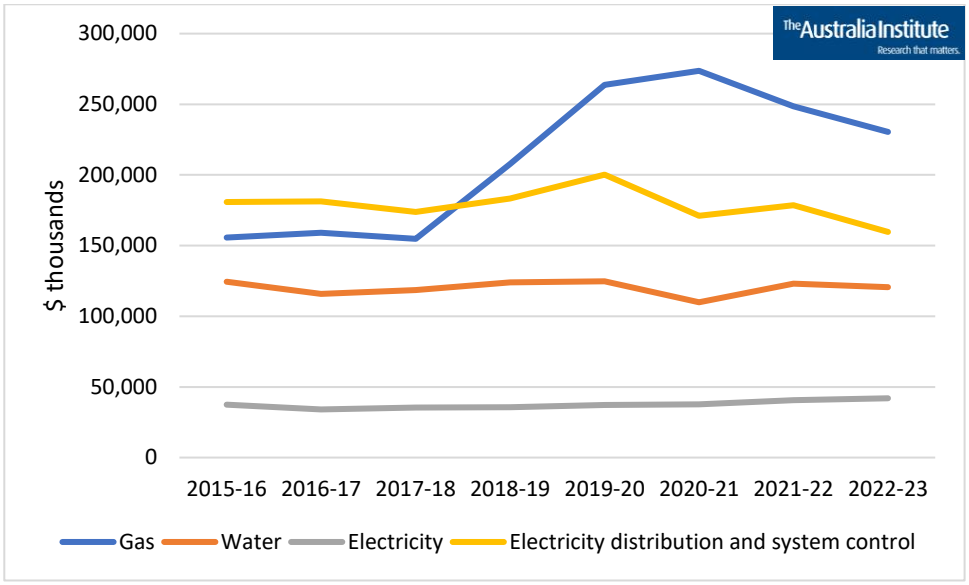
[103] NT Utilities Commission (2006) *Annual power system review December 2006*, https://utilicom.nt.gov.au/__data/assets/pdf_file/0008/743039/2006_PSR_final.pdf

NT taxpayers paid for large quantities of gas that they could not use or sell—or, as the PWC puts it:

> The current gas contracts relating to the sale and purchase of gas have resulted in Power and Water previously paying for gas that will be delivered in future years.[104]

While a detailed estimate is beyond the scope of this report, the loss on take-or-pay agreements with Blacktip was estimated at a total of $375 million by a prominent supporter of the gas industry, former NT News Business Editor Ashley Manicaros.[105] When the similarly-subsidised Northern Gas Pipeline now is operation, the PWC can sell Blacktip gas to buyers in Queensland. This saw the PWC's gas sales increase by over $100 million in two years, as shown in Figure 8 below:

Figure 8: PWC sales revenue, selected streams



Source: PWC annual reports

As shown in Figure 8, the NT government-owned PWC now collects over $230 million per year in gas sales revenue. In 2019–20 the PWC's gas sales area posted a net profit for the first time, contributing to the Corporation's overall $176 million profit.

However, the good times did not last after a 2021–22 result that saw "lower than expected revenue results in gas of $39 million…"[106], the PWC 2023 Statement of Corporate Intent

[104] PWC (2021) *Annual report*, p9, https://www.powerwater.com.au/about/what-we-do/our-plans-and-values/past-corporate-reports

[105] Manicaros (2017) *Business Confidential*, NT News 3 May 2017, page 15. This column does not appear to be on the NT News site. The Australia Institute has a copy and also has personal correspondence with Mr Manicaros regarding this figure.

[106] PWC (2021) *Annual report*, p6, https://www.powerwater.com.au/about/what-we-do/our-plans-and-values/past-corporate-reports

shows operating costs of the gas business at $250.1 million compared to gas revenue of $239.4 million, a loss of $10.7 million.[107]

The PWC's gas business does not only represent a cost to the NT taxpayer and a subsidy to at least one multinational fossil fuel company; it also presents the NT government with a major conflict of interest. The NT government cannot impartially assess controversial gas projects when it owns a gas supplier of this size. Moreover, renewable energy projects now present a "risk" to NT government revenue, as is clear in PWC reports:

> The corporation has in place long term contracts to procure gas and associated transport charges. The fixed price nature of the long term gas contracts; the volatility in the market price of gas; the pricing and volume risk from as yet unsecured contracts or contracts currently under negotiation; increasing competition in the gas supply market; and more recently the potential impact from the displacement of gas by renewables over time are risks to the corporation's ability to sell the gas at a price higher than the cost of gas and transport.[108]

The unexpected revenue loss by the PWC's gas sales division of $10.7 million has been included in Table 9 as a cost in this budget year. The total outstanding gas purchase and gas transport commitments—over $3.3 billion—are included as the total/capital value of the long-term assistance provided to gas production and sales by these commitments.

CHIEF MINISTER AND CABINET

Parts of the Department of the NT's Chief Minister and Cabinet promote and assist the gas industry. Investment Territory is a part of the Department of Chief Minister and Cabinet, charged with facilitating "major projects and significant investments in the Territory". As part of its remit, Investment Territory "lead[s] the coordination and delivery of the Territory's gas strategy and development of a gas-based manufacturing industry."[109] Of Investment Territory's $20 million budget, $5 million per year has been allocated to the Territory's gas strategy, based on earlier NT budgets that included $5 million per year for a "Gas Taskforce" that has now been absorbed into Investment Territory.

[107] PWC (2023) *Statement of corporate intent 2023-24*, https://www.powerwater.com.au/__data/assets/pdf_file/0030/173964/2023-24-Power-and-Water-Statement-of-Corporate-Intent.pdf

[108] PWC (2022) *Annual report*, p58, https://www.powerwater.com.au/about/what-we-do/our-plans-and-values/past-corporate-reports

[109] NT Government (2023) Budget Paper 3, p16

PORT AND INDUSTRIAL PRECINCT DEVELOPMENTS

In addition to the Darwin ship lift, a wider Marine Industry Park is being developed, partly because Darwin is "Adjacent to major onshore gas developments and offshore supply bases, the Marine Industry Park provides a unique opportunity to capitalise on Darwin's expanding gas, marine services and Defence industries."[110]. According to the Land Development Corporation, the Marine Industry Park "provides a unique opportunity to capitalise on Darwin's expanding gas, marine services and Defence industries."[111] The Marine Industry Park is budgeted to receive over $23 million in this budget, largely via the NT government's Land Development Corporation.

MINES AND ENERGY

The Department of Industry, Tourism and Trade's Mines and Energy group includes two programs that subsidise the gas industry.

The Resource Industry Development Services program includes the $9.5 million-per-year "Resourcing the Territory" exploration initiative, which provides "geoscience, investment attraction and exploration stimulus programs",[112] including to gas exploration.

The Energy Development program, meanwhile, works to:

> …advance the Territory's economic development and energy security through administration of exploration applications and permits, licences, resource management, operational approvals and regulatory activities, including monitoring and compliance under the Petroleum Act 1984 and Energy Pipelines Act 1981.[113]

A recommendation of the NT government's 2018 Fracking Inquiry was that the expense of this program should be recovered from gas companies. The NT government committed to implement all recommendations of the Fracking Inquiry, but five years later, under-recovery of the Energy Development program's costs continues. Table 9 includes this estimated $6.6 million gap in cost recovery as an annual, wholly-devoted subsidy to the export gas industry.

The Fracking Inquiry coincided with the beginning of a major increase in the budget of this program, as shown in Figure 9 below:

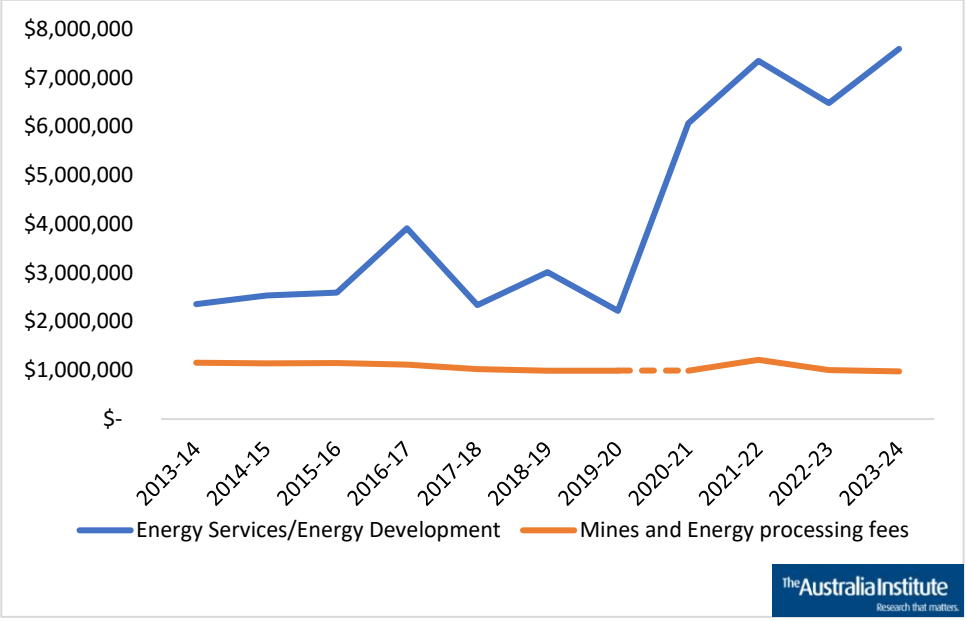
[110] Land Development Corporation (2023) *Marine Industry Park*, https://landdevcorp.com.au/project/marine-industry-park/

[111] NT Land Development Corporation (2023) *Marine Industry Park*, https://landdevcorp.com.au/project/marine-industry-park/

[112] Resourcing the Territory (2020) *About Resourcing the Territory*, https://resourcingtheterritory.nt.gov.au/about

[113] NT Government (2023) Budget Paper 3, p72

Figure 9: Energy Services/Energy Development budget



Source: NT Budget papers, various years

The budget for Energy Services—now re-named Energy Development has tripled in recent years—with no justification given. Revenue from applications, licence and title fees has now been renamed "Mines and energy processing fees (licences/titles)", and appears to have maintained at broadly similar levels, with just under $1 million budgeted in 2023–24. Only a fraction of this revenue is likely to come from the gas industry; the majority is likely to come from the mining industry.

Victoria

Victoria's fossil fuel industry comprises predominantly brown coal mines and power stations in the Gippsland region. The state is engaged in long-term oil operations, and in 2021, onshore gas exploration recommenced after a nine-year moratorium was lifted.[114]

Commendably, a fracking ban was introduced in March 2021, and in July 2022 the Victorian government released its Gas Substitution Roadmap, which aims to reduce fossil gas use (although hydrogen blending with fossil gas is being considered).[115] The Victorian government plans to publish a gas substitution policy directions paper in mid-2024.[116]

The long-running pilot phase of the Hydrogen Energy Supply Chain (HESC) Project was completed in early 2022.[117] The project was established to extract hydrogen from brown coal in the Latrobe Valley for export to Japan. The project initially received an estimated total of $496 million in funding from state, federal, and foreign sources – but no further funding is apparent in the 2023–24 budget papers. However, the project will receive a $2.1 billion funding boost from the Japanese government to support its continuation.[117]

Table 12: Victorian government 2023–2024 fossil fuel subsidies

	2023–24 expenditure	Capital values/forward estimates
Wholly	N/A	N/A
Primarily	21,000,000	84,000,000
Partly	N/A	N/A
Total	**21,000,000**	**84,000,000**
Coal	1,000,000	N/A
Gas	N/A	N/A
Various	20,000,000	84,000,000
Total	**21,000,000**	**84,000,000**

Source: Victoria State Government (2023) *Budget Papers 2023-2024*

[114] Victoria State Government: Energy, Environment and Climate Action (2021) *Resources Victoria - Restart of onshore conventional gas industry in Victoria*, https://resources.vic.gov.au/projects/onshore-conventional-gas-restart

[115] Victoria State Government: Energy, Environment and Climate Action (2023) *Victoria's Gas Substitution Roadmap*, https://www.energy.vic.gov.au/renewable-energy/victorias-gas-substitution-roadmap

[116] Victoria State Government: Energy, Environment and Climate Action (2023) *Victoria's Gas Substitution Roadmap Update*, https://www.energy.vic.gov.au/__data/assets/pdf_file/0027/691119/Victorias-Gas-Substitution-Roadmap-Update.pdf

[117] Hydrogen Energy Supply Chain Project (2024) *The world-first Hydrogen Energy Supply Chain (HESC) Project*, https://www.hydrogenenergysupplychain.com/

CARBONNET

CarbonNet is a carbon capture and storage network project in Gippsland that plans to build a 100 km CO_2 pipeline from the Latrobe Valley to the Gippsland Basin.[118] It was established in 2010 as part of the Federal Government's Carbon Storage Taskforce and National Low Emissions Coal Initiative. This initiative identified the Gippsland Basin as the most appropriate choice for a long-term carbon storage project in Victoria based on several technical factors. These factors included the region's close proximity to major coalfields, electricity generators, and industrial processors, along with its proximity to suitable offshore and onshore storage sites – "[Victoria's] largest sources of CO_2 are all located within a 15 km radius … [the site] offers an opportunity for shared infrastructure and a multi-user CCS network".[119]

CarbonNet has remained non-operational for over a decade. In 2022, it was reported that Stage Three of the project had been completed following the drilling of an offshore appraisal well in 2019–20 at the Pelican site in Bass Strait. However, recent reports state that the project remains in Stage Three – Project Development and Commercial Establishment.[120] In 2023, the Victorian Pipeline Regulator approved CarbonNet's Pipeline Consultation Plan, allowing the landholder consultation process to commence.[121] CarbonNet also announced Worley as it's Front End Engineering Design (FEED) contractor. The project is scheduled for its Final Investment Decision (FID) in 2024.

CarbonNet claims that it will have the capacity to store six million tonnes (Mt) of CO_2 each year for 30 years.[122] Even if this proves accurate, this figure represents a fraction of the emissions generated by Victoria's three brown coal-fired power stations: Yallourn, Loy Lang A, and Loy Yang B. In 2021, these generators emitted a combined 39.9 Mt CO_2-equivalent, representing 50% of Victoria's total greenhouse gas emissions.[123]

In previous editions of this report, the CarbonNet budget could not be separated from the rest of the "Resources" program in the Department of Energy, Environment and Climate

[118] Victoria State Government: Department of Jobs, Skills, Industry and Regions (DJSIR) (2023) *CarbonNet Project*, https://djsir.vic.gov.au/carbonnet

[119] Global CCS Institute (2015) *The CarbonNet Project: A Historical Perspective*, p. 9, https://www.globalccsinstitute.com/archive/hub/publications/155928/carbonnet-project-historical-perspective.pdf

[120] DJSIR (2024) *About the CarbonNet Project*, https://djsir.vic.gov.au/carbonnet/about-the-project

[121] Victoria State Government: Department of Jobs, Skills, Industry and Regions (2023) *Approvals & investigations*, https://djsir.vic.gov.au/carbonnet/approvals-and-investigations

[122] DJSIR (2024) *About the CarbonNet Project*

[123] Victoria State Government: Energy, Environment and Climate Action (2021) *Victorian Greenhouse Gas Emissions Report*, p. 19, https://www.climatechange.vic.gov.au/__data/assets/pdf_file/0036/687825/Victorian-Greenhouse-Gas-Emissions-Report-2021.pdf

Action (DEECA). The whole of that program's budget was included in this report as partly assisting fossil fuel industries.

In 2023–24, CarbonNet was transferred from the Resources program in DEECA, to the Investment Attraction program within the Department of Jobs, Skills, Industry and Regions (DJSIR). DEECA's Resources program's target budget declined from $69.4 million in 2022–23 to $48.5 million in 2023–24 "due mainly to the impact of the CarbonNet Project transfer to DJSIR," along with some other smaller changes.

This implies that CarbonNet's annual budget is in the order of $20 million per year. We have used this figure in this year's analysis, and considered it primarily dedicated to fossil fuel assistance, as the cost of the other programs involved in the change is uncertain.

The remaining parts of DEECA's Resources budget allocation is likely to provide some benefit to Victoria's petroleum exploration activities, but with no estimate available it is considered immaterial here. Notably, Victoria has 11 onshore petroleum production licences and 9 exploration permits,[124] and exploration activities continue in the offshore federal waters of the Otway and Gippsland Basins.[125]

LAND TAX EXEMPTION FOR MINING

Owners of land that is used exclusively as a mine receive a tax exemption in Victoria. This reduces government revenue and disincentivises the transition away from fossil fuel production. The exemption covers all mining licences and any land in the Latrobe Valley covered by the *Electricity Industry (Residual Provisions) Act 1993*,[126] which includes the state's brown coal mines and power stations. The land tax exemption for mining is therefore classified as primarily dedicated to fossil fuels and has been allocated $1 million in the 2023–24 budget, with an additional $3 million over the next three years.

[124] Department of Energy (2023) *Earth Resources Regulator - Annual Statistical Report FY 2022-23*, p. 30, https://resources.vic.gov.au/__data/assets/pdf_file/0012/996870/Earth-Resources-Regulation-Statistical-Report-2022-23.pdf

[125] Australian Government: Department of Industry Science and Resources (2023) *2023 offshore greenhouse gas storage acreage release*, https://www.industry.gov.au/publications/2023-offshore-greenhouse-gas-storage-acreage-release

[126] State Revenue Office (2023) *Land tax exemptions*, https://www.sro.vic.gov.au/land-tax/land-tax-exemptions#mines

South Australia

South Australia has long been a leader in renewable energy generation and has a commitment to achieving 100% renewable electricity by 2030. In 2022, South Australia's share of renewable energy for electricity generation was 71%.[127]

The oil and gas industry is focused on the Cooper Basin in the north east of the state. Gas is piped from there to the main Australian east coast gas network, and liquids are also produced and sent to Port Bonython near Whyalla for processing and shipping. Petroleum royalties for 2022–23 were $106.3 million, a fraction of the State Government's $27 billion in revenue.[128] Concerningly, the SA Government expects higher royalties in the future, "with growth in future years supported by increased petroleum production".[129]

An underground coal gasification project is also proposed for the state's main coal deposit at Leigh Creek in the Flinders Rangers.

Assistance measures from the state government continue to focus on infrastructure upgrades and industry advocacy.

Table 13: Government of South Australia 2023–24 fossil fuel subsidies

SA budget fossil fuel assistance	2023–24 expenditure ($)	Capital values/forward estimates ($)
Wholly	21,200,000	64,147,000
Primarily	N/A	N/A
Partly	13,630,000	$122,593,000
Total	**34,830,000**	**$186,740,000**
Coal	N/A	N/A
Gas/oil	34,830,000	186,740,000
Various		
Total	**34,830,000**	**186,740,000**

Source: Government of South Australia (2023) *Budget Papers 2023-24*

[127] Australian Government (2023) *Australian Energy Update 2023*, https://www.energy.gov.au/publications/australian-energy-update-2023

[128] Government of South Australia (2023) *Budget Paper 3*, Table 3.2 and p 105. https://www.statebudget.sa.gov.au/budget-papers

[129] Ibid, p 51.

PORT BONYTHON

Jetty Refurbishment

Port Bonython is the site of a gas and diesel importation and distribution hub and the jetty is leased by the state to Santos who use it to export LPG, crude oil and naphtha. The proposed expenditure to this ongoing project in the 2023–24 budget was $21,200,000, with the estimated total cost at $64,147,000.[130] This is a $3.7 million increase on the total cost estimated in 2022–23.

Hydrogen Hub

Port Bonython also features in South Australia's hydrogen export plans as part of the Clean Hydrogen Industrial Hub at Port Bonython.[131] This Hub falls under the jurisdiction of the Department of Energy and Mining's Office of Hydrogen Power South Australia. While largely focused on renewable energy, fossil fuel-based hydrogen appears to be included, with 'development agreements' having been negotiated with fossil gas companies Santos and Origin Energy, as well as green hydrogen-focussed companies.[132] The Hub is supported by the Commonwealth Government and private sector investments that "support common service infrastructure development to enable establishment of a globally competitive hydrogen export sector."[133]

Although there was no specific line payment entered for the 2023–24 budget, there are plans to finalise a "grant agreement to secure $70 million in Commonwealth Government matched grant funding towards South Australian hydrogen supply chain infrastructure at Port Bonython."[134] In last year's budget, the total cost of the hub was $30 million and $940,000 was for land acquisition. The associated "land agreements with project partners"

[130] Government of South Australia (2023) *Budget Paper 3*, p 113

[131] Government of South Australia (2023) *Budget Paper 3,* p 107, https://www.statebudget.sa.gov.au/budget-papers

[132] *Government of South Australia* (n.d.) *Project partners*, https://www.hydrogen.sa.gov.au/projects/port-bonython-hydrogen-hub/project-partners

[133] Government of South Australia (2023) *Budget Paper 3,* p 107, https://www.statebudget.sa.gov.au/budget-papers

[134] Government of South Australia (2023) *Budget Paper 4, Volume 2*, p 121, https://www.statebudget.sa.gov.au/budget-papers

have been finalised and planning processes begun.[135] The Hub is expected to be completed by mid-2024.[136]

It is still unclear the extent to which these initiatives will cross over with the South Australian Hydrogen Power Plant proposed to be built near Whyalla, which is being managed by the Office of Hydrogen Power South Australia.[137] Also known as the Hydrogen Jobs Plan, this project has a budget of $593 million, with $118.6 million allocated for 2023–24.[138] Although there is some discussion of hydrogen-fossil gas blending, most material in relation to the Hydrogen Power Plant specifies renewable hydrogen, so this expenditure is not included in our analysis.

DEPARTMENT OF ENERGY AND MINING

The Mineral Resources and Energy agency situated within the Department of Energy and Mining, is responsible for regulating, managing and supporting the development of South Australia's mineral, petroleum and renewable energy assets.[139] The agency oversees a range of subprograms that assist the gas and oil sectors in South Australia. The relevant subprograms and their contribution to gas and oil are as follows.

Energy Resources Subprogram

The Energy Resources Subprogram's annual highlights include "Continued focus on supporting industry to explore South Australian basins to make new discoveries." The agency's budgeted expenses for 2023–24 were $10.13 million, included as partly supporting fossil fuel industries.[140] The Roundtable for Energy Resources in South Australia (formerly the South Australia Roundtable for Oil and Gas; renamed to include focus on carbon capture and storage and hydrogen[141]) will continue to provide guidance and stewardship for this

[135] Government of South Australia (2023) *Budget Paper 4, Volume 2*, p 121, https://www.statebudget.sa.gov.au/budget-papers
[136] Government of South Australia (2023) *Budget Paper 4, Volume 2*, p 109, https://www.statebudget.sa.gov.au/budget-papers
[137] Government of South Australian (2023) *Hydrogen Jobs Plan*, https://www.ohpsa.sa.gov.au/projects/hydrogen-jobs-plan
[138] Government of South Australia (2023) *Budget Paper 4, Volume 2*, p 109, https://www.statebudget.sa.gov.au/budget-papers
[139] Government of South Australian (2023) *Budget Paper 4, Volume 2*, p 112, https://www.statebudget.sa.gov.au/budget-papers
[140] Government of South Australia (2023) *Budget Paper 4, Volume 2*, p 116, https://www.statebudget.sa.gov.au/budget-papers
[141] Government of South Australia (n.d.) *About the Roundtable*, https://www.energymining.sa.gov.au/industry/energy-resources/roundtable/about-the-roundtable

subprogram.[142] This Roundtable has several fossil fuel companies as members, including Santos, Origin, the APPEA, Cooper Energy, Beach Energy.[143] The Department of Energy and Mining will use this Roundtable to "deliver and implement an oil and gas strategy" for the state.[144]

Implementation of Hydrogen and Renewable Energy Act, 2023

The Growth and Low Carbon Subprogram 2.3 within the Department of Energy and Mining has plans for the implementation of South Australia's new Hydrogen and Renewable Energy Act, 2023. The 2023–24 budget allocated $1.2 million over two years for the implementation of the Act and development of associated regulations.[145] This is not included in our analysis as the budget says this is to support "a world-leading green hydrogen sector."[146] However, it may subsidise fossil fuels in the future as the Act itself does not specify any particular types of hydrogen and does not mention 'green' or 'clean'.[147] This means the Act is applicable to all forms of hydrogen, including those associated with fossil fuels. The Growth and Low Carbon Subprogram focuses on "major energy initiatives, industrial projects and low carbon initiatives" for the state.[148]

Accelerated Discovery Initiative (ADI)

The Accelerated Discovery Initiative (ADI) falls under the Department of Energy's Mineral Resources Subprogram 2.1. This ongoing subprogram manages the state's mineral resources, including exploration activities. The ADI focuses on mineral and energy exploration and discovery. It is a "government / industry co-funded partnership to stimulate innovation and de-risk investment in the exploration sector."[149] The ADI was allocated $10.5

[142] Government of South Australia (2023) *Budget Paper 4, Volume 2*, p 115, https://www.statebudget.sa.gov.au/budget-papers

[143] Government of South Australia (n.d.) *About the Roundtable,* see *Membership of the Roundtable*, https://www.energymining.sa.gov.au/industry/energy-resources/roundtable/about-the-roundtable

[144] Government of South Australia (2023) *Budget Paper 4, Volume 2*, p 108, https://www.statebudget.sa.gov.au/budget-papers

[145] Government of South Australia (2023) *Budget Paper 1,* p 18, https://www.statebudget.sa.gov.au/budget-papers

[146] Government of South Australia (2023) *Budget Paper 1,* p 18, https://www.statebudget.sa.gov.au/budget-papers

[147] *Hydrogen and Renewable Energy Act 2023 (SA)*, https://www.legislation.sa.gov.au/lz?path=/v/a/2023/hydrogen%20and%20renewable%20energy%20act%202023_37

[148] Government of South Australia (2023) *Budget Paper 4, Volume 2*, p 116, https://www.statebudget.sa.gov.au/budget-papers

[149] Government of South Australia (2023) *Budget Paper 3*, p 106, https://www.statebudget.sa.gov.au/budget-papers

million over three years but has no specific line item for the 2023–24 budget.[150] It is not clear if the ADI will exclude the oil and gas sectors, so it has been included in our analysis as partly contributing to fossil fuels.

HyLogger 4 and Raman Spectroscopy

The Hylogger 4 and Raman Spectroscopy unit comes under the ongoing Mineral Resources subprogram 2.1.[151] The HyLogger 4 and Raman Spectroscopy spectral geoscience technology will allow for "improved identification of geological samples, [and] support increased private mineral and energy exploration expenditure and services to the oil and gas industry, as well as attract more financial investment in South Australia".[152] The total cost of this project is $633,000 with no line payment for 2023–24.[153] We have determined the Hylogger 4 technology to be partly devoted to supporting fossil fuel industries.[154]

Hylogger drilling programs include the Plan for Accelerating Exploration (PACE) Gas grant program-supported drillholes in South Australia.[155]

[150] Government of South Australia (2023) *Budget Paper 3*, p 106, https://www.statebudget.sa.gov.au/budget-papers

[151] Government of South Australia (2023) *Budget Paper 4, Volume 2,* p 113, https://www.statebudget.sa.gov.au/budget-papers

[152] Government of South Australia (2021) *Budget Paper 5*, p 35 https://www.statebudget.sa.gov.au/budget-papers

[153] Government of South Australian (2023) *Budget Paper 4, Volume 2*, p 109, https://www.statebudget.sa.gov.au/budget-papers

[154] Government of South Australia (2021) *Budget Paper 5*, p 35, https://www.statebudget.sa.gov.au/budget-papers

[155] Government of South Australia (n.d.) *PACE GAS grants*, https://www.energymining.sa.gov.au/industry/energy-resources/industry-activity/pace-gas-grants; Government of South Australia (2021) *Spectral geoscience*, https://www.energymining.sa.gov.au/industry/geological-survey/mesa-journal/previous_news/news-articles-2021/spectral_geoscience

New South Wales

New South Wales (NSW) is a major coal mining jurisdiction, with 40 operating coal mines producing 221 million tonnes of raw coal per year.[156] Coal royalties account for just 2.9% of state revenue despite record coal prices. Coal royalties are to increase by around 2% of sale value from 1 July 2024 to "ensure that New South Wales receives a fair return on its natural resources".[157]

The state is not currently a significant gas producer, but the controversial Narrabri Gas Project could significantly increase production.

In 2023–24, the NSW government spent approximately $60.5 million on fossil fuel subsidies, with total forward budgeted assistance estimated at $102.7 million, as shown in Table 14 below.

Table 14: NSW government 2023–24 fossil fuel subsidies

NSW budget fossil fuel assistance	2023–24 Expenditure ($)	Capital value/forward estimates ($)
Coal	27,226,454	45,406,000
Gas	875,000	1,845,000
Various	32,398,333	55,466,667
Total	**60,499,787**	**102,717,667**
Wholly	28,101,454	47,251,000
Primarily	N/A	0
Partly	32,398,333	55,466,667
Total	**60,499,787**	**102,717,667**

Source: NSW Government (2023) *Budget Papers*

The estimates of fossil fuel subsidies for 2023–24 in Table 14 are an increase from $45.2 million budgeted in 2022–23, largely due to the Coal Innovation Fund significantly increase its spending. The total value of projects and forward estimates has decrease from $178.4 million in 2022–23 to $103 million in 2023–24, mainly reflecting lower remaining value of the Coal Innovation Fund and lower forward estimates of the legacy mine program.

[156] Coal Services (2024) Statistics, https://www.coalservices.com.au/

[157] The NSW Government (2023) *NSW Budget 2023-24 - Budget Statement: Budget Paper No. 01*, p4-4

DEPARTMENT OF REGIONAL NSW

The Department of Regional NSW (DRNSW) oversees various programs and functions that benefit the state's fossil fuel industry:

- The 2023–24 Budget did not include an "Outcomes statement" as had been published in 2022–23. The 2022–23 document included a key outcome of the "Regional NSW Cluster" as "Mineral and petroleum industries generating prosperity, safely". Related investment was planned for four years,[158] although much is not related to fossil fuels. Based on total planned investment for four years and allocated budget in 2022–23, we estimate 2023–24 allocated budget for items that likely assists fossil fuel industry as the average fund for each year from the remaining fund. They include:
    - $17.3 million allocated to the "remediation of high-risk legacy mine sites, including site assessment, contamination safety and risk reduction to manage physical risks to the public from legacy mines". This is categorised as partly assisting the coal industry.
    - $6.17 million for geoscience and scientific advice that benefit mining companies. This is categorised as partly assisting the coal industry.
- DRNSW's Mining, Exploration and Geoscience (MEG) program aims to "provide certainty to industry and local communities about the future of mining in NSW, and support industry to understand and fulfil its obligations" and "support and grow responsible mining and exploration across regional NSW". The MEG program is also responsible for the Minerals and Petroleum Investment Fund, which can fund "any authorised investment program, the object of which is to promote investment in State minerals or petroleum (or both)".[159] In 2023, the fund spent total $8.965 million with a closing balance of $8.6 million.[160] This is categorised as partly assisting the fossil fuel industry.

COAL INNOVATION NSW

The NSW Coal Innovation Fund's purpose is "to provide funding for research into, and development of, low emissions coal technologies, low emissions coal technology demonstration projects, increasing public awareness and acceptance of the importance of reducing greenhouse gas emissions through the use of low emissions coal technologies, and

[158] The NSW Government (2022) NSW Budget 2022-23 Budget Paper No. 02 Outcomes Statement, p. 7-11.

[159] The NSW Government (2023) *Department of Regional NSW Annual Report 2022-2023*, p 21, https://www.nsw.gov.au/sites/default/files/2023-12/Department-of-Regional-NSW-Annual-Report-2022-2023.pdf

[160] The NSW Government (2023) *Department of Regional NSW Annual Report 2022-2023*, p. 21,56, https://www.nsw.gov.au/sites/default/files/2023-12/Department-of-Regional-NSW-Annual-Report-2022-2023.pdf

commercialisation of low emissions coal technologies"[161]. This fund spent $27.2 million in 2022–23 year (the most recent data available) and had a closing balance of $45.4 million.[162] This fund spent five times more in 2022–23 than in 2021–22. The fund is considered wholly attributable to the coal industry.

OTHER DEPARTMENTS

Property and Development NSW (PDNSW) is leading and managing the remediation of contaminated properties on the former Waratah Gasworks site in Newcastle. The budget for this item in 2023–24 is $0.875 million.[163] Although the contamination of this site by the coal gasification industry occurred between 1889 and 1926,[164] the NSW Government continues to spend money on remediation. This is an example of how the public can subsidise fossil fuel industries through degraded environments and clean-up costs decades after projects have ceased operations.

[161] The NSW Government (2023) *Coal Innovation Fund annual report 2022-23*, p. 12, https://www.parliament.nsw.gov.au/tp/files/187376/Coal%20Innovation%20NSW%20Fund%20Annual%20Report%20for%202022-23%20(1).PDF

[162] The NSW Government (2023) Coal Innovation Fund annual report 2022-23, p. 20,26, https://www.parliament.nsw.gov.au/tp/files/187376/Coal%20Innovation%20NSW%20Fund%20Annual%20Report%20for%202022-23%20(1).PDF

[163] The NSW Government (2023) NSW Budget 2023-24 Budget Paper No.03 Infrastructure Statement, p.4-40, https://www.budget.nsw.gov.au/2023-24/budget-papers

[164] The NSW Government (2023) Waratah Gasworks site remediation, https://www.dpie.nsw.gov.au/housing-and-property/our-business/environmental-service-group/waratah-gasworks-site-remediation

Tasmania

The Tasmanian state budget does not include any clear subsidy to fossil fuel production or use. This is not unexpected, given that the state reached 100% renewable net electricity generation in 2020,[165] and has a legislated target to generate 200% of 2022 electricity consumption by 2040.[166] These achievements are enabled by Tasmania's long-established, and often controversial, hydroelectricity scheme, and more recent contributions from onshore wind farms.

Tasmania does produce and use some fossil fuels.[167] The gas-fired Tamar Valley Power Station contributed 0.56% of Tasmanian power generated in 2022–23, down from 0.9% in 2021–22.[168] Tasmania is also connected to the National Electricity Market via the Basslink interconnector, which facilitates the import of fossil fuel-generated electricity. Fossil fuels are also the primary source of energy for transport, agriculture and industrial sectors in Tasmania.[169]

Resources Policy and Regulatory Services

The only potential fossil fuel subsidy in the Tasmanian Budget is the funding allocated to Resources Policy and Regulatory services Output Group 4.2., Mineral Resources, which "facilitates mineral exploration and mining development and fosters and encourages responsible land management in Tasmania… [and improves] the quality and quantity of geoscience information, essential to the encouragement of mineral exploration".[170] Mineral Resources was allocated $9.3 million in 2023–24, and $27 million over 3 years.[171] Ores and concentrates (such as copper, zinc, tin and tungsten) make up the majority of Tasmania's mining production and the entirety of the state's mineral exports.

[165] Renewables, Climate and Future Industries (n.d.) *100% target achievement*, https://recfit.tas.gov.au/renewables/100_target_achievement

[166] *Energy Co-ordination and Planning Act 1995*, Part 1A, s 3C, 2 (b).

[167] Department of Climate Change, Energy, the Environment and Water (2022) *Australian Energy Update 2022*, https://www.energy.gov.au/sites/default/files/Australian%20Energy%20Statistics%202022%20Energy%20Update%20Report.pdf, p 20.

[168] Tasmanian Economic Regulator (2023) *Energy in Tasmania: Annual Security Review 2022-23 Water Year*, p9, https://www.economicregulator.tas.gov.au/Documents/23%202630%20Annual%20Energy%20Security%20Review%202022-23.PDF.

[169] Department of Climate Change, Energy, the Environment and Water (2022) *Australian Energy Update 2022*, https://www.energy.gov.au/sites/default/files/Australian%20Energy%20Statistics%202022%20Energy%20Update%20Report.pdf, p 20.

[170] Tasmanian Government (2023) Budget Paper 2, Volume 1, https://www.treasury.tas.gov.au/Documents/2023-24-Budget-Paper-No-2-Volume-1.pdf, p 265.

[171] Ibid, p 257.

Coal mining in a net zero state

Tasmania has one active coal mining enterprise, Cornwall Coal Company Pty Ltd., which operates in the state's north-east.[172] Cornwall Coal Company is a subsidiary of Cement Australia, and supplies coal to industrial consumers within Tasmania, such as Cement Australia's Railton plant, and the Norske Skog paper mill. In 2022, Cornwall Coal sought to develop a new open cut pit at the Cullenswood Mine which would extract up to 50,000 tonnes of raw coal per annum over a predicted three-year lifespan.[173] The proposed project was referred for EPBC Act approval in November 2022, but has not progressed beyond the referral decision stage at present.[174]

[172] Barnes and McCoull (2022) *The Cornwall Coal Company Pty Ltd, Blackwood 1 Redevelopment, Blackwood Colliery, Cornwall Project Description*, https://epa.tas.gov.au/Documents/The%20Cornwall%20Coal%20Company%20Pty%20Ltd%2c%20Blackwood%201%20Redevelopment%2c%20Blackwood%20Colliery%2c%20Cornwall%20-%20Project%20Description.pdf

[173] Ibid, p 2.

[174] EPBC Act Public Portal (2023) *Cullenswood Mine development of open cut coal pit No.6,*https://epbcpublicportal.awe.gov.au/all-referrals/project-referral-summary/project-decision/?id=a4b1598d-fb8a-ed11-81ad-00224818a80f&refentity=incident&refid=23a8e3a9-d65f-ed11-9561-00224814a07b&refrel=mara_projectdecision_project_Incident, p 1.

Australian Capital Territory

The ACT does not produce any coal, gas or oil, nor is it home to any major consumers of fossil fuel. Its 2023–24 budget does not contain any measures that could be considered fossil fuel subsidies. That budget contains ambitious targets for transitioning away from dependence on fossil fuels, with a view to achieve net zero-emissions by 2045.[175]

Because the ACT government has contracted renewable generation equivalent to the Territory's electricity consumption, the ACT's electricity system has been described as 100% renewable since 2019.[176] The government further aims to phase out gas in favour of electrification by 2045 at the latest.[177]

The 2023–24 ACT budget implements a range of measures that aim to grow renewable energy and further reduce emissions.[178] These include:

- $85.1 million to facilitate a whole-of-government electrification program;
- An additional $80 million towards the Sustainable Household Scheme, which incentivises ACT homeowners to make their homes more energy efficient and assists eligible households with the upfront costs of solar and battery storage;
- Continuing the implementation of the Vulnerable Household Energy Support Scheme to support public housing, community housing providers, eligible private rental providers, and low-income homeowners to install energy-efficient insulation and to transition away from gas-based appliances;
- Continuing the Zero Emissions Vehicles Strategy 2022–23, which will implement a range of measures to transition the ACT away from fossil-fuelled vehicles;
- Delivering the Big Canberra Battery, which aims to facilitate further renewable electricity use and reduce the ACT's use of fossil fuel-generated electricity from the wider NSW grid, and;
- Funding to deliver an organic waste recovery facility.

[175] ACT Government (2023) *Budget Outlook*, p 66, https://www.treasury.act.gov.au/__data/assets/pdf_file/0007/2244436/Budget-Outlook.pdf

[176] See for discussion of the ACT's electricity policy and 100% target see Cass (2019) *Class ACT: How the Australian Capital Territory became a global energy leader*, https://australiainstitute.org.au/report/class-act-how-the-australian-capital-territory-became-a-global-energy-leader/ and Evans (2019) *ACT has '100 per cent renewable' electricity from today. But what does that mean?*, https://www.abc.net.au/news/2019-10-01/act-is-100-per-cent-renewable-but-what-does-that-mean/11560356

[177] ACT Government (2023) *Canberra's plan to transition,* https://energy.act.gov.au/

[178] ACT Government (2023) *Budget Outlook*, p 77

Conclusion

The subsidies that Australian governments give to the fossil fuels industry come at the expense of action on climate change. Existing policies supposedly designed to tackle climate change – like carbon offset systems, land sector accounting, hydrogen, and carbon capture and storage – merely greenwash the continuing, increasing support that Australian governments give the fossil fuels industry. Until Australian governments abolish these subsidies, the production and consumption of the fossil fuels that are largely responsible for climate change will increase. Ending fossil fuel subsidies should be the starting point of any sincere climate policy.

Cutting fossil fuel subsidies would not only help achieve genuine reductions in emissions but would save money that could be spent on public services. The $65 billion that could be recovered by eliminating fossil fuel subsidies could replace the Disaster Ready Fund 14 times over. It could triple the Housing Australia Future Fund and then double it again. It could provide much needed resources to any number of social, environmental and economic challenges that Australia faces.

With three state and territory elections to be held in 2024, and a federal election soon thereafter, fossil fuel subsidies should be front and centre of Australian policy debate.

The Australia Institute
Research that matters.

In reverse

The wrong way to fuel savings and falling transport emissions

Australia's light duty vehicle fleet is among the least fuel efficient in the world, using 24% more fuel per kilometre travelled than the UK. If the UK's modest standards could be met here, Australian drivers would save $13 billion a year in fuel costs and overall transport emissions would be 17% lower.

Matt Saunders
Matt Grudnoff
Rod Campbell

March 2023

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Canberra, ACT 2601
Tel: (02) 61300530
Email: mail@australiainstitute.org.au
Website: www.australiainstitute.org.au
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Summary

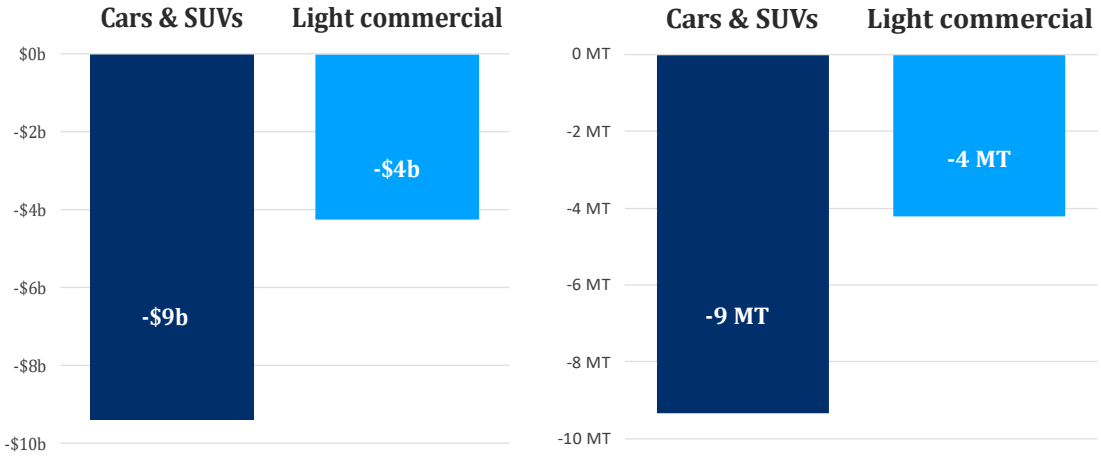
It is hard to overstate the significance of the role of transport emissions in achieving national greenhouse gas reduction targets. Transport is both a major source of greenhouse gas emissions— accounting for 18% of Australia's total emissions and the second largest source after electricity (34%)—and one of the easiest sources to abate. The widespread availability of more fuel-efficient vehicles and zero-emission vehicles means that there are many reasonably straightforward ways transport emissions can be reduced.

At the same time, with historically high fuel prices, the path to lowering transport emissions — burning less petrol and diesel — is also the path to major cost savings for households, as well as significantly improving the nation's fuel security.

This paper outlines how the growth in the greenhouse gas emissions of Australia's passenger vehicle fleet is one of the highest among the developed countries. The paper then shows that the high emissions growth is closely related to the relatively low fuel efficiency of Australia's passenger vehicle fleet, which in turn is the result of the pattern of new vehicle sales dominated by relatively inefficient vehicles especially dual-cabs utes. A pattern encouraged by current tax settings.

The analysis is compared to the outcomes in the U.K, a similar highly developed, right-hand drive country, middle ranked in average fuel efficiency, with a greater share of its population in rural and regional areas, and yet has successfully lowered its transport emissions.

Figure A: Annual emissions reduction and fuel savings from improved fuel efficiency



Source: Author's estimates using data from BITRE, ABS, and AiP

The paper finds that, over time, if the pattern of Australian passenger, SUV and light commercial vehicles purchased emulated that of the UK, then total road transport fuel consumption and emissions in Australia could be 17% lower, saving households around $13 billion a year in fuel costs, and 13.6 MT of emissions (Figure A). The paper also shows how the increase in fuel efficiency would improve Australia's fuel security and reduce the cost of meeting the new obligations of 27 days of petrol and 32 days of diesel held in storage.

Several policy changes, many well-known, could drive reductions in Australia's transport emissions:

1. A switch to an improved emissions and fuel consumption test regime so consumers can make accurate purchasing decisions. The Australian testing regime is obsolete with off-the-shelf replacements readily available and in use around the world.
2. Legislated mandatory emissions and fuel consumption standards for all new vehicles, with perhaps a phase-in period for new and old commercial vehicles.
3. Reconfigure vehicle registration fees so they are calculated on emissions rather than weight, similar to the ACT policy,[1] and reconfigure the Luxury Car Tax to also account for emissions intensities, effectively making electric and hybrid vehicles low rego and luxury tax free.
4. If again extended, the *Temporary Full Expensing* and *Loss Carry Back Tax Offset* policies should be re-configured towards low emissions purchases.
5. Governments, at all levels ideally, commit to electric vehicle fleets by 2030, thereby lowering the prices of these cars in the second-hand market.
6. Federal government look to extend the S*afeguard Mechanism* to include transport emissions.
7. Continued price incentives, subsidies, and discounts, in their various forms for electric and hybrid vehicles including encouragement to significantly expand the recharging network especially in regional areas.

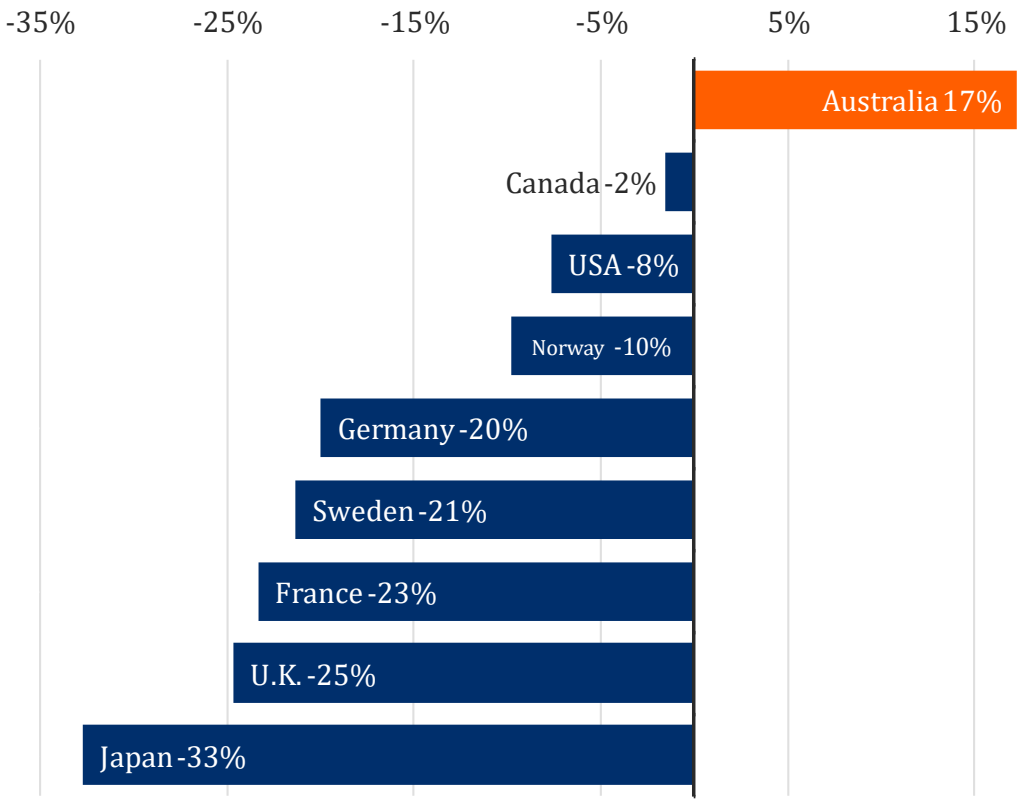
[1] The Canberra Time, 2023, ACT registration system change to charge on emissions instead of weight will save motorists $6.6 million in four years, https://www.canberratimes.com.au/story/8068261/act-unveils-new-car-rego-scheme-promises-to-cut-fees-for-most-but-not-all-drivers/?cs=14329

Introduction

It is hard to overstate the significance of transport emissions in achieving national emission reduction targets. Transport is a major source of emissions; it accounts for 18% of Australia's total emissions, making it the second largest source of greenhouse gases after electricity (34%). It is also one of the easiest sources to abate. The widespread availability of more fuel-efficient and zero-emission vehicles, as well as public and active transport options, means that there are many reasonably straightforward ways by which transport emissions can be reduced.

Most developed countries have seen road transport emissions from Light Duty Vehicles (LDVs - passenger cars, SUVs, and light commercial vehicles) fall significantly in recent decades. Australia, however, has been heading in the opposite direction—its LDV transport emissions rose 17% between 2000 and 2020, making it one of the worst performers in the OECD. By contrast, the UK, France and Germany saw their road transport emissions fall by 25%, 23% and 20% respectively (Figure 1).

Figure 1: Transport emissions growth since 2000, cars & light duty trucks



Source: UN, 2022, Greenhouse Gas Inventory Data: Detailed data by Party, https://di.unfccc.int/detailed_data_by_party

The magnitude of, and growth in, emissions from transport in Australia will make it virtually impossible for Australia to achieve Labor's target of an economy-wide 43% reduction in greenhouse emissions over 2005 levels by 2030. That is, unless the trend of Australians buying large, inefficient, high emission vehicles is reversed quickly. This means tackling Australia's enduring love affair with the ute. Moreover, with the average passenger vehicle on the road for around 11 years,[2] it means that if Australia is to have any hope of meeting this goal, change needs to be made today.

This report explores trends in Australia's transport fuel consumption and LDV sales, and outlines the potential gains in cost savings, greenhouse emissions and fuel security from improving the efficiency of the LDV fleet.

[2] BITRE, 2022, *Motor Vehicles Australia*, https://www.bitre.gov.au/publications/2022/motor-vehicles-australia-january-2022-first-issue

Transport fuel consumption

Australia's 'fleet-wide' fuel efficiency is relatively poor when compared to other developed countries. This leads to both high transport emissions and excessive nation-wide expenditure on predominantly imported fuel.

In examining just how inefficient Australia's fleet-wide fuel economy is, it helps to compare Australia to the United Kingdom. As the U.K. is a developed economy, part of the 'Anglosphere', and uses left-land drive, this comparison highlights the potential interchangeability of the two LDV vehicle fleets and the relevant impacts of doing so.

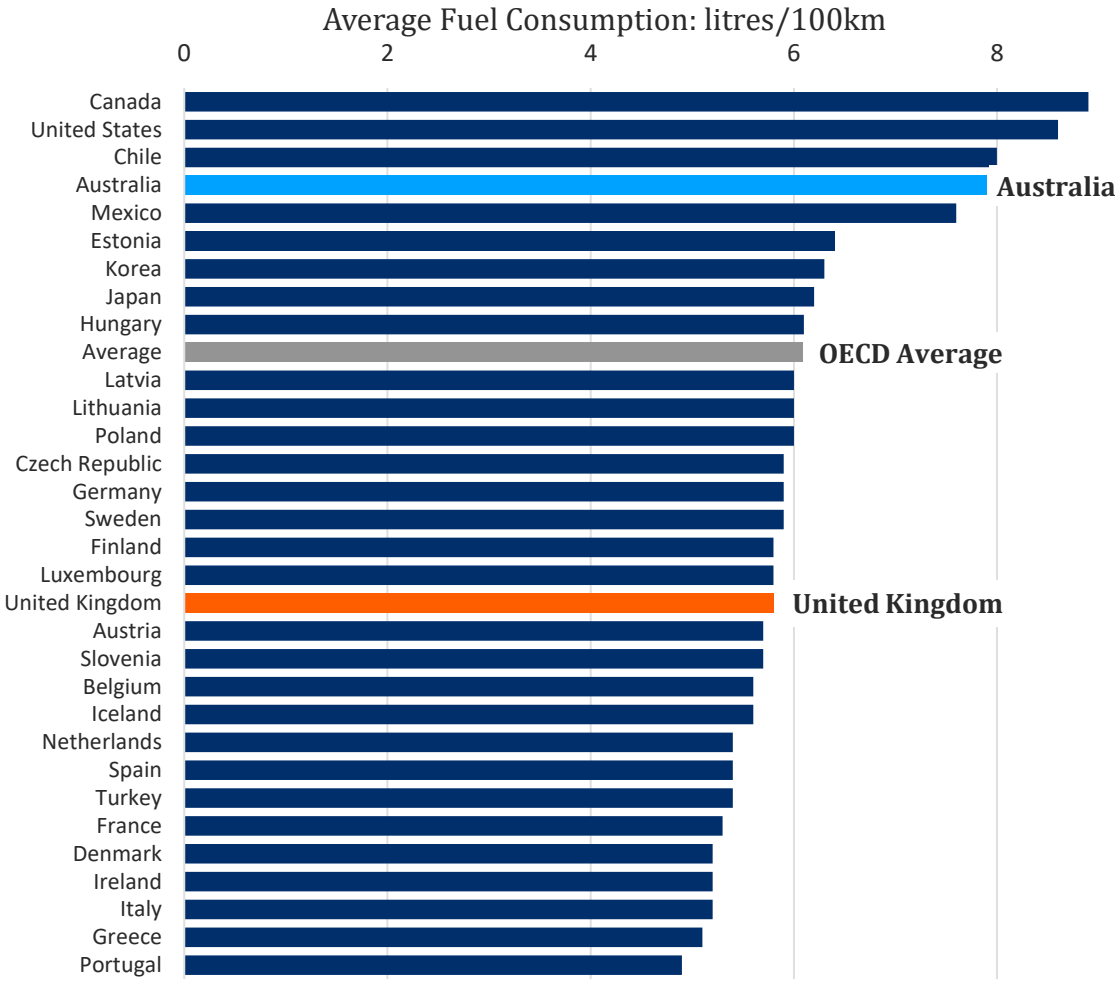
Data published by the IEA under the *Global Fuel Economy Initiative 2021* highlights the differences in fleet-wide fuel economy and emissions factors for LDVs including cars, SUVs, and light commercial vehicles in Australia and the U.K.[3] Using the IEA's most recent data for 2020, and on a litres of petrol equivalent, Australia's LDV fleet fuel economy was reported to be 8.3 litres/100km compared to 6.3 litres/100km in the U.K - 24% lower.

While they are not reported by the IEA, emissions intensities would show a similar 24% difference. This is consistent with slightly older data published by the IEA for 2017, which again shows a similar fuel efficiency gap of 27% between Australia and the U.K. and a 23% gap between Australia and the OECD average (Figure 2).[4]

[3] IEA, 2022, iea.org/reports/global-fuel-economy-initiative-2021

[4] IEA, 2019, *Fuel Economy in Major Car Markets*, iea.org/reports/fuel-economy-in-major-car-markets

Figure 2: OECD fuel consumption, Light Duty Vehicles, 2017



Source: IEA, 2019, iea.org/reports/fuel-economy-in-major-car-markets

The clear conclusion from the data is that not only are Australian transport emissions relatively high, but so too is Australian fuel consumption and expenditure. If the Australian fleet of cars, SUVs, and light commercial vehicles were as efficient as those in UK, then emissions and fuel consumption could be around 27% lower.

WHY ARE THE FLEET CHARACTERISTICS SO DIFFERENT?

The characteristics of Australia's vehicle fleet reflects the sales pattern of new motor vehicles over many years, as well as the retirement rate of older vehicles.

Quite simply, if Australia buys more inefficient new vehicles compared to the rest of the world, fleet-wide fuel efficiency will decline and fuel costs will rise further than if there had been more efficient vehicle purchasing patterns.

A simple comparison of recent new motor vehicle sales in Australian and the U.K. hints at how Australia has ended up with one of the highest polluting car fleets in the developed world.

In 2022, exactly 1,081,429 new vehicles were sold in Australia, with the top ten selling vehicles accounting for 30 percent of total sales. Of these ten, five were twin-cab utes, including the two highest-selling vehicles, three were sports utility vehicles (SUVs), and only two were small passenger cars.

Table 1 outlines the top-10 selling vehicles in Australia for the calendar year 2022, along with the reported fuel efficiency and emissions intensity of each vehicle. Asterisks denote vehicles considered utes for the purposes of this paper; daggers denote SUVs. The table highlight Australia's recent obsession with big utes and SUVs[5]. Australia's bestselling vehicle, the Toyota Hilux, sold over 64,000 units, over twice as many as the highest selling traditional passenger vehicle, the Toyota Corolla, coming 6th for sales with only 25,000 units sold. The sales weighted average reported fuel efficiency is 7.6 litres/100km with an emissions intensity of 191 g/km.

Table 1: Australia's Top-10 selling vehicles, 2022.

Vehicle	Sales	Fuel use: l/100km	Emissions: g/km
Toyota HiLux*	64,391	8.0	212
Ford Ranger*	47,479	7.2	189
Toyota RAV4†	34,845	6.0	137
Mitsubishi Triton*	27,436	8.6	225
Mazda CX-5†	27,062	8.2	191
Toyota Corolla	25,284	6.0	139
Toyota LandCruiser†	24,542	9.5	250
Isuzu D-Max*	24,336	7.9	209
MG ZS†	22,466	7.1	165
Hyundai i30	21,166	7.4	173
Average		7.6	191

Source: Federal Chamber of Automotive Industries (FCAI), https://www.fcai.com.au/news/index/view/news/787 and Green Vehicle Guide, https://www.greenvehicleguide.gov.au/

In comparison, in the UK, the 10 top selling vehicles of 2022 accounted for 18% of the country's total sales. The list includes three SUVs, including the top-selling Nissan Qashqai—but despite the existence of 'tradies' in the UK, no dual cab-ute made their top 10 (Table 2). The UK's top 10 does include two light commercial vehicles, denoted with an asterisk, but compared to the Australian top selling dual cab utes they would

[5] Discussed in more detail in the next section.

struggle to double up as family vehicles, lacking the necessary features to carry much else but the driver, a passenger, and commercial freight.

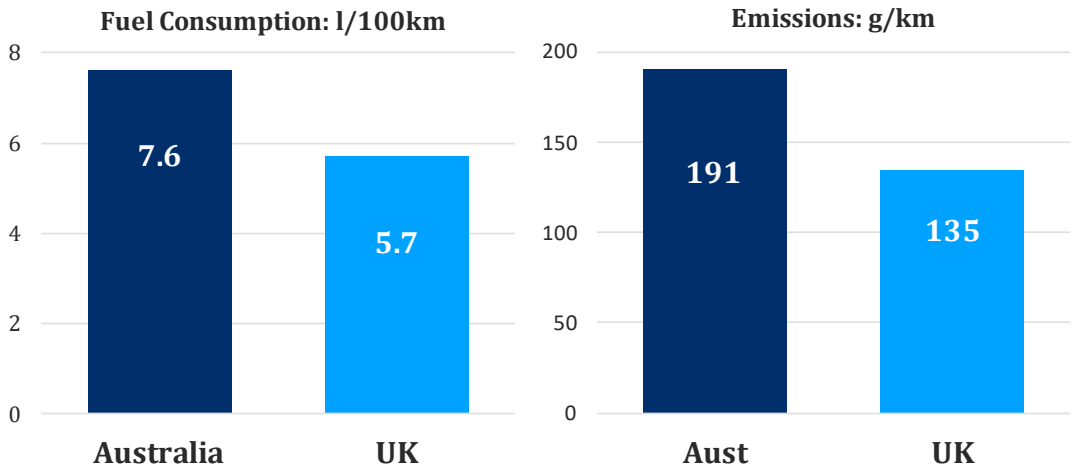
Table 2: UK's Top-10 selling vehicles, 2022

Vehicle	Sales	Fuel use: l/100km	Emissions: g/km
Nissan Qashqai	42,704	6.3	143
Ford Transit Custom*	42,215	7.9	191
Vauxhall Corsa	35,910	4.6	127
Telsa Model Y	35,551	0.0	0
Ford Puma	35,088	6.4	145
Ford Transit*	33,203	8.6	212
MINI Hatchback	32,387	6.1	138
Kia Sportage	29,655	5.9	119
Hyundai Tucson	27,839	6.6	150
VW Golf	26,558	4.5	109
Average		5.7	135

Source: Society of Motor Manufacturers and Traders (SMMT) www.smmt.co.uk/vehicle-data/car-registrations and Vehicle Certification Agency carfueldata.vehicle-certification-agency.gov.uk/

The weighted average fuel economy of the U.K. top-10 sellers is 24% lower than Australia's, at 5.7 litres/100km while similarly emissions intensity is 29% lower at 135 g/km. The data shows the stark difference between the reported fuel economy and emission intensity of new vehicles sales in the UK's and those in Australia, summarised in Figure 3.

Figure 3: Comparison of fuels efficiency and emissions, Australia & U.K, new LDVs



Source: Green Vehicle Guide (AUST) and Vehicle Certification Agency (UK)

That the top selling UK vehicles use 24% less fuel for each kilometre travelled than Australia's top selling vehicles should be of enormous concern to those concerned with

Australia's climate policies and cost-of-living. But the problem is likely far worse than it appears as the method used to measure the fuel efficiency of vehicles sold in Australia significantly understates the amount of fuel used.

The UK has recently adopted the World-harmonised Light Vehicle Testing Procedure (WLTP) to replace the now obsolete standard known as the New European Driving Cycle (NEDC)—which, coincidentally, is the basis for the fuel efficiency and emissions testing scheme used under Australian Design Rules 81/2 and 79/04. As an illustrative example, the Ford Ranger dual-cab diesel ute is a high-selling vehicle in both countries. In Australia, the Ford Ranger is described as having an average fuel economy of 7.2 litres of petrol per 100km whereas in the UK the same vehicle is described to potential customers as using 9.03 litres per 100km—a 27% disparity. On emissions, the difference for the Ford Ranger is similar at 26%, 191g/km reported in Australia compared to 237 g/km in the U.K.[6]

The disparity in the way that the UK (and most of Europe) measure the fuel efficiency and emission intensity of vehicles means that the data presented in Tables 1 and 2 are likely to significantly understate the extent of the difference in the fuel efficiency of top selling cars in Australia and the UK.

Over time, the repeated and continued differences in the fuel efficiency of new vehicle sales leads to Australia's fleet of vehicles being much less fuel efficient and more emissions intensive than it should be. This begs the question - why does Australia appear to have such an obsession with these vehicles?

WHY ARE UTES SO POPULAR IN AUSTRALIA?

Australians are often told that our collective preference for heavy, inefficient 4WD vehicles reflects our country's vast distances and harsh outback terrain—a narrative that is reinforced relentlessly by the way these vehicles are marketed. In reality, however, Australia is a highly urbanised country. The vast majority of vehicle use and fuel consumption occurs within our cities, and all of our major cities are connected by multi-lane highways.

But if Australian geography and transport patterns do not explain the national love for big, inefficient utes, what does? One answer can be found by looking at Australia's tax system—and particularly at the subsidies it provides for certain vehicle classes. In short, the Australian tax system is a major determinant of passenger and commercial

[6] Green Vehicle Guide (AUST), 2023, https://www.greenvehicleguide.gov.au/ and Vehicle Certification Agency (UK) 2023 https://www.smmt.co.uk/vehicle-data/car-registrations

vehicle choice and, in turn, has significant implications for trends in Australia's transport emissions.

Under current tax settings there are two incentives that work together to subsidise the purchases of new large dual-cab utes. The first incentive, the *Temporary Full Expensing* policy allows the purchase of new business assets, including motor vehicles, to be claimed as an immediate and full one-off tax-deductible expense.[7] For passenger vehicles the deduction is capped at around $60,000. However, for non-passenger vehicles, generally those that can carry at least one-tonne in payload, there is no limit to the deduction. The full cost of top-selling dual-cab utes can be written off instantly as an annual expense.

The second incentive works together with the first and is known as the *Loss Carry Back Tax Offset.* If the purchase of a new vehicle creates a net loss for a business, that loss can be applied to previous years' profits to reduce the tax already paid on those previous profits, resulting in a cash refund, reduced tax liability or a reduction in debt owed to the ATO.[8]

The policies work to encourage the sale of dual-cab utes—the $60,000 limit for conventional passenger vehicles does not apply, but a dual-cab ute can still function as a family or leisure vehicle. In addition, if the business owner is required to buy something/anything to claim an additional tax offset against previous profitable years, that something might as well be a big, expensive vehicle that can be easily, and happily, used outside the business.

[7] ATO, 2022, *Temporary full expensing,* https://www.ato.gov.au/Business/Depreciation-and-capital-expenses-and-allowances/Temporary-full-expensing/

[8] ATO, 2022, *Loss Carry Back Tax Offset,* https://www.ato.gov.au/business/loss-carry-back-tax-offset/

Impacts of improving fuel efficiency

If there is anything positive to take from the current situation, it is that changing Australia's car and light commercial purchase habits over time would be enough to create a significant economy-wide reduction in emissions.

Startlingly, as described in more detail below, a 24% reduction in emissions from Australia's fleet of passenger cars and light commercial vehicles—which would make the efficiency of Australia's fleet comparable to that of the UK—would equate to an 17% reduction of the country's total transport emissions, even if the emissions from the rest of the transport sector, mainly trucks, buses and motorcycles, remained unchanged.

It is important to note that matching the fleet efficiency of the UK would not give Australia the most fuel-efficient light vehicle fleet in the world; indeed, it would not even place in the top 10.

In following sections data from the Australian Bureau of Statistics (ABS), the Bureau of Infrastructure and Transport Research Economics (BITRE), Department of Climate Change, Energy, Environment and Water (DCCEEW), and the Australian Institute of Petroleum (AiP) are used to estimate the impacts on fuel consumption, transport emissions, and fuel security that would happen if Australia's vehicle fleet had similar fuel efficiency characteristics as the UK.

Lower fuel consumption

According to DCCEEW[9] and reported by BITRE,[10] Australian road transport emissions were 79.8 MT from 46,200 ML of fuel (petrol and diesel) in 2021-22. Of those 79.8 MT emissions, around 38.8Mt, or 49%, were from cars and SUVs, and 17.5 MT, or 22%, from light commercial vehicles. The remainder came from heavy trucks, buses, and motorcycles.

[9] DCCEEW, 2022, Australian *Petroleum Statistics,* https://www.energy.gov.au/publications/australian-petroleum-statistics-2022

[10] BITRE, 2022, *Australian Infrastructure and Transport Statistics - Yearbook 2022* https://www.bitre.gov.au/publications/2022/australian-infrastructure-and-transport-statistics-yearbook-2022

Assuming that the pattern of fuel consumption across cars, SUVs and light commercial vehicles is proportionally similar to emissions, the 46,200 ML of total fuel purchased in 2021-22 equates to 22,400 ML of fuel used in cars and SUVs, compared to 10,200 ML for light commercial vehicles. The remainder is used in heavy trucks, buses and motorcycles.

Combined with retail fuel price data from AiP,[11] this data suggests that in 2021-22 $56.6 billion was spent on fuel for Australia's fleet of cars, SUVs, and light commercial vehicles.[12] Table 3 summaries the emissions fuel use and expenditure by transport type.

Table 3: Emissions, fuel use and expenditure by road vehicle type, 2021-22

	Emissions (MT)	Implied Fuel Use (ML)	Estimated Expenditure at Retail Prices ($b)
Cars and SUVs	38.8	22,435	$39.0
Light Commercial	17.5	10,151	$17.6
Other	23.5	13,632	NA
Total	**79.8**	**46,217**	NA

Note: Expenditure on fuel by 'Other' is not estimated since different fuel prices apply to different vehicles types in this category via the Fuel Tax Credit scheme.
Source: Analysis of BITRE (2022) and AiP (2023)

If, on the other hand, Australia's LDV vehicle fleet had the same fuel efficiency as the U.K.'s, then fuel consumption and expenditure would be around 24% lower, at 24,700ML, or $43.0 billion: an annual saving of around 7,850 ML of fuel costing $13.6 billion a year based on 2022 retail prices. (Figure 4 and Table 4).

Table 4: Impacts of 24% improvement in fuel efficiency: cars, SUVs and light commercial vehicles

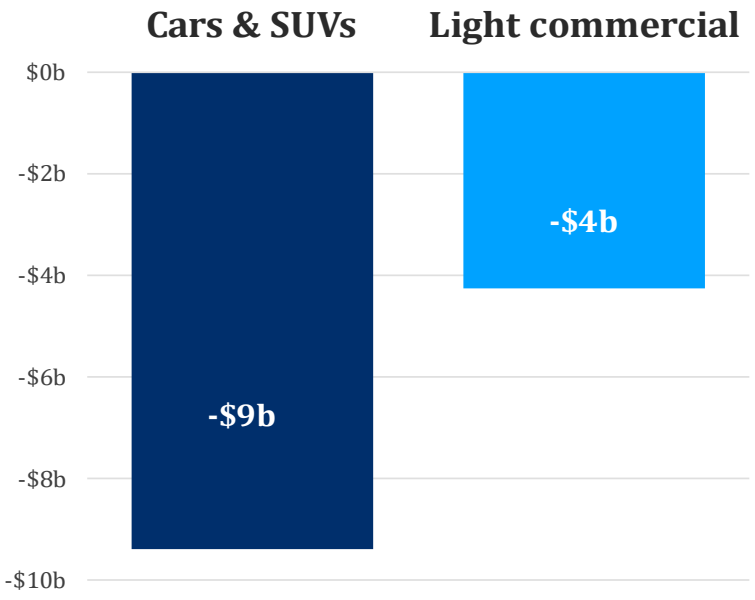
	Existing Fleet	With UK Fuel Economy	Change
Fuel use (ML)	32,585	24,734	-7,852
Fuel expenditure ($b)	$56.6	$43.0	-13.64
Emissions (MT)	56.29	42.73	-13.6

Source: Authors estimates using BITRE (2022) and AiP (2023)

[11] AIP, 2023, *AIP Annual Retail Price Data*, Ref https://www.aip.com.au/aip-annual-retail-price-data

[12] Assuming commercial users of light commercial vehicles do not have access to fuel tax credit scheme and pay the full retail price.

Figure 4: Annual fuel savings from a 24% improvement in fuel efficiency



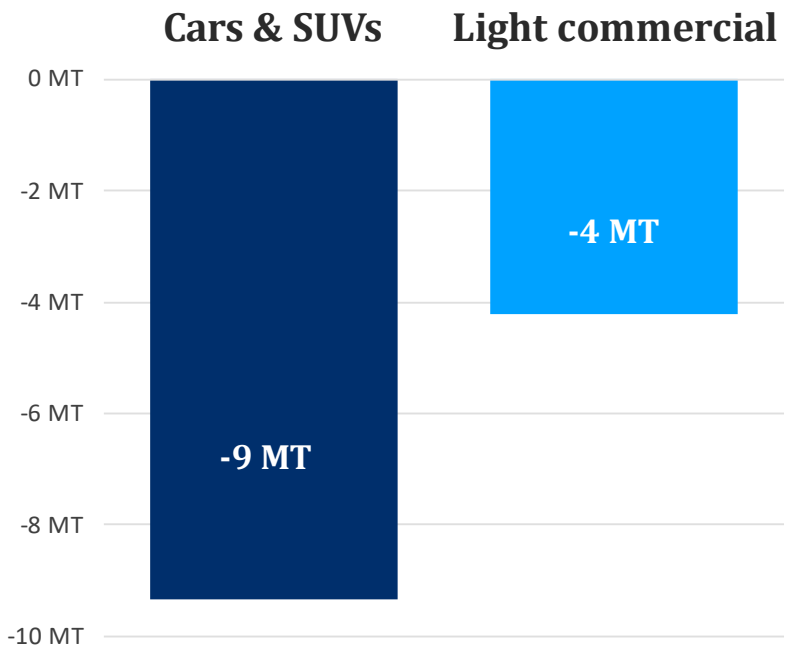
Source: Author's estimates using data from BITRE, ABS, and AiP

The reduction in fuel usage would lead to a similar approximate 24 per cent fall in emissions from LDV vehicles, from 56MT to 43MT, a 13.6MT a year fall in vehicle emissions (Figure 5).

Lower transport emissions

The reduction in fuel usage would lead to a similar approximate 24 per cent fall in emissions from LDV vehicles, from 56MT to 43MT, a 13.6MT a year fall in vehicle emissions (Figure 5).

Figure 5: Annual emissions reduction from a 24% improvement in fuel efficiency



Source: Author's estimates using data from BITRE, ABS, and AiP

The key point is that a 24% saving in fuel costs and emissions for cars and light commercial vehicles alone is the same as a 17% savings in economy-wide transport emissions, if there is no change in heavy vehicle emissions (Table 5). This shows that a significant reduction in emissions can be achieved just by changing the pattern of cars and light commercial sales towards moderately more efficient vehicles.

Table 5: Redcution in total transport emissions from cutting LDV emissions

	Current emissions 2022 (MT)	Improved LDV Efficiency (MT)	% change
Cars, SUVs, Light commercial	56.3	42.7	-24%
Other (trucks & buses)	23.5	23.5	0%
Total – Transport sector	79.8	66.3	-17%

Source: Author's estimates using data from BITRE, ABS, and AiP

The large potential savings in fuel use and emissions from simply emulating the passenger vehicle choices made in the UK – right-hand drive vehicles already in mass production – highlights that significant reductions in fuel costs and transport emissions can be achieved without radical policy changes.

Policies to drive electric passenger vehicle uptake, encourage the use of active transport, and electrify the state's bus fleets can deliver significant emission reductions as well as cleaner air and healthier cities. Nevertheless, by simply shifting the vehicle choice of Australian motorists towards more efficient vehicles already in mass production and use world-wide, including changes to the subsidies that motivate dual cab use purchases, Australia could substantially reduce emissions and increase fuel security.

Enhancing fuel security

An additional benefit of saving 7,850 ML of fuel a year is that it improves national fuel security. Under the new policy announced in November 2022, Australian refineries and major importers are required to hold minimum stocks of liquid fuels on shore in Australia; 24 days of petrol and 20 days of diesel. This will increase to 27 days for petrol and 32 days for diesel by 2024.[13]

There are two ways for Australia to meet these fuel security obligations: we can either build more storage capacity or reduce our daily usage of fuel. While policies to promote active and public transport or electric vehicles can play a major role in reducing daily fuel use, shifts in the composition of new car sales provides instant benefits to both car users (who save money on fuel) and economy-wide (by avoiding the need to build excessive fuel storage capacity).

Based on Australia's 2022 total fuel usage of 46,200 ML,[14] our daily fuel use is estimated to be 127 ML per day, implying a required current stockpile of just under 2,700 ML, increasing to just over 3,800ML by 2024.[15]

In order to demonstrate the significance of the efficiency of Australia's passenger vehicle fleet for our fuel security targets, if the efficiency of Australia's LDV fleet improved to that of the UK's, then the annual 7,850 ML of fuel saved would lower total fuel consumption to 38,370 ML, and daily consumption from 127ML down to 105ML – a 17 per cent reduction. In turn, this would mean that the current required stockpile of fuel of 2,700ML would be equivalent to 25.7 days of fuel use rather than the current 21.3 days associated with our current inefficient vehicle fleet (Table 6). Such an

[13] DCCEEW, 2022, *Australia's fuel reserves boosted to strengthen resilience and supply,* https://www.energy.gov.au/news-media/news/australias-fuel-reserves-boosted-strengthen-resilience-and-supply

[14] BITRE, 2022

[15] The underlying calculations account for the different holding requirements for petrol and diesel.

improvement of over four days in fuel security would account for almost half of the legislated required increase in storage capacity required by 2024.

Table 6: Fuel security impacts of improved fuel efficiency, ML

Fuel use	Existing Fleet	With UK Fuel Economy	% change
Cars, SUV, light commercial (ML/year)	32,585	24,734	-24%
Other Vehicles (ML/year)	13,632	13,632	0%
Total (ML/year)	46,217	38,365	-17%
Daily use (ML/day)	127	105	-17%
Current fuel reserve (ML)	2,700	2,700	
Days of supply	21.3	25.7	20%

Note: Numbers in text are reported at two significant figures

Source: Authors calculations

Whilst it would be impossible to improve Australia's LDV fleet fuel efficiency so quickly, the analysis presented above highlights that the dominance of heavy and inefficient vehicles in the pattern of vehicle purchases in Australia is not just a major driver of Australia's emissions growth, but of our lack of fuel security. Put another way, rather than spend billions of dollars building new, and dangerous, fuel storage facilities Australia could achieve significant increases in liquid fuel security at negative cost by simply pursuing rapid increase in the fuel efficiency of new passenger vehicles.

Conclusion and policy recommendations

Australians buy big dumb cars and that means we spend a lot more on petrol than we should. The fact that these cars stay on the road for a long time makes it harder to achieve our emission reduction targets. In addition, the fact that we want to have a stockpile of liquid fuels means that the more fuel we use, the more money we need to spend storing lots of fuel—and 2023 does not seem like the time to be spending money on liquid fuel storage.

While the need to hasten electrification and encourage a shift in transportation modes are clear, at the same time we need to shift the types of cars people buy. Doing so will save households, and the country, a lot on fuel expenditure and emissions, and ditching the subsidies for dual-cabs will save billions. It is hard to think of lower cost abatement policies.

Stemming from the analysis the policy recommendations are by no means new or innovative, apart from highlighting household savings that could occur if these fuel saving policies were put into place.

Following along the lines of the many who have suggested similar policies, such as Quicke,[16] PWC,[17] IEA,[18] Electric Vehicle Council,[19] Climate Council,[20] the policy recommendations run the spectrum of relatively simple to ambitious:

1. A switch to an improved emissions and fuel consumption test regime so consumers can make accurate purchasing decisions. The Australian testing regime is obsolete with off-the-shelf replacements readily available and in use around the world.

[16] Quicke, A., 2022, *Submission: National EV Strategy*, https://australiainstitute.org.au/report/submission-national-ev-strategy/

[17] PWC, 2020, *Australia's road to zero transport emissions,* https://www.pwc.com.au/government/government-matters/australias-road-to-zero-transport-emissions.html

[18] IEA, 2021, *Policies to promote electric vehicle deployment,* https://www.iea.org/reports/global-ev-outlook-2021/policies-to-promote-electric-vehicle-deployment

[19] Electric Vehicle Council, Various publications: https://electricvehiclecouncil.com.au/reports/

[20] Climate Council, 2017, *Transport Emissions: Driving Down Car Pollution in Cities,* https://www.climatecouncil.org.au/wp-content/uploads/2017/09/FactSheet-Transport.pdf

2. Legislated mandatory emissions and fuel consumption standards for all new vehicles, with perhaps a phase-in period for new and old commercial vehicles.
3. Reconfigure vehicle registration fees so they are calculated on emissions rather than weight, similar to the ACT policy,[21] and reconfigure the Luxury Car Tax to also account for emissions intensities, effectively making electric and hybrid vehicles low rego and luxury tax free.
4. If again extended, the *Temporary Full Expensing* and *Loss Carry Back Tax Offset* policies should be reconfigured towards low emissions purchases.
5. Governments, at all levels ideally, commit to electric vehicle fleets by 2030, thereby lowering the prices of these cars in the second-hand market.
6. Federal government look to extend the S*afeguard Mechanism* to include transport emissions.
7. Continued price incentives, subsidies, and discounts, in their various forms for electric and hybrid vehicles including encouragement to significantly expand the recharging network especially in regional areas.

[21] The Canberra Time, 2023, ACT registration system change to charge on emissions instead of weight will save motorists $6.6 million in four years, https://www.canberratimes.com.au/story/8068261/act-unveils-new-car-rego-scheme-promises-to-cut-fees-for-most-but-not-all-drivers/?cs=14329

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Luxury Car Tax and the ute loophole

Expensive utes are exempt from Luxury Car Tax, which cost more than $250 million in forgone revenue in 2023 and incentivises bigger and more harmful cars on our roads.

Jack Thrower
July 2024

INTRODUCTION

Even though the transport sector is the third largest source of Australian emissions and accounted for 21% of national emissions in 2023, the Australian Government continues to incentivise the sale of big utility vehicles (utes) relative to other car options.[i] Over the last twenty years, the number of utes on our roads has grown much faster than the number of passenger vehicles.

While utes are necessary to a range of occupations, their proliferation, particularly of larger heavier models, damages the environment, damages roads, and incurs a range of other costs on society.[ii] A key example of this incentivisation is an exemption from Luxury Car Tax (LCT), which applies to essentially all utes.

WHAT IS LUXURY CAR TAX?

Luxury Car Tax (LCT) was introduced in the year 2000 under the Howard Government, replacing similar taxes on luxury cars that were abolished as part of the introduction of the Goods and Services Tax (GST). The LCT and its predecessors have been justified on various grounds, such as helping promote an Australian car industry, generating revenue from wealthier people, and curbing consumption of luxury goods.

How does it work?

In simple terms, LCT must be paid on the sale or importation of a car that is valued above the LCT threshold. These thresholds are updated every year by the Australian Tax Office (ATO). For the financial year 2024-25, the standard threshold is $80,576. A higher threshold is applied for fuel efficient vehicles, such as electric vehicles and hybrids, this threshold is $91,387 for 2024-25.[iii] The rate of the tax is 33%, this is applied to the value of the car above the LCT threshold, and a formula is applied to subtract the value of GST from the car's price.

How much does it raise?

In 2023-24 the LCT is estimated to raise about $1.3 billion. While this does not constitute one of Australia's major taxes, it is a considerable amount of revenue, about as much as the Commonwealth Government annually spends on the ABC ($1.25 billion in 2023-24).[iv]

THE UTE LOOPHOLE

Unfortunately, there is a large loophole in the LCT system, as written by one of Australia's most popular automotive news websites (drive.com.au):

> Does LCT apply to utes? No, every ute available in Australia – including dual-cab utes – is exempt from paying LCT due to a loophole in how a vehicle's "principal purpose" is determined.[v]

This is because LCT does not apply if the car is "a commercial vehicle designed mainly for carrying goods and not passengers".[vi] This exemption is defined broadly, so if a ute can carry twice the weight in payload that it can carry in people, it is exempt from paying LCT. As reported by drive.com.au, this test is easy to pass, meaning that "[e]ssentially every dual-cab ute on the market in 2024 has this tax-exempt payload, including the Jeep Gladiator, which has a low 693kg payload."[vii] There is no requirement to demonstrate that the car is being purchased or used for primarily commercial rather than personal use.

HOW DOES THIS INCENTIVISE BUYING UTES?

This difference in tax treatment incentivises people to buy utes because it significantly affects the relative price of utes compared to other expensive cars. For instance, take an example of two similarly priced cars:

- 2024 Mercedes-Benz E350 EQ (Hybrid), rear wheel drive 4 Door Sedan:
    - Starting cost $133,370, before on-road costs.[viii]
- 2024 Chevrolet Silverado 1500 ZR2, four-wheel drive Crew Cab Pick Up:

- Starting cost $138,000, before on-road costs.[ix]

The Mercedes hybrid has a starting cost nearly $5,000 lower than the Chevrolet ute. However, a buyer of the Mercedes will incur an additional $15,841 in LCT, bringing its total cost to $149,211, or $11,211 more than the ute.[x] This underestimates the impact of the LCT, as LCT would also apply to additional costs such as dealer delivery charges.

Even if the purchaser chose an electric alternative, making it eligible for the higher fuel efficiency threshold, the LCT would still likely make the ute cheaper. For instance, if the purchaser chose the 2024 Mercedes-Benz EQE 300 (costing $133,575 before on-road costs),[xi] the ute would still be at least $8,231.40 cheaper.

This loophole incentivises people to buy expensive utes instead of expensive smaller cars, including fuel efficient and electric cars. Notably in the above example, the Chevrolet's fuel economy is 14.5 litres per 100km,[xii] more than double the current fuel-efficient car definition (7 litres per 100 kilometres[xiii]), which is itself already generous and is currently being tightened. This is also considerably higher than other cheaper and more fuel-efficient utes.[xiv] Additionally, as the size and weight of utes generally correlates with their price, this exemption provides greater incentives for larger and heavier vehicles.

WHAT IMPACT DOES THIS HAVE?

How much does this loophole cost?

While the Treasury annually calculates the cost of other tax exemptions, such as the exemption of fresh fruit and vegetables from GST, there is no government measure of the cost or distributional impact of the ute exemption. Publicly available data indicates that a considerable number of utes are likely exempt from LCT each year, notably many of the 2023 best-selling utes have model variants whose cost exceeds the LCT threshold (such as the Ford Ranger and Toyota HiLux).[xv]

Most of the cost of this exemption will relate to large, expensive utes, such as those produced by Ram and Chevrolet.[xvi] The price of these vehicles magnifies the impact of their exemption from LCT. For instance, the 2024 Ram 1500 TRX Final Edition (4x4) is priced at $249,950 before on-road costs, and avoids more than $50k in tax due to its exemption from LCT.[xvii] According to our estimates, based on simplifying assumptions outlined in the appendix, the LCT ute exemption led to over $250 million in foregone revenue in 2023, almost three-quarters of which was due to sales of Ram and Chevrolet vehicles. Notably these huge vehicles, categorised as 'full-size 4X4 utes', are one of the fastest growing market segments, growing by 21.4% in 2023.[xviii]

Non-luxury utes, used by most tradies, sit below the LCT threshold. This means that removal of the LCT ute exemption would not affect most ute drivers, while discouraging non-work related purchases of more expensive, damaging vehicles.

Which other policies have encouraged these vehicles?

Government policies have facilitated an explosion in the prevalence of utes over recent decades. From 2001 to 2021 the number of passenger vehicles grew by half, while the number of light commercial vehicles (a category that overwhelmingly represents utes) doubled.[xix] In 1999, there were about 5.6 passenger vehicles for every light commercial vehicle, whereas in 2023, there were only 3.9.[xx]

In addition to the LCT exemption, a range of policies have encouraged the growth of large, expensive utes. These have included ongoing exemptions from Fringe Benefits Tax, road and parking regulations, and the under-pricing of road damage and carbon emissions and the now-expired Morrison Government's "Temporary Full Expensing" and the "Loss Carry Back" tax offset.[xxi] These policies sit alongside general disregard for investment in public or active transport and varied state and territory approaches to taxing or incentivising the purchase of electric or hybrid vehicles.

Reforming these policies would not only curb the growth in polluting utes, but would free up resources to help decarbonise transport. For instance, the $250 million of foregone LCT revenue in 2023, is ten times greater than the cost of the Commonwealth Government's *Active Transport Fund* for 2025-26, designed to assist the states and territories to construct or upgrade bicycle paths. The cost of this fund is projected at $80 million over three financial years from 2025-26 to 2027-28 with $25 million earmarked for the first year.[xxii] More sensible government policies would properly tax what we want less of, larger and more harmful vehicles, and subsidise what we want more of: measures to accelerate the climate transition.

CONCLUSION

Large vehicles impose considerable costs on society, from their higher carbon emissions and rates of road damage to serious safety concerns. The Australian Government should ensure that these costs are accounted for by properly taxing and regulating these vehicles, starting with removing the LCT exemption for utes. These policies would curb the growth in expensive and damaging vehicles in Australia and limit the use of utes to legitimate commercial purposes rather than personal luxuries.

APPENDIX: LCT COST METHODOLOGY

The estimate of $250 million in foregone LCT revenue was calculated as follows.

Data sources

- **2023 ute sales numbers**: are sourced from VFACTS, as quoted by CarExpert,[xxiii] this broke down the best 20 selling utes by make and model. Data is not available on sales numbers by variant/trim.
- **Car prices**: the price of each is taken from CarsGuide,[xxiv] prices are assumed to equal the currently listed prices for the 2024 model, as using current data on 2023 models leads to less reliable and consistent data.

Adjustment to prices

- $2,000 of on-road costs is added to each vehicle as prices listed are Manufacturer's Suggested Retail Price, which does not include fees such as dealer delivery charges which are included in the value for LCT purposes.

Calculation

- LCT theoretically payable on each sale is calculated using the ATO formula.[xxv]
- Total LCT payable is calculated by multiplying the total sale numbers of each trim by the LCT payable on each trim.
- This results in total LCT payable of about $321 million, this is adjusted down to 'over $250 million' to ensure figures are highly conservative and to account for lack of data on proportion of sales of each variant/trim, which would affect the cost of the car.

Assumptions

- As data is not available on specific sales of each variant/trim, each variant/trim is assumed to sell equal numbers of units.
- LCT threshold assumed to be $74,399.50, the average of the rates for 2022-23 and 2023-24, this is conservative as the first half of the year usually includes disproportionate sales as it includes end of financial year.

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[i] Department of Infrastructure, Transport, Regional Development, Communications and the Arts (n.d.) *Towards net zero for transport and infrastructure*, https://www.infrastructure.gov.au/infrastructure-transport-vehicles/towards-net-zero-transport-and-infrastructure#:~:text=Australia's%20transport%20sector%20is%20the,largest%20in%20Australia%20by%202030.

[ii] Thrower (2024) *SUVs and utes are no longer just work vehicles, but tax-subsidised behemoths*, https://australiainstitute.org.au/post/suvs-and-utes-are-no-longer-just-work-vehicles-but-tax-subsidised-behemoths/

[iii] The Government's definition of a fuel-efficient vehicles will be tightened from 7 litres to 3.5 litres per 100km.

[iv] Australian Government, *Budget 2024-25: Budget strategy and outlook: Budget paper no. 1*, https://budget.gov.au/content/bp1/download/bp1_2024-25.pdf

[v] Drive (2024) *Does the luxury car tax apply to utes?*, https://www.drive.com.au/caradvice/does-lct-apply-to-utes/

[vi] Australian Tax Office (2024) *When luxury car tax doesn't apply*, https://www.ato.gov.au/businesses-and-organisations/gst-excise-and-indirect-taxes/luxury-car-tax/when-lct-doesn-t-apply

[vii] Drive (2024) *Does the luxury car tax apply to utes?*

[viii] CarExpert (2024) *Mercedes-Benz E350 EQ (HYBRID) Price and Spec*, https://web.archive.org/web/20240711012119/https://www.carexpert.com.au/mercedes-benz/e-class/2024-eq-hybrid-1514806d

[ix] CarExpert (2024) *2024 Chevrolet Silverado 1500 ZR2*, https://web.archive.org/web/20240711012942/https://www.carexpert.com.au/chevrolet/silverado/2024-1500-zr2-6a95b9e1

[x] Rounded to the nearest dollar.

[xi] CarExpert (2024) *Mercedes-Benz EQE 300 Price and Spec*, https://web.archive.org/web/20240711013045/https://www.carexpert.com.au/mercedes-benz/e-class/2024-300-e7c60eec

[xii] CarExpert (2024) *2024 Chevrolet Silverado 1500 price and specs*, https://www.carexpert.com.au/car-news/2024-chevrolet-silverado-1500-price-and-specs

[xiii] Green Vehicle Guide (2024) *Frequently Asked Questions*, The Australian Government, https://www.greenvehicleguide.gov.au/pages/About/FAQ

[xiv] Drive (2024) *The 10 most fuel-efficient dual-cab utes in Australia*, https://www.drive.com.au/caradvice/most-fuel-efficient-ute-in-australia-2024/

[xv] CarExpert (2024) *VFACTS: The best-selling utes in Australia in 2023*, https://www.carexpert.com.au/car-news/vfacts-the-best-selling-utes-in-australia-in-2023

[xvi] CarExpert (2024) *VFACTS: The best-selling utes in Australia in 2023*

[xvii] CarSales (2024) *2024 RAM 1500 TRX Final Edition priced at a premium*, https://www.carsales.com.au/editorial/details/2024-ram-1500-trx-final-edition-priced-at-a-premium-145638/

[xviii] CarSales (2024) VFACTS *2023: Car industry breaks all-time sales record*, https://www.carsales.com.au/editorial/details/vfacts-2023-car-industry-breaks-all-time-sales-record-143992/

[xix] Australian Bureau of Statistics (2001) *Motor Vehicle Census, Australia, March 2001* https://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/9309.0Mar%202001?OpenDocument; Australian Bureau of Statistics (2021) *Motor Vehicle Census, Australia, January 2021* https://www.abs.gov.au/statistics/industry/tourism-and-transport/motor-vehicle-census-australia/31-jan-2021

[xx] Australian Bureau of Statistics (2001) *Motor Vehicle Census, Australia, March 2001*; Department of Infrastracture, Transport, Regional Development, Communications and the Arts (2023) *Road Vehicles, Australia, January 2023*, https://www.bitre.gov.au/publications/2023/road-vehicles-australia-january-2023

[xxi] Saunders and Grudnoff (2023) *In reverse: The wrong way to fuel savings and falling transport emissions*, https://australiainstitute.org.au/post/suvs-driving-substantial-transport-pollution-research-report/

[xxii] Australian Government, *Budget 2024-25: Federal Financial Relations: Budget paper no. 3*, https://budget.gov.au/content/bp3/download/bp3_2024-25.pdf

[xxiii] CarExpert (2024) *VFACTS: The best-selling utes in Australia in 2023*

[xxiv] CarsGuide (n.d.) *Homepage*, https://www.carsguide.com.au/

[xxv] Australian Taxation Office (2024) *Working out the LCT on a sale*, https://www.ato.gov.au/businesses-and-organisations/gst-excise-and-indirect-taxes/luxury-car-tax/working-out-the-lct-amount/working-out-the-lct-on-a-sale

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Submission: National EV Strategy

Australia's National Electric Vehicle Strategy is an opportunity to increase the supply of affordable electric vehicles for Australians and phase out the sale of internal combustion engine vehicles. It should be accompanied by a broader transport decarbonisation strategy, include the introduction of strong fuel efficiency standards and targeted subsidies for electric vehicles, e-bikes and micromobility options, and remove incentives for fossil fuelled vehicles.

Audrey Quicke

October 2022

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Level 1, Endeavour House, 1 Franklin St
Canberra, ACT 2601
Tel: (02) 61300530
Email: mail@australiainstitute.org.au
Website: www.australiainstitute.org.au
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Contents

Introduction

The Australia Institute welcomes the introduction of the National Electric Vehicle (EV) Strategy and the opportunity to comment on the proposed goals, objectives and actions.

Combatting and avoiding the worst impacts of climate change requires steep and immediate reductions in global greenhouse gas emissions. Transport is a major source of emissions both globally and in Australia and must therefore be at the forefront of strategies to decarbonise our economy. Transport is Australia's third highest emitting sector, and the sector where emissions have increased most since 1990. The vast majority of Australia's transport emissions (85%) come from road transport and just under half (44%) from private passenger vehicles alone.[1]

Significantly reducing transport emissions is technically and economically feasible. While some sectors of the Australian economy will be harder to abate, solutions and technologies necessary to decarbonise transport have been successfully adopted across the world. With rapid policy intervention and Government support, the transport sector could reach near zero emissions by 2050.

For too long, Australia has had no nationally co-ordinated plan to reduce transport emissions. To achieve legislated emissions reductions targets, major changes, supported by Government action, will be necessary. These include reducing or avoiding transport by improving the efficiency of the transport system as a whole, shifting from energy intensive and highly polluting transport modes (privately owned cars) towards more environmentally friendly options (public transport, bicycles, micro mobility and walking), and improving vehicle and fuel efficiency. Not only will these changes results in emissions reductions, they could reduce the cost of living for many Australians, improve health outcomes and public spaces, and create new industries and high-quality jobs.

A national EV strategy is a necessary step towards realising this new transport system. EVs are described by the International Council for Clean Transportation as 'the single most important technology for decarbonizing the transport sector'.[2] Yet current policy settings have failed to secure supply of affordable EVs for Australians. Federal Government leadership, policy and funding is needed to fast track the uptake of EVs and phase out the sale of internal combustion engine (ICE) vehicles.

[1] Australian Government (2020) National Inventory Report, https://www.industry.gov.au/data-andpublications/national-inventory-reports

[2] ICCT (2020) *A Strategy to Decarbonize the Global Transport Sector by Mid-Century,* https://theicct.org/sites/default/files/publications/ICCT_Vision2050_sept2020.pdf

However, the development of Australia's National EV Strategy should sit within a broader clean transport plan. Australian's love affair with large vehicles, compounded with slow fleet turn over, constrain efforts to reduce emissions, even as EV sales increase. Efforts to electrify passenger vehicles will need to be accompanied by efforts to reduce car dependency and stop incentives and loopholes that favour large sports utility vehicles (SUVs) and utes.

Being a late-mover to EV technology, Australia has the benefit of hindsight. Australia's EV strategy should be informed by international experience, modelled on successful international policies, and learn from their pitfalls. Fuel efficiency standards have been adopted in approximately 80% of the global light vehicle market[3] and would significantly reduce transport emissions, while encouraging manufactures to bring affordable EV models to Australia and reduce fuel cost for Australian motorists. The introduction of mandatory fuel efficiency standards is a pivotal part of the national EV strategy, and can be modelled on successful overseas standards.

The Australia Institute's Climate of the Nation 2022 report shows that many of the policies needed to decarbonise transport and increase EV uptake are supported by the vast majority of Australians. (see separate attachment)

The Australia's Institute's main recommendations and responses to the consultation questions are below.

MAIN RECOMMENDATIONS

- **Introduce fuel efficiency standards**: These should be implemented as soon as possible – aiming for 100% of vehicle sales being electric by 2030 or 2035 at the latest and have integrity – be informed by independent emissions data with no loopholes for heavy vehicles or particular manufacturers.
- **Implement a transport decarbonisation strategy**: Alongside the EV strategy, Australia should have a national transport decarbonisation policy – including freight transport, active transport, etc. This should include a transport decarbonisation target, which could form part of Australia's Nationally Determined Contribution (NDC) under the Paris Agreement.
- **Regularly review and update the EV Strategy and targets:** Transport technology is developing at a rapid pace, as is the understanding of how best to reduce transport emissions. In particular, vehicle automation, V2X technology, and battery recycling, are

[3] Department of Infrastructure, Transport, Regional Development, Communications and the Arts (2021) *Fuel Efficiency Standards*, https://www.infrastructure.gov.au/infrastructure-transport-vehicles/vehicles/fuel-efficiency-standards

constantly progressing. As such, Australia's EV strategy should be flexible and responsive to these changes by providing for review periods of at least 5 years. Additionally, targets, such as fuel efficiency standards, should be regularly assessed and updated.

- **Conduct an audit of transport regulation and data collection by 2024:** Currently, Australia's transport policy straddles multiple federal departments and offices. An audit would identify the existing responsibilities and capacities of different departments and identify where closer collaboration or additional funding is necessary in order to streamline transport regulation and data collection.

- **Put equity front and centre:** Monitor the equity impacts of EV policy and the resulting distribution of EV uptake. Structure policies to ensure that low-income households and individuals can access EVs, eg. targeting subsidies at low-income households and making subsidies available at point of sale rather, than as post-sale rebates. Consider the establishment of a regional EV strategy, to ensure than regional areas are not left behind, and to address the obstacles to EV adoption that are unique to the regional context.

- **Provide targeted subsidies for EVs:** Provide temporary and targeted subsidies for EVs, targeted at low-income households.

- **Provide subsidies for e-bikes:** Provide subsidies for micro mobility options such as e-bikes. Consider a car scrapping program similar to those in Finland and France, where older, high-emitting vehicles could be traded-in, in exchange for a discounted EV or e-bike, or for free public transportation.

- **Stop incentives for fossil fuelled vehicles**: Remove the instant asset write-off provisions for commercial vehicles that subsidise heavy vehicles and utes for small business owners. Modify the Fuel Tax Credit scheme to remove or cap large incentives for diesel use, particularly in the mining industry.

- **Propose new funding for electric bus procurement:** All State bus fleets should be zero emissions buses by 2030. To assist, the Federal Government should propose new funding models for electric bus procurement and depot/charging infrastructure to address high upfront costs and risks associated with procurement.

- **Consider a feebate system:** If designed carefully, feebate systems can be a cost-neutral method of disincentivising higher emitting vehicles and incentivising lower emitting vehicles, thereby reducing passenger vehicle emissions. Consider the introduction of a feebate system similar to France's Bonus Malus and New Zealand's Clean Car Discount.

- **Change the Luxury Car Tax (LCT) definition of 'fuel efficient' vehicles:** Change the definition of a fuel-efficient vehicle under the LCT from 7L/100km to 0L/100km.

- **Expand the Commonwealth fleet target:** This should be expanded from the current target of 75% of Commonwealth vehicles being EVs by 2025 to 100% by 2030. Plug-in Hybrid EVs (PHEVs) should be excluded from this target.

- **Explore further revenue options:** Explore policy changes that increase government revenue while decreasing transport emissions. For example, the Australia Institute has proposed changes to the Safeguard Mechanism that introduce a voluntary, fixed-price polluter-payment of $25 a tonne. This would raise billions for the Commonwealth to direct to industry policy to build climate solutions including battery or electric bus manufacturing. Additionally, consider the changes to the LCT, a cost-neutral feebate system, and the removal of tax incentives for utes outlined above.

- **National charging infrastructure network integrated with the electricity grid:** Continue to invest in national charging infrastructure while expanding the capacity of the electricity grid and increasing the supply of renewable electricity.

- **Integrate EV and transport policy into Australia's liquid fuel security framework:** Demand side solutions to Australia's liquid fuel security, including fuel efficiency standards, EV uptake and mode shifting should be considered as part of the national response to fuel security. The Final Liquid Fuel Security Review should consider these measures and be released by as soon as possible.

- **Develop a tripartite council of government, unions and industry to accelerate domestic manufacturing**: As recommended by AMWU National Secretary Steve Murphy at the National EV Summit, a National Innovation Council would accelerate the uptake of EVs and co-ordinate industry policy, jobs, skills and training.

- **Leapfrog hybrids:** Emissions associated with PHEVs are highly dependent how they are charged and driven. PHEVs only reduce emissions if charged enough to be predominantly driven using the battery alone. For this reason, they should not receive public funding. PHEVs should be removed from the Clean Car Discount policy. The Commonwealth fleet should target 'zero emissions vehicles' instead of 'low emissions vehicles', excluding PHEVs. If fuel efficiency standards are introduced, hybrids should not receive any super credits or additional support.

Responses to consultation questions:

STRATEGY FRAMEWORK

Core objectives and goals

1. **Do you agree with the objectives and do you think they will achieve our proposed goals? Are there other objectives we should consider?**

The Australia Institute broadly supports the five core goals – making EVs more affordable, expanding EV uptake and choice, reducing emissions, saving Australians money on fuel, and increasing local manufacturing – and the three objectives to meet them – encourage rapid increase in demand for EVs, increase supply of affordable and accessible EVs to meet demand across all segments, establish the systems and infrastructure to enable the rapid uptake of EVs.

However, there is no goal to ensure an equitable transition to EVs, and it is unclear how the objectives would help meet the goal of increasing local manufacturing. Consider adding:

- 'Ensure that disadvantaged communities participate and benefit from the transition to EVs' as a core goal,
- 'Develop a coordinated industry policy for EV manufacturing' as an objective,
- a reference to 'powered by 100% renewable energy' to the final objective,
- and a reference to 'increasing fuel security' in addition to saving Australians money on fuel.

Additionally, only three barriers are identified – limited availability of affordable EVs, range anxiety and information. Another barrier to EV adoption in Australia is the current tax incentives that encourage the purchase of SUVs and utes.

In addition to the EV Strategy, a transport decarbonisation strategy should be developed. This would create an overarching framework for decarbonising the whole transport sector, including freight transport, and promote alternatives to private vehicle travel, including active transport and a national regulatory framework for Mobility-as-a-service.[4] It should include a transport decarbonisation target, that could form part of Australia's NDC under the Paris Agreement.

- The Australia Institute's Climate of the Nation 2022 shows:

[4] Quicke (2021) *Finland's Mobility as a Service Legislation, https://d3n8a8pro7vhmx.cloudfront.net/theausinstitute/pages/3938/attachments/original/1642042201/NPC_Factsheet_MaaS__WEB_.pdf?1642042201*

- 69% of Australians support the introduction of a transport decarbonisation strategy.
- 75% agree that the Australian Government should set industry-specific (i.e. transportation, agriculture, etc.) targets for reducing emissions.[5]

Implications of a delayed EV transition

2. What are the implications if other countries accelerate EV uptake faster than Australia?

Australia has become a dumping ground for inefficient vehicles due to the lack of fuel efficiency standards, and now has access to fewer EV models compared to other jurisdictions. If this continues, it will hamper efforts to bring affordable EV models to the Australian market.

Additionally, if Australia does not accelerate EV uptake, it will be difficult to achieve national emissions reductions targets. Transport sector emissions could be reduced to near zero with limited use of offsets for unavoidable transport emissions, if strong policy action is taken.[6]

Suitable indicators to measure progress

3. What are suitable indicators to measure if we are on track to achieve our goals and objectives?

Transport emissions: Set emission reductions targets for the whole transport sector and consider including these targets as part of Australia's NDC. Currently, 98% of country NDC's mention transport, but only 18% set transport CO_2 reduction targets.[7]

Electrification of public transport and passenger EVs: Target 100% of Australia's public bus fleets being electric by 2030, and target 100% of new passenger vehicle sales being electric by 2030 or 2035 at the latest.

EV affordability: Set targets for the number of EVs under particular price points, e.g., $40,000, and monitor the price parity of EVs and ICE vehicles in the Australian market.

[5] Quicke and Venketasubramanian (2022) *Climate of the Nation 2022,* https://australiainstitute.org.au/report/climate-of-the-nation-2022/

[6] Whitehead et al (2022) *FACTS: A Framework for an Australian Clean Transport Strategy,* https://transportfacts.org/wp-content/uploads/2022/06/FACTS-a-Framework-for-an-Australian-Clean-Transport-Strategy-2022.pdf

[7] International Transport Forum (n.d) *How serious are countries about decarbonising transport?*, https://www.itf-oecd.org/ndc-tracker/en

Charging infrastructure: Set national targets for the number of fast charging stations per kilometre on arterial routes and in urban areas, similar to targets set in Norway[8] and NSW[9], and ensure households in areas with limited off-street parking have close access to fast charging stations.

Commonwealth fleet electrification: Increase the Commonwealth fleet target to 100% EVs by 2030. This should only include zero emissions vehicles, not 'low emissions vehicles'.

Fleet turn over: Noting that fleet electrification is constrained by slow fleet turn over, monitor the dynamics of the whole fleet, including the percentage of vehicle kilometres travelled by EVs.

Domestic manufacturing: Set a target for the percentage of new vehicles sales that are domestically manufactured.

Equity: Measure the distribution of public subsidies for EVs and consider accessibility indicators to assess equity impacts.

Measures to increase affordability and accessibility

4. Are there other measures by governments and industry that could increase affordability and accessibility of EVs to help drive demand?

Direct financial incentives or subsidies are one of the most effective policies to drive EV uptake. According to the Bloomberg Policy Scorecard, "Policies lowering the upfront costs have been the most effective tool for driving early-stage adoption of passenger EVs and are offered in most G20 countries."[10] Government should consider targeted and temporary subsidies to assist with the purchase of an EV, e-motorbike or e-bike, helping bridge the price gap with ICE vehicles.

Additionally, a vehicle replacement program should be considered, to increase EV and e-bike uptake and accelerate the retirement of inefficient ICE vehicles.[11] Vehicle replacement programs achieve the biggest environmental benefit if they are limited to battery electric

[8] Quicke and Armistead (2020) *Ending the ICE age, Norway's plan to end internal combustion engine vehicles sales by 2025,* https://australiainstitute.org.au/wp-content/uploads/2020/12/P975-Norway-Australia-EV-policies-WEB.pdf

[9] NSW Government (2022) *NSW Electric Vehicle Strategy*, https://www.energy.nsw.gov.au/sites/default/files/2022-09/nsw-electric-vehicle-strategy-210225.pdf

[10] Bloomberg New Energy Finance (2021) G20 Zero-Carbon Policy Scoreboard, p 24. https://assets.bbhub.io/professional/sites/24/BNEF-G20-Zero-Carbon-Policy-Scoreboard-EXEC-SUM.pdf

[11] Naumov, Keith & Sterman (2022) *Accelerating vehicle fleet turnover to achieve sustainable mobility goals*, https://onlinelibrary.wiley.com/doi/10.1002/joom.1173

vehicles only (as opposed to 'low emissions vehicles').[12] Both Finland and France have used car scrapping schemes to incentivise mode shift, buy providing grants for motorists switching to electric vehicles, e-bikes or – in the case of Finland – public transport.[13]

Financial support from the Federal Government is also needed to transition to electric bus fleets by 2030. Electric buses are economically viable and operating internationally, yet just 0.1% of Australia's buses are electric.[14] The Government should propose new funding models to address higher upfront costs and risk associated with procurement of electric buses and establishment of electric depots and charging infrastructure.

The introduction of a Feebate system, similar to those in France and New Zealand, should be considered. A properly designed feebate system would be cost neutral, as the buyers of the dirtiest vehicles subsidise the buyers of the cleanest. The fee or rebate is benchmarked against a standard, so the cleaner the vehicle the higher the rebate, and the dirtier the vehicle the higher the fee (described in further below).

Vehicle replacement programs achieve the biggest environmental benefit if they are limited to battery EVs only.[15]

- The Australia Institute's Climate of the Nation 2022 shows:
    - 75% of Australians support Government subsidies to reduce electric vehicle purchase cost.
    - 75% support electrifying state bus fleets by 2030.
    - 74% support state governments buying or leasing only electric buses from 2025.

[12] Bieker and Mock (2020) *Green vehicle replacement programs as a response to the COVID-19 crisis: Lessons learnt from past programs and guidelines for the future*, https://theicct.org/sites/default/files/publications/Vehicle-replacement-programs-COVID-Jun2020.pdf

[13] Finland Ministry of Transport and Communications (2021) *Roadmap to fossil-free transport*, https://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/163260/LVM_2021_19.pdf?sequence=1&isAllowed=y;
Reuters (2021) *Trading clunkers for electric bikes: France moves to offer financial incentive*, https://www.reuters.com/technology/trading-clunkers-electric-bikes-france-moves-offer-financial-incentive-2021-04-11/

[14] Thomson (2022) *'Low-hanging fruit': States lack ambition in energy transition, bus industry says*, https://www.smh.com.au/business/entrepreneurship/low-hanging-fruit-states-lack-ambition-in-energy-transition-bus-industry-says-20221007-p5bny5.html

[15] Bieker and Mock (2020) *Green vehicle replacement programs as a response to the COVID-19 crisis: Lessons learnt from past programs and guidelines for the future*, https://theicct.org/sites/default/files/publications/Vehicle-replacement-programs-COVID-Jun2020.pdf

- 79% support having the Australian Government provide funding to help bus drivers and mechanics transition to use electric buses.[16]

Low emissions vehicles

5. Over what timeframe should we be incentivising low emission vehicles as we transition to zero emission vehicles?

The Australian Government should focus incentives on zero emissions vehicles, excluding low emissions vehicles.

Emissions associated with PHEVs are highly dependent how the vehicle is charged and driven. PHEVs only reduce emissions compared to an ICE if charged enough to be predominantly driven using the battery alone, resulting in considerable gaps between real-world emissions values and reported emissions values for PHEVs.[17]

PHEVs should be removed from the Clean Car Discount policy. The Commonwealth fleet should target 'zero emissions vehicles' instead of 'low emissions vehicles', excluding PHEVs. If fuel efficiency standards are introduced, hybrids should not receive any super credits or additional support.

Lessons can be learnt from countries including Germany that are currently cutting subsidies for PHEVs on the basis that they no longer require public financing,[18] and jurisdictions that are phasing out the sale of new cars with internal combustion engines (including PHEVs), such as the ACT[19] and the European Union.[20]

Access to information

6. What information could help increase demand and is Government or industry best placed to inform Australians about EVs?

[16] Quicke and Venketasubramania (2022) *Climate of the Nation 2022,* https://australiainstitute.org.au/report/climate-of-the-nation-2022/

[17] Plotz et al (2020) *Real-world usage of plug-in hybrid electric vehicles: fuel consumption, electric driving, and CO2 emissions,* https://theicct.org/publication/real-world-usage-of-plug-in-hybrid-electric-vehicles-fuel-consumption-electric-driving-and-co2-emissions/

[18] Meza (2022) *Germany to end subsidies for plug-in hybrids earlier than planned,* https://thedriven.io/2022/04/20/germany-to-end-subsidies-for-plug-in-hybrids-earlier-than-planned/

[19] Lindell (2022) New internal combustion engine cars, light trucks will be banned in ACT from 2035 as part of electric transition, https://www.canberratimes.com.au/story/7822512/act-sets-date-forban-on-new-fossil-fuel-cars/

[20] France24 (2022) *EU strikes deal to ban consumption-engine cars by 2035,* https://www.france24.com/en/live-news/20221028-eu-strikes-deal-to-ban-combustion-engine-cars-by-2035

Currently, Australia's transport policy straddles multiple federal departments and offices. The Government should consider conducting an audit of transport regulation and data to establish the delineated responsibilities and capacities of different departments and identify where closer collaboration or additional funding is necessary in order to streamline transport regulation and data collection.

As EV policy develops, co-ordination of different state, territory and federal policy will become increasing important. The National Transport Commission (NTC) are tasked with interjurisdictional coordination of transport policy and as such, increased funding to the NTC should be considered.

Additionally, Government should provide data on EV sales and emissions independent from industry.

FUEL EFFICIENCY STANDARDS

Impact of fuel efficiency standards

7. Are vehicle fuel efficiency standards an effective mechanism to reduce passenger and light commercial fleet emissions?

Fuel efficiency standards are an effective mechanism to reduce fleet emissions. Mandatory fuel efficiency standards for new vehicles in the Australian market would also provide substantial benefits to consumers by way of lower fuel costs and increased access to EV models. Standards would reduce greenhouse gas emissions from the light motor vehicle fleet and improve Australia's fuel security by decreasing the transport sector's reliance on imported oil.

Australia Institute research finds that if fuel efficiency standards had been introduced in 2016:

- 9 million tonnes of CO_2 would have been prevented – similar to one year's worth of emissions from domestic aviation,
- $5.9 billion in fuel costs would have been saved, and
- 4000 megalitres of imported fuel could have been avoided.[21]

Rising transport emissions have been addressed in other jurisdictions through fuel efficiency standards or other efficiency measures such as feebate schemes, where fees are levied on inefficient vehicles to fund rebates on efficient vehicles.

[21] Quicke (2022) *Fuelling Efficiency,* https://australiainstitute.org.au/report/fuelling-efficiency/

According to the 2022 International Energy Efficiency Scorecard, which ranks 25 of the world's largest energy users on efficiency metrics,[22] Australia ranks third last in the transport category, in part due to lack of fuel efficiency standards. France scores highest on transport efficiency and has had a feebate system in place for over 14 years to regulate vehicle efficiency.

In 2014, the Australian Climate Change Authority (CCA) recommended the introduction of fuel efficiency standards to reduce the emission intensity of the Australian light vehicle fleet from 192gCO_2/km in 2013 to 105gCO_2/km in 2025. Modelling later undertaken by the Bureau of Infrastructure, Transport and Regional Economics (BITRE) as part of the Ministerial Forum into Vehicle Emissions found these standards would have a net benefit to the economy of $13.9 billion by 2040 and save Australia $48.70 for every tonne of CO_2 avoided.[23]

- The Australia Institute's Climate of the Nation 2022 shows:
    - 68% of Australians support the introduction of national fuel efficiency standards in line with those in Europe.
    - 64% support requiring all new car sales in Australia to be zero emissions vehicles by 2035.[24]

Incentivising manufactures to bring EVs to the Australian market

8. Would vehicle fuel efficiency standards incentivise global manufacturers to send EVs and lower emission vehicles to Australia?

Fuel efficiency standards create an incentive to bring more efficient and electric models to market.

Currently, Australia is facing an EV supply problem. Waiting lists for EVs are long, driving second hand EV prices up. While this supply problem is not confined to Australia (internationally, supply chains are struggling due to lack of critical minerals and the COVID-19 pandemic) it is exacerbated in Australia due to the lack of standards. The limited number of EV models that are available globally will likely be placed in markets with fuel efficiency

[22] ACEEE (2022) International Energy Efficiency Scorecard, https://www.aceee.org/international-scorecard

[23] Australian Government (2016) Improving the efficiency of new light vehicles, https://www.infrastructure.gov.au/sites/default/files/migrated/vehicles/environment/forum/files/Vehicle_Fuel_Efficiency_RIS.pdf

[24] Quicke and Venketasubramanian (2022) *Climate of the Nation 2022,* https://australiainstitute.org.au/report/climate-of-the-nation-2022/

standards in place, to help manufacturers avoid facing fines. This has been made clear through calls from industry to introduce standards.[25]

The International Energy Agency (IEA) recommends ambitious fuel efficiency standards to accelerate the uptake of EVs worldwide, stating that 'Stringent [fuel] efficiency and/or CO_2 standards have promoted EV adoption in most leading EV markets and should be adopted by all countries seeking to hasten the transition to electromobility.'[26]

Fuel efficiency standards for heavy vehicles

9. In addition to vehicle fuel efficiency standards for passenger and light commercial vehicles, would vehicle fuel efficiency standards be an appropriate mechanism to increase the supply of heavy vehicle classes to Australia?

The recent Federal Government announcement slating the introduction of Euro VI standards for heavy vehicles (new trucks and buses) from 2024 is welcome and may increase access to electric trucks and heavy vehicles in Australia. Consultation with industry and experts is needed to determine whether fuel efficiency standards should be extended to heavy vehicles, in addition to the introduction of Euro VI emissions standards.

Design features

10. What design features should the Government consider in more detail for vehicle fuel efficiency standards, including level of ambition, who they should apply to, commencement date, penalties and enforcement?

In designing fuel efficiency standards for Australia, Government should consult with international experts on best practice principles, as well as using previous work undertaken by Government – including the Ministerial Forum on Vehicle Emissions Standards' *Draft Regulation Impact Statement on Fuel Efficiency Measures.*[27]

The principles of good regulatory design for fuel efficiency standards, laid out by the CCA, should be followed: environmental effectiveness, administrative and regulatory burden, equity, policy stability and credibility.[28]

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[25] Mercer and Mackintosh (2022) Electric vehicles are racing ahead overseas, so why isn't that happening in Australia? https://www.abc.net.au/news/2022-06-17/electric-vehicles-in-australia/101155228

[26] IEA (2022) Global EV Outlook, https://www.iea.org/reports/global-ev-outlook-2022

[27] Australian Government (2016) Improving the efficiency of new light vehicles, https://www.infrastructure.gov.au/sites/default/files/migrated/vehicles/environment/forum/files/Vehicle_Fuel_Efficiency_RIS.pdf

[28] Climate Change Authority (2020) *Designing an emissions standard for Australia*, https://www.climatechangeauthority.gov.au/sites/default/files/2020-06/Light%20Vehicle%20Report/CCA_TransportReport_Chapter5.WEB.pdf

The Australia Institute has previously recommended that fuel efficiency standards be:

- Strong and aligned with Australia's emissions reductions commitments, eventually leading to a ban on new fossil fuelled vehicle sales by 2030 or 2035 at the latest,
- implemented as soon as practicable,
- have integrity – standards should be mandatory, independent from industry, and based on independent and publicly accessible data.[29]

Australia is already behind other countries in vehicle efficiency. Australian fuel efficiency standards should be designed to put Australia on track to align with comparable nations like the United Kingdom, New Zealand and the United States.

The national average target should become stronger over time, and be aligned with Australia's broader emissions reductions targets, including Australia's commitments under the Paris Agreement. This should include regular reviews of the targets to ensure they are ratcheted down.

Several international forecasts show that, in order to achieve net zero emissions by 2050, new car sales must be 100% zero emissions vehicles by the early 2030s and by 2035 at the very latest.[30] Australian standards should therefore reduce to zero gCO_2/km by 2030 or 2035 at the latest– effectively banning the sale of new fossil fuelled vehicles.

Standards should be implemented as soon as practicable. While a phase in period may be necessary, this should not be used as a delay tactic. To expedite the process, standards could be designed using existing resources. Considerable work has already been done for modelling and designing fuel efficiency standards for Australia (discussed further below). Much of this work could inform the design of new standards, particularly the work of the CCA and the Ministerial Forum into Vehicle Emissions.

Fuel efficiency standards should have integrity. They should be implemented and enforced independently from industry. The CCA are set to be reinstated as a central advisory body to Government and would be well placed to implement these standards.

Standards should be mandatory with significant penalties for noncompliance. Current voluntary standards are set too low, and the lack of penalties for non-compliance means there is no incentive for vehicle manufacturers to meet the voluntary standards, which are industry-led and suffer from loopholes. Penalties should be set significantly higher than the cost of complying with the standard.

[29] Quicke (2022) *Fuelling Efficiency,* https://australiainstitute.org.au/report/fuelling-efficiency/

[30] IEA (2021) Global EV Outlook, P 55 https://www.iea.org/reports/global-ev-outlook-2021 Transport & Environment (2018) How to decarbonise European transport by 2050, https://www.transportenvironment.org/wpcontent/uploads/2021/07/2018_11_2050_synthesis_report_transport_decarbonisation.pdf

The World Light Vehicle Harmonised Testing Procedure (WLTP) should be used to measure vehicle emissions, as the preferred method over the New European Driving Cycle (NEDC) procedure.[31]

Additionally, super credits and off-cycle credits are not necessary to the functioning of a fuel efficiency standards system, but if included should be robust, transparent and limited to technologies with strong evidence of emissions reductions benefits.

The use of multipliers or super credits should be carefully considered. These are used to provide favourable accounting rules to particular technology, and further encourage the uptake of zero or low emissions vehicles, but can also act to obscure emissions results if not implemented transparently.

The Government should carefully consider the use of super credits in the Australian context. If super credits are awarded, they should be limited to EVs and be temporary.

The use of 'off-cycle' credits should be similarly critically evaluated. The limitations in accessing data and accurately testing the performance of these off-cycle technologies should be acknowledged, and Government should assess the integrity of overseas off-cycle credits before adopting them in Australia.

In considering which vehicle attributes to base the standards on, Government should seek to minimise the possibility of gaming the system by shifting vehicles into different categories. Additionally, the standards should incentivise the reduction of vehicle mass as a method of lowering emissions.[32]

More details are set out in the Australia Institute's report, *Fuelling Efficiency*[33] (attached).

ADDITIONAL ACTIONS

Policies complementary to fuel efficiency standards

11. What policies and/or industry actions could complement vehicle fuel efficiency standards to help increase supply of EVs to Australia and electrify the Australian fleet?

Other measures exist to reduce carbon emissions and increase the efficiency of a vehicle fleet. These can be implemented alongside fuel efficiency standards or as stand-alone

[31] Dornoff et al (2020) *On the way to "real-world" CO2 values: the European passenger car market in its first year after introducing the WLTP,* https://theicct.org/sites/default/files/publications/On-the-way-to-real-world-WLTP_May2020.pdf

[32] ICCT (2017) *Footprint versus mass: how to best account for weight reduction in the European vehicle CO2 regulation*, https://theicct.org/sites/default/files/CO2-reduction-technologies_fact-sheet_10102017_vF.pdf

[33] Quicke (2022) *Fuelling Efficiency,* https://australiainstitute.org.au/report/fuelling-efficiency/

policies, and include consumer awareness initiatives, higher fuel taxes, tax or registration fees with a CO_2 component, zero emissions vehicle sales targets, and incentives for efficient or zero emissions vehicles.

One method of incentivising zero and low emissions vehicles adopted by a number of countries is a feebate system.

Feebate systems levy a fee on the purchase of higher emitting vehicles and use the revenue to incentivise the purchase of zero or low emissions vehicles. They are easy to implement, self-funding schemes (if designed carefully), that provide more incentive than fuel efficiency standards to go above and beyond the required emissions reductions, due to the continuous incentive to improve emissions performance.

France's Bonus-Malus scheme is an example of a feebate system and provides a useful case study, having been established over 14 years ago.[34] According to the ICCT analysis of France's feebate system, step functions used to set levels of fees and rebates were initially too widely spaced, allowing manufactures to increase rebates substantially by registering vehicles with CO_2 emissions just below the step function. The system was later improved by reducing step functions, and phasing into a continuous function system. The French Bonus-Malus scheme has effectively shifted vehicle sales towards lower emitting and electric models, decreasing the average emissions of new vehicles.[35]

The New Zealand Government are also introducing a feebate scheme, the Clean Car Discount scheme.[36] The Clean Car Discount was introduced in July 2021, providing rebates for electric and plug-in hybrid vehicles. Rebates of up to NZD$7,500 are available for new vehicles, and NZD$3,000 for used vehicles. The second stage of the New Zealand scheme expanded the Clean Car Discount, charging a fee of up NZD$4,500 on new high emitting vehicles. As a whole, the feebate system is cost-neutral, as EV incentives are funded through fees on higher emitting vehicles.[37]

If designed carefully, feebate systems can be a cost-neutral method of disincentivising higher emitting vehicles and incentivising lower emitting vehicles, thereby reducing transport emissions. According to the ICCT, best practice feebate schemes are continuous and linear, with a pivot point set to make the system self-funding (rebates for low emissions

[34] ICCT (2018) Practical Lessons in vehicle efficiency policy: The 10-year evolution of https://theicct.org/practical-lessons-in-vehicle-efficiency-policy-the-10-year-evolution-of-frances-co2-basedbonus-malus-feebate-system/

[35] Monschauer & Kotin-Forster (2018) Bonus-Malus Vehicle Incentive System in France, https://www.euki.de/wp-content/uploads/2018/09/fact-sheet-bonus-malus-vehicle-incentive-system-fr.pdf

[36] ICCT (2022) General statement of ICCT's support to the Clean Vehicle Standards, https://www.transport.govt.nz//assets/Uploads/ICCT-review-of-New-Zealand-CO2-Clean-Vehicles-Billtargets-February-2022.pdf

[37] NZ Transport Agency (n.d) Clean Car questions and answers, https://www.nzta.govt.nz/vehicles/clean-carprogramme/clean-car-programme-questions-and-answers/

vehicles are funded entirely by additional fees on higher emitting vehicles), with a linear metric (CO2 emissions or fuel consumption).

While both fuel efficiency standards and feebates system share the same objective – reducing transport emissions - feebate systems directly affect the vehicle price faced by consumers, where as fuel efficiency standards apply to vehicle manufacturers.

Electric bikes, micro mobility, and motorbikes

12. Do we need different measures to ensure all segments of the road transport sector are able to reduce emissions, and if so what government and industry measures might well support the uptake of electric bikes, micro-mobility and motorbikes?

Specific measures, including subsidies should be introduced to support the uptake of micro-mobility options, particularly e-bikes.

A recent scoping review of 107 academic articles on e-bikes found that the use of e-bikes is associated with lower energy and emissions and can lead to significant modal shift.[38]

The Government should extend the Fringe Benefits Tax exemptions provided under the Electric Car Discount Bill to e-bikes, work with state and territory governments to provide loan schemes for e-bikes and consider a national bike subsidy scheme.

- The Australia Institute's Climate of the Nation 2022 shows:
    - 62% of Australians agree that governments should introduce policies that encourage moving away from cars and towards public transportation and active transportation (i.e. walking and cycling).
    - 62% support having a national subsidy scheme that provides 30% rebates for buying bikes, e-bikes or cargo bikes for work purposes.
    - 61% support making current subsidies and tax incentives for electric vehicles available for e-bikes and cargo bikes.[39]

SECOND HAND EVS

Increasing the number of second-hand vehicles

13. How could we best increase the number of affordable second hand EVs?

[38] Jenkins et al (2022) *What do we know about pedal assist E-bikes? A scoping review to inform future decisions*, https://www.sciencedirect.com/science/article/pii/S0967070X22002475#!

[39] Quicke and Venketasubramanian (2022) *Climate of the Nation 2022,* https://australiainstitute.org.au/report/climate-of-the-nation-2022/

To ensure a greater number of affordable second-hand EVs, the Government should increase the ambition of its commonwealth fleet target.

Currently, a Low Emissions Vehicle target for the Commonwealth fleet is set at 75% of new leases and purchases by 2025.[40] However, costing by the Parliamentary Budget Office shows that after 2025, the proportion of low-emissions vehicles is assumed not to change – staying at 75% up to 2033. In other words, no increased ambition for the next decade.[41]

Additionally, 'low emissions vehicles' are not defined, suggesting that the target is not limited to zero emissions vehicles.

The Commonwealth fleet target should be extended to 100% zero emissions vehicles by 2030 (excluding PHEVs), to increase the number of second-hand vehicles entering the Australian market.

STRENGTHENING AUSTRALIA'S COMPETITIVENESS IN THE EV VALUE CHAIN

Strengthening Australia's competitiveness across the EV value chain

15. What actions can governments and industry take to strengthen our competitiveness and innovate across the full lifecycle of the EV value chain?

The global transition to EVs and EV manufacturing is an enormous opportunity for Australia to rebuild its vehicle manufacturing industry.

At the National EV Summit in August, AMWU National Secretary Steve Murphy called on the Government to establish a tripartite council of government, union and industry to support the uptake of EVs and develop a long-term plan for EVs in Australia 'with a focus on industry policy, jobs, and skills and training'.[42]

The Australia Institute supports the creation of a National Innovation Council to strengthen Australia's competitiveness and innovation across the EV value chain.

[40] The Hon Catherine King MP (2022) *Accelerating Australia's electric vehicle potential*, https://minister.infrastructure.gov.au/c-king/media-release/accelerating-australias-electric-vehicle-potential

[41] Parliamentary Budget Office (2022) *Costings,* https://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Budget_Office/Publications/Costings

[42] AWMU (2022) *AMWU calls for National Electric Vehicle Council to boost domestic manufacturing, https*://www.amwu.org.au/amwu_calls_for_tripartite_ev_council

Government should also consider publicly funded apprenticeships and traineeships in the EV manufacturing and associated sectors and nationally accredited transferable skills packages – as recommended by the Senate Enquiry into EVs.[43]

Additionally, the Australia Institute's Centre for Future Work has made a number of recommendations to realise Australia's EV industrial prospects, including developing an EV manufacturing industry commission, an EV industry powered by sustainable energy, adding value to Australian resources, developing EV supply chains and investing in essential skills.

These are discussed in more detail in the Australia Institute's Centre for Future Work report, *Rebuilding Vehicle Manufacturing in Australia: Industrial Opportunities in an Electrified Future* (attached).[44]

- The Australia Institute's Climate of the Nation 2022 shows:
    - 76% of Australians want to see government support to increase domestic manufacturing of zero emission electric vehicles, batteries and component parts.
    - 79% agree that manufacturing electric vehicles domestically would benefit the Australian economy, society, and environment.
    - 79% support having a long-term strategy to provide vocational training to ensure that there is a skilled workforce for the manufacturing of electric vehicles.
    - 70% support having a Manufacturing Industry Commission to explore Australia's prospects for producing electric vehicles domestically.[45]

Expanding Australia's domestic heavy vehicle manufacturing

16. How can we expand our existing domestic heavy vehicle manufacturing and assembly capability?

Australia is in a prime position to expand the manufacturing and assembly of heavy electric vehicles. Australia possesses many of the crucial elements for an EV manufacturing industry,

[43] Parliament of Australia (2019) *Recommendations*, https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Electric_Vehicles/ElectricVehicles/Report/b02

[44] Dean (2022) *Rebuilding Vehicle Manufacturing in Australia: Industrial Opportunities in an Electrified Future, https*://australiainstitute.org.au/wp-content/uploads/2022/02/Rebuilding_Vehicle_Manufacturing_in_Australia_FINAL_march.pdf

[45] Quicke and Venketasubramanian (2022) *Climate of the Nation 2022,* https://australiainstitute.org.au/report/climate-of-the-nation-2022/

including mineral reserves, a skilled workforce and industrial base – however, government support is needed to fully realise this opportunity.[46]

The Government should carefully balance the emissions reduction objectives of the EV strategy with the effect on Australian workers. Some organisations have recommended changing the regulation of truck widths to align with standards used internationally, thus increasing access to imported electric trucks.[47] If this is considered, it should happen in close consultation with domestic manufacturers, noting the potential impact this could have on them. Changes that lead to an influx in imported EVs could have negative impacts on domestic suppliers if not properly co-ordinated. These impacts could be mitigated by longer lead-in times for these changes, and close consultation with industry.

Expanding domestic manufacturing to other vehicle classes

17. Is it viable to extend Australian domestic manufacturing and assemble capability to other vehicle classes?

With appropriate Government support, it is feasible to extend domestic manufacturing and assembly to the regular vehicle market. The National Innovation Council proposed by the AMWU would be well placed to consider the measures needed to support this.

ESTABLISH THE SYSTEM AND INFRASTRUCTURE TO ENABLE RAPID UPTAKE OF EVS

Creating revenue and driving demand for EVs

18. Are there other proposals that could help drive demand for EVs and provide a revenue source to help fund road infrastructure?

While revenue from fuel tax has not directly funded Australian road infrastructure since 1959,[48] the shift to electric and more efficient vehicles will reduce government revenue from fuel tax. However, there are a number of actions the Government could considered to

[46] Dean (2022) *Rebuilding Vehicle Manufacturing in Australia: Industrial Opportunities in an Electrified Future, https*://australiainstitute.org.au/wp-content/uploads/2022/02/Rebuilding_Vehicle_Manufacturing_in_Australia_FINAL_march.pdf

[47] Australian Trucking Association and Electric Vehicle Council (2022) *Electric trucks: keeping shelves stocked in a net zero world,* https://electricvehiclecouncil.com.au/wp-content/uploads/2022/01/ATA-EVC-Electric-trucks_Keeping-shelves-stocked-in-a-net-zero-world-1.pdf

[48] Webb (2000) *Petrol and Diesel Excises, https*://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/rp/rp0001/01RP06

drive EV demand and provide a revenue source. Additionally, the Government should look to the Norwegian approach to EV policy, where, simply put, the Government incentivises the things they want to encourage and taxes the thing they want to discourage.[49]

A federal road user charge could be considered. This should be implemented at the national level to deliver a co-ordinated approach across jurisdictions. The charge should include all externalities of motor vehicle use including air pollution, road damage, congestion and greenhouse gas emissions. EVs could be exempt from the charge for a temporary period, until they reach a significant percentage of national vehicles sales.

Government should also remove tax concessions and subsidies for SUVs. The latest report on light vehicle emissions intensity by the NTC shows that increasing sales of utes and SUVs are counteracting the climate change benefits of increased EV sales.[50] Through the Instant asses write-off scheme, Australia's current tax system allows small business owners to write off the costs of new utes and heavy-duty vehicles, thus incentivising their purchase. These tax concessions should be removed.[51]

Government could also consider reforming the Fuel Tax Credit system. The Fuel Tax Credit rebate is one of the top 20 most expensive programs in the Federal Budget, rebating the fuel excise tax to businesses that consume diesel off public roads. The biggest beneficiary is the mining industry, which receives the largest share of the total and also has the largest individual claims. Not only does this subsidy encourage the use of a fossil fuels, it also primarily benefits the fossil fuel industry.[52] Government could consider limiting the amount of credits an entity can claim, thereby restricting the large claims from the mining industry without overly affecting other industries like farming and agriculture, where claims tend to be smaller.

Changes to the LCT system could increase government revenue and incentivise EV uptake. Changes to the LCT were proposed by Senator Storer in the Chairs Additional Comments to the 2018 Senate Enquiry into Electric vehicles,[53] and recently costed by the Parliamentary

[49] Quicke and Armistead (2020) *Ending the ICE age, Norway's plan to end internal combustion engine vehicles sales by 2025,* https://australiainstitute.org.au/wp-content/uploads/2020/12/P975-Norway-Australia-EV-policies-WEB.pdf

[50] National Transport Commission (2021) *Carbon Dioxide Emissions Intensity for New Australian Light Vehicles 2021*, https://www.ntc.gov.au/sites/default/files/assets/files/Carbon%20Dioxide%20Emissions%20Intensity%20for%20New%20Australian%20Light%20Vehicles%202021.pdf

[51] Saunders and Denniss (2021) *One tonne of jobs and growth,* https://australiainstitute.org.au/wp-content/uploads/2021/06/P1089-One-tonne-of-jobs-and-growth-WEB.pdf

[52] Quicke (2022) *Fuel tax credit,* https://australiainstitute.org.au/post/fuel-tax-credit/

[53] Parliament of Australia (2019) *Report,* https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Electric_Vehicles/ElectricVehicles/Report

Budget Office.[54] The Australia Institute recommends redefining fuel-efficient vehicles from 7L/100km to 0L/100km.

Additionally, changes to Australia's broader climate and energy policy could be used to create additional revenue streams. For example, the Australia Institute has proposed changes to the Safeguard Mechanism that introduce a voluntary, fixed-price polluter-payment of $25 a tonne. This would raise billions for the Commonwealth to direct to industry policy to build climate solutions, including battery or electric bus manufacturing.[55]

- The Australia Institute's Climate of the Nation 2022 shows:
    - 55% of Australians support removing subsidies for large four-wheel drives through the instant asset write-off scheme, compared to 20% who oppose.[56]

Other national policies

19. What more needs to be done nationally to ensure we deliver a nationally comprehensive framework for EVs?

Preparation for battery recycling should be undertaken. According to the IEA, battery recycling could account for 10% of battery supply by 2040.[57] The International Transport Forum recommends designing for recyclability early in the EV transition and increasing data collection on battery chemistries, collection and traceability.[58]

Government should also prepare for vehicle automation by working closely with the NTC to prepare Australian roads and regulations for autonomous vehicles.[59] Additionally, further preparation for Mobility-as-a-Service and Vehicle-to-Everything technologies should be considered.

[54] Parliamentary Budget Office (2022) *Costings,* https://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Budget_Office/Publications/Costings

[55] Armistead et al (2022) *Safeguarding fossil fuels: Submission,* https://australiainstitute.org.au/post/climate-safeguards-mechanism-risks-safeguarding-new-gas-coal-submission-the-australian-governments-safeguard-mechanism-is-at-risk-of-safeguarding-new-gas-and-coal-projects-and-driving-inc/

[56] Quicke and Venketasubramanian (2022) *Climate of the Nation 2022,* https://australiainstitute.org.au/report/climate-of-the-nation-2022/

[57] International Energy Agency (2022) The Role of Critical Minerals in Clean Energy Transitions, https://iea.blob.core.windows.net/assets/ffd2a83b-8c30-4e9d-980a-52b6d9a86fdc/TheRoleofCriticalMineralsinCleanEnergyTransitions.pdf

[58] International Transport Forum (2021) *Cleaner Vehicles: Achieving a Resilient Technology Transition,* 67, https://www.itf-oecd.org/sites/default/files/docs/cleaner-vehicles-technology-transition.pdf

[59] National Transport Commission (2020) *Automated Vehicle Program Approach, https://www.ntc.gov.au/sites/default/files/assets/files/Automated%20vehicle%20approach.pdf*

Ensuring all Australians benefit

20. How can we best make sure all Australians get access to the opportunities and benefits from the transition?

To ensure all Australians are brought along for this transition, consideration should be given to groups that have historically been left behind in technological and transport transitions – including regional Australians, lower incomes households and individuals, and people with disability.

Government should consider the development of a separate regional EV strategy to address the barriers to EV adoption that are unique to regional areas. For example, smaller, lighter and short-ranged vehicles are suited to urban environments but may not be practical for regional areas.

Any incentives or subsidies should consider equity in their design. The Government's main policy – the Electric Car Discount – is targeted at employees and may benefit higher income earners more. The likely distribution of benefits from this policy should be modelled.

Government should also consider ways to mitigate unfair impacts of the EV transition. For example, Greenlining provides guidance on equitable EV policies, and suggests that incentives targeting low incomes rather than capping incentives based on vehicles price leads to more equitable outcomes, as does providing subsidies at the point of sale rather than rebates.[60] People on lower incomes are more responsive to incentives and these are likely to become more important for EV adoption overtime.[61]

Additionally, revenue from measures including road user charging and fuel tax could be directed to address equity issues.

- The Australia Institute's Climate of the Nation 2022 shows:
    - 72% of Australians believe that electric vehicles subsidies should be aimed at people on lower incomes.[62]

[60] Greenlining (2022) *Electric vehicles for all: an equity toolkit,* https://greenlining.org/resources/electric-vehicles-for-all/#tab2-section3

[61] Jenn et al (2020) *An in-depth examination of electric vehicle incentives: Consumer heterogeneity and changing response over time, https://www.sciencedirect.com/science/article/abs/pii/S0965856418311091?via%3Dihub*

[62] Quicke and Venketasubramanian (2022) *Climate of the Nation 2022,* https://australiainstitute.org.au/report/climate-of-the-nation-2022/

Attachments

The following Australia Institute reports are attached to this submission:

- *Fuelling Efficiency*
- *Rebuilding Vehicle Manufacturing in Australia: Industrial Opportunities in an Electrified Future*
- *Climate of the Nation 2022*
- *Over a Barrel: Addressing Australia's Liquid Fuel Security*