Appendix: Methodology for assessments contained in Chapter 4

The rankings used in this report assess Australia's performance against the performance of similar countries, with a view to providing a reliable indication of where Australia sits, in comparison to its peers. Careful consideration was given to the choice of metrics to ensure that they provided an accurate perspective on Australia's performance relative to its international peers.

In the interests of transparency, this process is discussed below.

1. Country selection

Australia's performance was assessed against the following nations:

> Austria, Belgium, Canada, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Latvia, Lithuania, Luxembourg, Netherlands, New Zealand, Norway, Poland, Portugal, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom, and the United States of America.

The initial pool of comparator nations was selected from current members of the Organization for Economic Co-operation and Development (OECD) who were also listed in Annex I of the United Nations Framework Convention on Climate Change (UNFCCC). Like the 30 nations chosen, Australia is also present on both lists. At the time that the treaty was agreed to, those parties to the UNFCCC that are listed in Annex I were considered the world's wealthiest and most capable of taking early action on climate change. These nations were all either early members of the OECD or prominent economies in transition – such as Russia and other former members of the Soviet Bloc of nations. The full list of Annex I nations was further limited to those that are current members of the OECD to ensure more direct comparability to Australia.

This approach was taken because, like Australia, these parties are all market economies and have long been considered to bear an additional obligation to reduce the impact of climate change. Except for Turkey, all comparators were among a

group of nations that might have been bound to reduce emissions through the first and second commitment periods of the Kyoto Protocol, had they ratified and remained part of it. These countries – like Australia – have been expected, by virtue of their wealth and relative capacity, to have already begun reducing their emissions in line with the threat of climate change.

As should be expected, given the concentration of power and wealth in the global north, this means that many of these nations are also European Union (EU) members, with only Canada, Japan, New Zealand, Switzerland, United Kingdom and the United States not being EU members. In instances where it is more appropriate to consider the actions of EU member nations as a bloc, this has been done. This includes when considering the EU's joint mitigation commitment under the Paris Agreement to reduce emissions by 55% below 1990 levels by 2030 – which will require different respective amounts of mitigation between the member nations.

2. Scoring system

The scoring system used across both assessments is the same for both the assessment of mitigation performance and pledges, and in the fossil fuel export and consumption. In both cases, as described further in the sections below, the assessment occurs across a range of indicators. This includes, by way of example, each country's per person greenhouse gas emissions in 2019.

Performance against each individual indicator is then given a relative rank, which forms the basis of that country's score for that indicator. A country with the highest per person greenhouse gas emissions is awarded a score of 1. A country with the lowest is awarded a score of 31. This is repeated across five indicators for each of the assessments.

The score across the five indicators is then tallied into an overall score for the assessment. This means that the worst theoretically available score is 5 – 1 + 1 + 1 + 1 + 1 across the five indicators– for a country that was the worst performer across all five indicators. If a country was best across all five indicators, it would receive a score of 155 – 31 + 31 + 31 + 31 + 31.

In the event, the worst and best scores awarded across the two assessments were both in the Performances and Pledges assessment. Australia received an overall score of 8 after receiving the lowest score on two indicators, and second lowest in the other three. The United Kingdom took out the highest score – 136 – after being second best on two indicators, fourth, seventh and ninth in the others.

In Fossil fuel exports and consumption, the range of scores was narrower. Canada and Australia tied for the lowest score, with both countries scoring 26, and both countries being consistently ranked in the bottom third across all five indicators. The Czech Republic took out first place based on a significant decrease in fossil fuel exports, and significantly decreased reliance on fossil fuel consumption domestically which flowed through to per person metrics.

3. Mitigation performance and pledges

When comparing national climate performance, it is important to note that not all countries report their emissions to the UNFCCC in the same way. This means that relying on emissions as reported without further interrogation can often be misleading. This issue has in fact been used as a source of disinformation by the Australian government when discussing its own performance.

Principal among these issues is the distinction between reporting emissions with and without the impact of land use, land use change and forestry (hereinafter "land management") emissions factored in to the total. As noted in the report, in 1997 Australia secured special dispensation to consider the impact of past changes to land management in its official reports to the UNFCCC – something that most other nations are not permitted to do. Including these shifts to land management tends to make Australia's past performance appear to be significantly better than it is.

This is the basis of many impressive-sounding, but ultimately spurious claims made by the Australian government relating to its climate performance, including through the recent 'Positive Energy' campaign being headed up by the Department of Industry, Science, Energy and Resources on behalf of the federal coalition. There is no principled reason to compare countries on two fundamentally different bases.

Further, there is no single, consistently applied means for measuring emissions from land management that could form an authoritative, consistent and reliable basis on which to compare emissions from individual countries. In short, while there may be good reasons to consider the emissions of all countries on like terms while including the impact of land management emissions, there is no reliable means to do so.

For this reason – in assessing countries' past performance while comparing apples to apples – it is necessary to rely on emissions figures excluding the impact of land management emissions. The Potsdam Institute for Climate Impact Research's PRIMAP-hist dataset, which also underpins much of the IPCC's country level analysis, was used for this purpose (Gütschow, Günther & Pflüger 2021). Specifically, this analysis used the total greenhouse gas emissions, excluding land use, land use change and forestry (M.0.EL), the "HISTCR" scenario that prioritises countries reported data, and brings greenhouse gases onto like terms based on 100-year global warming potentials as at the IPCC's Fourth Assessment Report, which is the latest available in the dataset.

Analysis of country pledges was based on nationally determined contributions found in the interim Nationally Determined Contribution (NDC) registry (UNFCCC Secretariat, 2021) on 22 September 2021. The formally submitted pledges were supplemented by subsequent or informal announcements, as described later in this section.

Considerable thought was given to finding a principled way to compare wealthy nations' climate mitigation pledges under the Paris Agreement. This is because simply comparing the headline figure of "26% below", "40% below" and so on – without more thought – tends to mislead. The effect of shifting base years, historical circumstances, wildly different population sizes and the vicissitudes of emissions reporting means that the percentage reduction contained in a pledge will poorly represent the relative strength of a nation's climate commitments. For this reason, when assessing the strength of pledges, the Climate Council has focussed instead on what effect meeting the pledge would have on the countries' emissions per person in the target year. This relies on the same Potsdam Institute emissions data referred to above, and population

projections provided by the US Census Bureau (2021).

The Paris Agreement also requires that countries progressively strengthen their pledges over time, and this is one of the agreement's central features. Indeed, it is one of very few features that are legally binding on parties to the agreement. To examine the degree to which parties have strengthened their pledges, a second indicator is used to compare the change in per person emissions between the first and current pledges.

As flagged in section 1, as the EU members have negotiated the nationally determined contributions in both 2015 and 2020 as a bloc – with national shares to be determined by EU regulations – for the purposes of assessing national pledges, the per person emissions of this cohort of countries is considered as a collective, rather than individually. This includes the United Kingdom when considering its first pledge, given that this pledge was made as part of the EU bloc.

A separate difficulty here is accounting accurately for Australia's pledge and this is of central importance given Australia's centrality to this report. Like its emissions, Australia's pledge includes land management emissions, while other nations' pledges do not. As with historical emissions, this makes Australia's pledged emissions reductions not directly comparable to those of other nations.

As well, Australia's means for accounting for its performance against the pledge is quite unique. As a result, on the Australian government's current accounting practices Australia may 'meet and beat' its headline commitment to reduce emissions by 26% below 2005 levels by 2030 without emissions ever being particularly close to 26% below 2005 levels at any point over the next decade (Department of Industry, Science, Energy and Resources, 2020).

Given this, to compare Australia's 2030 commitment with those offered by other nations, it is necessary to dig beneath the headline reduction pledge. To deal with this issue, the analysis here relies instead on the estimates contained in Australia's 2020 emissions projections. The government claims that by following this trajectory, and doing nothing more than the very little that is currently being done, Australia will meet the emissions reduction commitment it has made to the international community through its nationally determined contribution to the Paris Agreement.

If one allows for Australia's irregular accounting for its international commitment and irregular means for accounting for land management, then this is almost true. Official figures indicate the current low levels of ambition will be missed by only 1.16% (Department of Industry, Science, Energy and Resources 2020). There have been few effective policy measures in place at the federal government level for most of the past decade, and the federal government has expressed no desire to create effective policy over the next decade. The fact that Australia's national target can be met through no policy ambition whatsoever demonstrates how Australia's woeful climate target is clearly in breach of the Paris Agreement's requirement that nationally determined contributions should represent the nation's 'highest possible ambition' (article 4.3). However, the pathway contained in the projections allows for Australia's national target to be placed on like terms with the more consistent, more principled targets used by other wealthy nations.

To put Australia's 2030 target into appropriate context for the purposes of comparison, this analysis uses Australia's emissions projections – that very nearly meet the inadequate target Australia set itself using its irregular accounting methods – after excluding land use change. This was determined to be the most accurate of several different paths.

- Any effort to compare Australia's ambition to other nations' ambitions that ignores the fact that these nations are excluding the impact of land management emissions in their targets is creating a false comparison. As noted in the main report, most emissions reduction seen to date in Australia is because of reductions in land clearing, and so reductions

in emissions from land management. Given that other nations are not accounting for this, doing so would dramatically overstate Australia's relative ambition.
- To assess Australia's target as if the federal government intends for emissions to be 26% below 2005 levels at any point between 2021 and 2030 similarly overstates Australia's relative ambition, albeit to a lesser degree. As a result of Australia's unusual accounting methods – explained more fully in the federal government's annual emissions projections report (Department of Industry, Science, Energy and Resources 2020) – Australia's emissions would only need to be in the order of 24% below 2005 levels in 2030, depending on the pathway.

As a result, the closest representation of Australia's relative ambition that allows insight into Australia's position, excluding the impact of land management emissions, and gets closest to meeting Australia's target after accounting for peculiar emissions accounting, is the forecast contained in Australia's 2020 emissions projections (Department of Industry, Science, Energy and Resources 2020). This path – which, as noted above, the federal government has been claiming for some time will result in Australia meeting and beating its goal – in fact misses it by just a little over one percent across the decade.

Taking this path as a given means that meeting Australia's 2030 goal will require annual emissions – excluding land management – to fall from 510 million tonnes carbon dioxide equivalent in the financial year ending 2021 to 483 million tonnes carbon dioxide equivalent in the financial year ending 2030; approximately half of 1% per year, each year. These values have been fed into the assessment of Australia's pledge to assess the strength of its ambition.

The other limitations, caveats or exceptions in the methodology, each of lesser importance than those already discussed, include:

- The United States' first nationally determined contribution under the Paris Agreement was to reduce emissions by 26-28% below 2005 levels in 2025. However, comparable nations' targets – including Australia's – were based on emissions reduction by or in 2030. As the United States never made a 2030 commitment, the rubric tends to understate the relative ambition of its first target. Consequently, it also tends to overstate the change in relative ambition between the country's first and second NDCs, but in a way that is balanced across the other metrics.

- The United Kingdom's first nationally determined contribution was pledged alongside its then fellow members of the EU, rather than as a standalone nation. The United Kingdom is already more than 40% below 1990 – which was the first EU-wide goal – and would undoubtedly have played an outsized role in reducing the EU's goal, had it chosen to remain in the Union. As such, the shift in relative ambition between first and second NDCs is likewise slightly overstated. Again, this is balanced out across other metrics.

- Turkey is a signatory to the Paris Agreement. However, until very recently it was the only wealthy nation not to ratify the Paris Agreement, but has very recently announced its intention to do so (Agence France-Presse 2021). This ratification occurred earlier this month, and Turkey will submit its NDC in 2022 (Lo & Farand 2021). As a result of its delayed ratification, and the absence of any NDC at all, Turkey receives the worst rating across the two pledge-based indicators by default.

- Japan announced an increase to its 2030 ambition at the Climate Leaders Summit in the first half of 2021 (Nikkei Asia 2021). However, this has not yet been formalised

into a revised NDC. That said, the announcement has sufficient specificity that it might form the basis of a revised NDC. As a result, its 2030 ambition has been assessed on that basis, rather than the unrevised NDC.

- While New Zealand has not increased its climate ambition ahead of COP26, it had previously expressed an intention to do so. Very recently, the New Zealand government delayed making this update to their ambition until 2022, on the basis of COVID-19's impact on their ability to do proper consultation (RNZ 2021). That said, in the absence of this having been announced, this intention to increase ambition can only be noted, but not considered.

- Between its first and second NDC, Switzerland shifted the language it uses to refer to its 2030 pledge. Whereas before the NDC was a pledge to reduce emissions to 50% below 1990 levels in 2030, it is now a pledge to reduce emissions by *at least* 50% below 1990 levels by 2030. For the purposes of quantifying countries' pledges, this distinction has been excluded.

Alongside the per person emissions intensity in 2030 of each country's pledge, and the change between first and current pledge, countries are also assessed on change in their absolute emissions – excluding land management – between 1990 and 2019, their 2019 emissions per person and the 2019 emissions per unit of GDP. Due to the delay in emissions reporting from countries to the UNFCCC, more recent years are not yet available. That said, given that the short-term impact of the COVID-19 pandemic on national emissions will have varied greatly between countries, relying on 2020 emissions data would have been unsound even if more recent data was available. Historical per country population and GDP (PPP, current international $) figures are taken from the World Bank Open Data service (2021).

Full detail of the indicators and scores awarded is contained in part 5 of this document. Charts demonstrating the spread of countries' performance on these metrics are included in part 6.

4. Fossil Fuel exports and consumption

Compared to the complexity of assessing nations' overall mitigation performance and pledges, in assessing nations' fossil fuel consumption and exports, a relatively simple approach was taken.

Meeting the challenge of climate change means driving production and consumption of fossil fuels as close to zero as possible. As such, an early decision was made for this section to focus far less on the emissions from fossil fuels than the total energy derived from them. This was done for several reasons.

The first of these is the most obvious. Whether coal, oil or gas, from the climate's perspective, there is no fossil fuel that it would not be better to have left in the ground. As all energy derived from fossil fuel must ultimately be replaced, regardless of the fuel, it makes more sense to focus on the energy, rather than the emission.

Second, while there are many well-established means with which the relative levels of climate harm caused from burning different fossil fuels, these methodologies are very frequently affected by considerable assumptions. As discussed

in the Climate Council's report *Passing Gas: Why Renewables are the Future* (2020), there are very significant gaps in measurement that affect these assumptions. Relatively minor changes to approach can produce extremely different outcomes using these different methods.

Third, in an indirect and obviously imperfect way – given the number of other, lesser determinants of a country's emissions – the assessment of overall mitigation performance already assesses emissions from fossil fuels for most countries. Fossil fuel emissions are globally responsible for about two-thirds of global greenhouse gas emissions, and in many developed countries, this figure is even higher.

This section relied heavily on data provided by the International Energy Agency in its annual World Energy Balances dataset (2021). While country-level data in the most recent version of this dataset extends for most countries to 2019, some gaps remain. As such, 2018 data was used to ensure consistency.

The specific indicators chosen were total fossil fuel exports in tonnes of oil equivalent both in 2018 and as a relative change on 1990 levels. To interrogate each nation's overall impact on the global supply of fossil fuels, a third export related indicator was chosen. This indicator was each country's net fossil fuel exports, being the total of fossil fuels exported, minus fossil fuels imported by each country.

The final two indicators chosen were fossil fuel consumption per person – again in tonnes of oil equivalent per person – and change in fossil fuel consumption per person since 1990.

Full detail of the indicators and scores awarded is contained in part 5 of this document. Charts demonstrating the spread of countries' performance on these metrics are included in part 6.

5. Full data tables

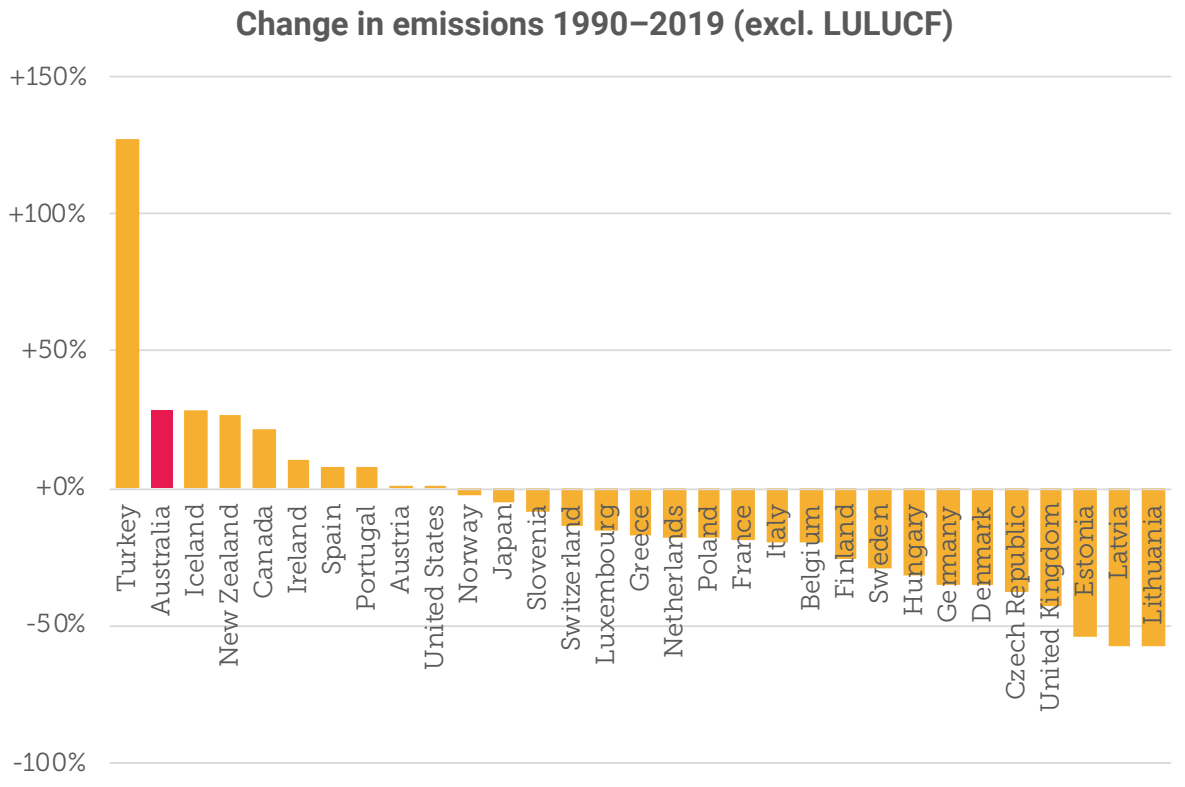
Emissions reduction performance and pledges														
	Change in emissions since 1990	Change in emissions since 1990, score	2019 emissions per person (tCO_2e/ person)	2019 emissions per person (tCO_2e/ person), score	2019 emissions per GDP (tCO2e/ $m GDP(PPP))	2019 emissions per GDP (tCO2e/$m GDP(PPP)), score	Emissions per person in target year of first NDC (tCO2e/ person)	Emissions per person in target year of current NDC (tCO2e/ person)	Progression from first to current NDC (change in pp)	Per person emissions intensity of 2030 pledge, score	Progression from first to current NDC	Overall score	Overall rank	Notes
Australia	+28.40%	2	21.56	1	413.09	1	16.97	16.97	0.00	2	2	8	31	Emissions intensity of pledges calculated using ex LULUCF in projections
Austria	+1.26%	9	9.04	17	154.18	23	6.50	4.87	1.62	7	5	61	16	EU
Belgium	-19.86%	21	10.18	12	186.14	16	6.50	4.87	1.62	7	5	61	16	EU
Canada	+21.16%	5	19.50	3	384.88	2	12.88	11.04	1.84	3	28	41	27	
Czech Republic	-37.88%	27	11.53	9	268.00	7	6.50	4.87	1.62	7	5	55	19	EU
Denmark	-35.24%	26	7.96	20	131.98	29	6.50	4.87	1.62	7	5	87	5	EU
Estonia	-54.37%	29	14.55	6	374.69	3	6.50	4.87	1.62	7	5	50	25	EU
Finland	-25.42%	22	9.67	14	187.58	15	6.50	4.87	1.62	7	5	63	15	EU
France	-19.20%	19	6.63	25	134.31	28	6.50	4.87	1.62	7	5	84	6	EU
Germany	-35.12%	25	9.76	13	174.63	19	6.50	4.87	1.62	7	5	69	11	EU
Greece	-17.40%	16	8.01	19	259.54	8	6.50	4.87	1.62	7	5	55	19	EU
Hungary	-32.07%	24	6.61	26	194.70	13	6.50	4.87	1.62	7	5	75	9	EU
Iceland	+28.11%	3	13.15	7	218.80	11	6.50	4.87	1.62	7	5	33	29	EU
Ireland	+10.26%	6	12.20	8	136.42	27	6.50	4.87	1.62	7	5	53	23	EU
Italy	-19.58%	20	7.02	22	156.41	22	6.50	4.87	1.62	7	5	76	8	EU
Japan	-4.72%	12	9.58	15	227.10	9	8.71	6.36	2.36	6	29	71	10	
Latvia	-57.09%	30	5.85	29	182.86	17	6.50	4.87	1.62	7	5	88	4	EU
Lithuania	-57.29%	31	7.34	21	189.26	14	6.50	4.87	1.62	7	5	78	7	EU
Luxembourg	-15.63%	15	17.42	4	144.01	24	6.50	4.87	1.62	7	5	55	19	EU
Netherlands	-17.73%	17	10.44	10	175.48	18	6.50	4.87	1.62	7	5	57	18	EU
New Zealand	+26.42%	4	16.53	5	366.70	4	10.68	10.68	0.00	4	2	19	30	An intended increase to ambition ahead of COP26 has been delayed to 2022
Norway	-2.32%	11	9.44	16	138.17	26	6.50	4.87	1.62	7	5	65	13	EU
Poland	-18.24%	18	10.27	11	300.79	6	6.50	4.87	1.62	7	5	47	26	EU
Portugal	+7.78%	8	6.19	27	167.95	20	6.50	4.87	1.62	7	5	67	12	EU
Slovenia	-8.56%	13	8.19	18	198.77	12	6.50	4.87	1.62	7	5	55	19	EU
Spain	+7.90%	7	6.66	24	157.92	21	6.50	4.87	1.62	7	5	64	14	EU
Sweden	-28.69%	23	4.98	31	90.45	30	6.50	4.87	1.62	7	5	96	3	EU
Switzerland	-13.99%	14	5.38	30	73.53	31	3.00	3.00	0.00	31	2	108	2	Migrated from 50% below in first NDC to "at least" 50% below in second
Turkey	+127.43%	1	6.16	28	225.52	10	n.a.	n.a.	n.a.	1	1	41	27	No NDC. Only recently ratified the Paris Agreement. NDC to follow in 2022
United Kingdom	-43.11%	28	6.79	23	140.02	25	6.50	3.72	2.78	30	30	136	1	Originally an EU member, since left
United States	+0.30%	10	20.19	2	309.33	5	16.23	10.63	5.60	5	31	53	23	First target had 2025 target year

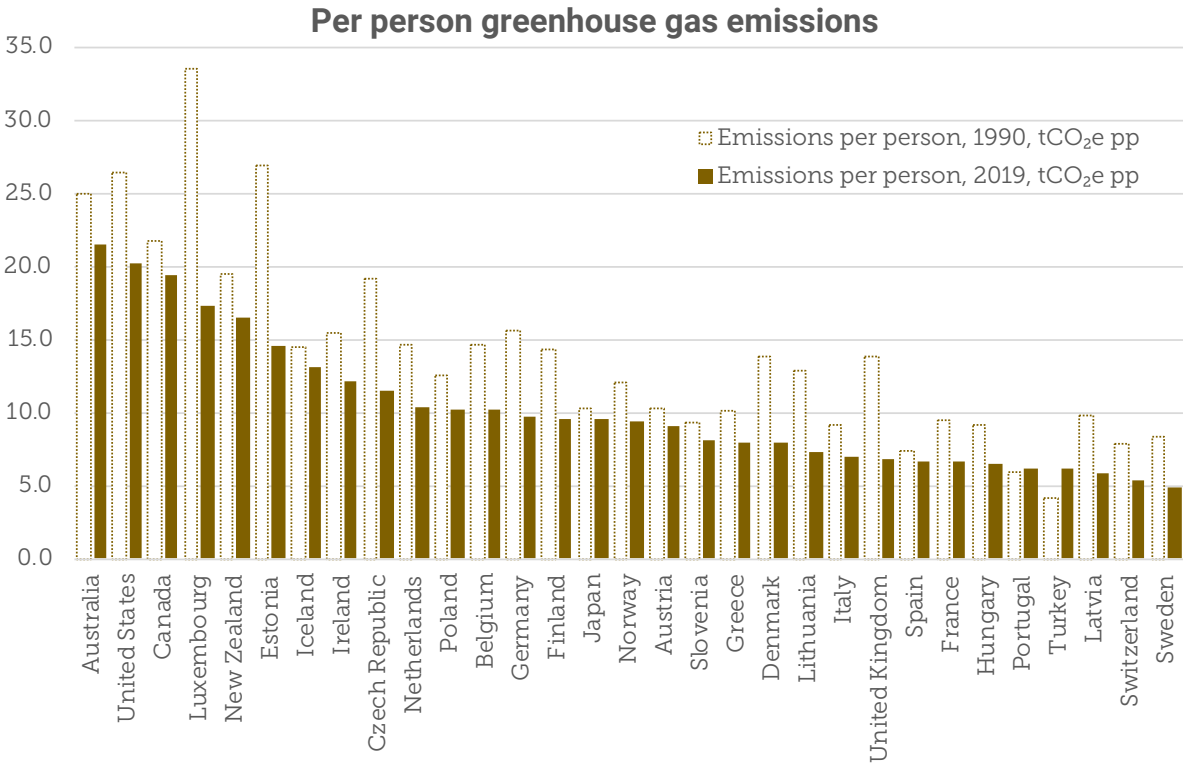
Fossil fuel extraction and use

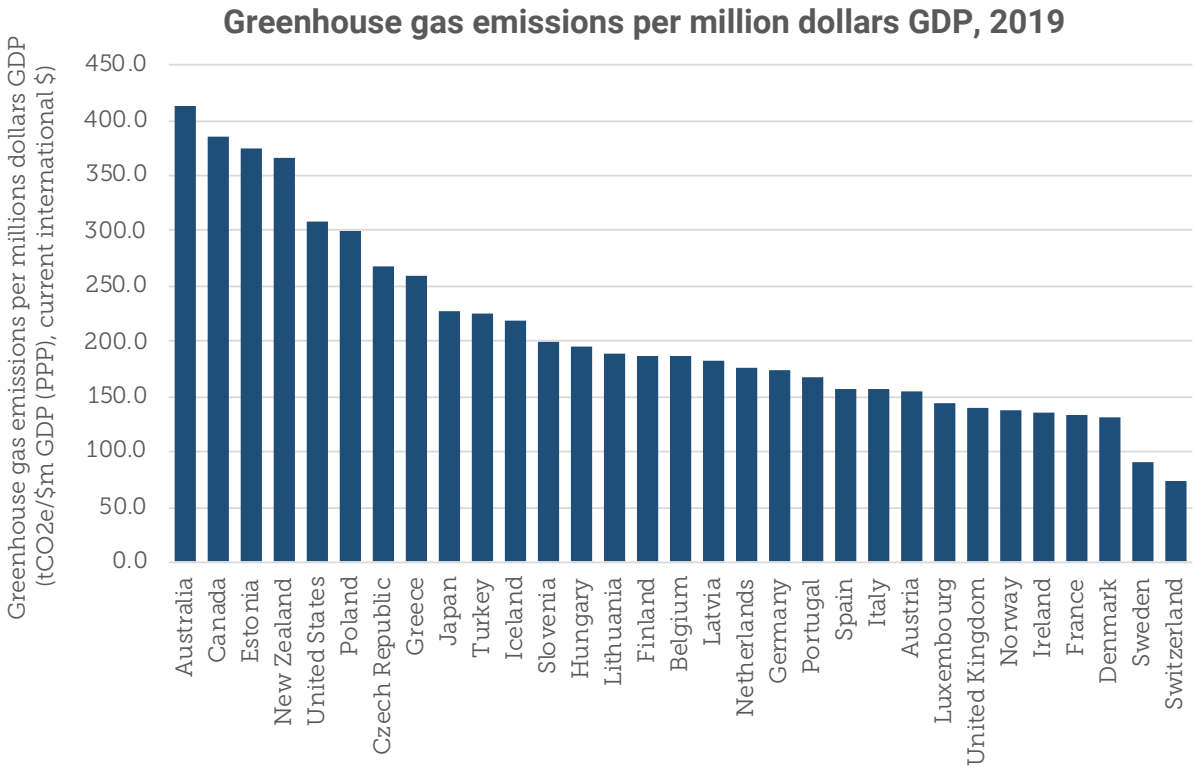
	Total fossil fuel exports, 1990, ktoe	Total fossil fuel exports, 2018, ktoe	Total fossil fuel exports, 2018, ktoe, score	Change in total fossil fuel exports, 1990-2018	Change in total fossil fuel exports, 1990-2018, score	Net fossil fuel exports, 2018, ktoe	Net fossil fuel exports, ktoe, 2018, score	Fossil fuel consumed per person, 1990, toe pp	Fossil fuel consumed per person, 2018, toe	Change in fossil fuel consumed, 1990-2018	FF consumed pp, toe, 2018, score	Change in fossil fuel consumed, 1990-2018, score	Overall FF score	Overall FF rank
Australia	78,918	332,696	2	+322%	7	279,453	1	2.47	2.42	-2%	6	10	26	30
Austria	556	7,482	20	+1245%	2	-20,917	20	1.73	1.86	+8%	9	4	55	26
Belgium	20,092	33,947	7	+69%	20	-50,593	22	2.67	2.78	+4%	4	6	59	25
Canada	104,155	305,311	3	+193%	10	223,398	2	4.04	4.03	-0%	2	9	26	30
Czech Republic	13,814	4,360	23	-68%	30	-17,194	17	2.40	1.57	-35%	14	29	113	1
Denmark	6,779	10,830	16	+60%	22	-2,202	6	1.64	1.25	-24%	25	24	93	12
Estonia	53	1,703	26	+3104%	1	-791	4	1.79	1.06	-41%	26	30	87	15
Finland	1,698	9,047	17	+433%	5	-13,940	14	2.37	1.59	-33%	13	28	77	20
France	15,533	25,627	10	+65%	21	-124,510	29	1.81	1.45	-20%	18	20	98	7
Germany	19,217	23,941	11	+25%	25	-204,428	30	2.39	1.85	-23%	10	22	98	7
Greece	7,454	20,345	12	+173%	11	-17,730	18	1.09	0.94	-14%	29	14	84	17
Hungary	1,521	8,257	18	+443%	4	-14,430	15	1.51	1.41	-7%	20	12	69	23
Iceland	0	0	31	+0%	26	-1,245	5	2.43	2.04	-16%	7	18	87	15
Ireland	698	1,683	27	+141%	14	-9,903	12	1.83	1.75	-4%	11	11	75	21
Italy	19,831	30,451	8	+54%	23	-115,527	28	1.68	1.34	-20%	22	21	102	4
Japan	5,076	18,724	13	+269%	8	-385,908	31	1.80	1.54	-15%	15	15	82	18
Latvia	341	902	28	+165%	12	-2,795	7	1.15	0.95	-17%	28	19	94	9
Lithuania	9,702	7,812	19	-19%	28	-5,190	10	1.90	1.44	-24%	19	25	101	5
Luxembourg	14	3	30	-77%	31	-3,645	9	6.34	4.90	-23%	1	23	94	9
Netherlands	84,466	150,536	5	+78%	19	-52,519	23	3.09	2.63	-15%	5	17	69	23
New Zealand	1,696	2,204	24	+30%	24	-6,372	11	1.95	1.99	+2%	8	8	75	21
Norway	99,598	186,462	4	+87%	18	176,521	3	1.92	1.71	-11%	12	13	50	29
Poland	21,993	14,832	15	-33%	29	-46,436	21	0.94	1.35	+43%	21	2	88	14
Portugal	2,472	5,368	22	+117%	16	-19,225	19	0.90	0.93	+3%	30	7	94	9
Slovenia	256	2,152	25	+740%	3	-3,583	8	1.22	1.48	+21%	16	3	55	26
Spain	12,115	28,230	9	+133%	15	-100,288	26	1.18	1.27	+8%	24	5	79	19
Sweden	8,628	17,204	14	+99%	17	-15,402	16	1.80	1.03	-43%	27	31	105	2
Switzerland	168	430	29	+156%	13	-12,706	13	1.94	1.32	-32%	23	27	105	2
Turkey	1,903	5,703	21	+200%	9	-109,404	27	0.54	0.91	+69%	31	1	89	13
United Kingdom	78,055	75,796	6	-3%	27	-61,433	24	1.99	1.46	-27%	17	26	100	6
United States	108,840	498,190	1	+358%	6	-79,811	25	4.17	3.56	-15%	3	16	51	28

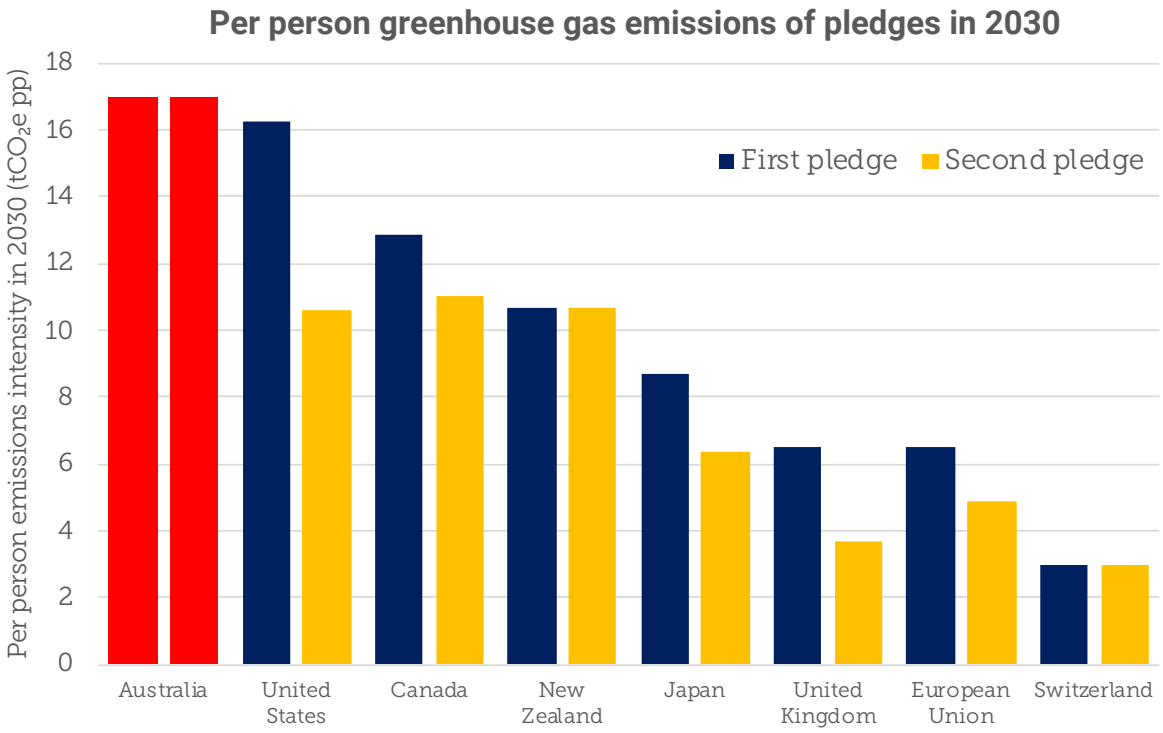
6. Indicator charts

The following charts are included for reference. Data sources as described in text.

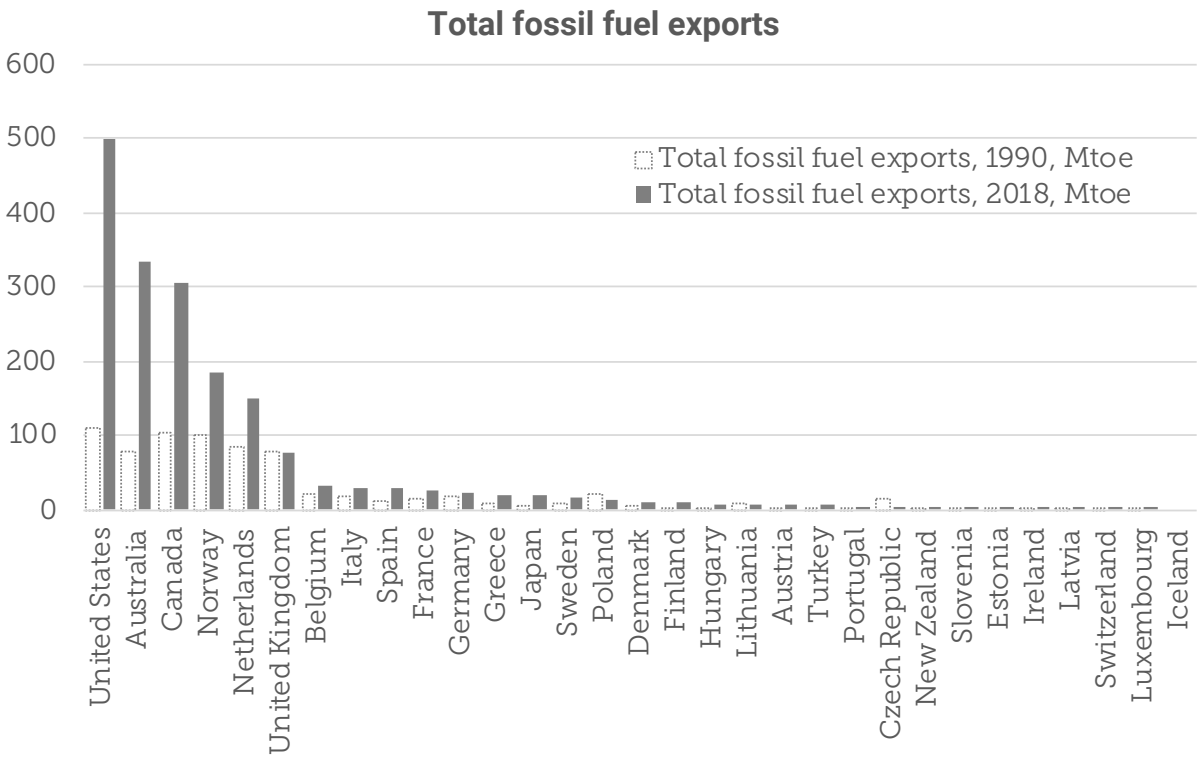


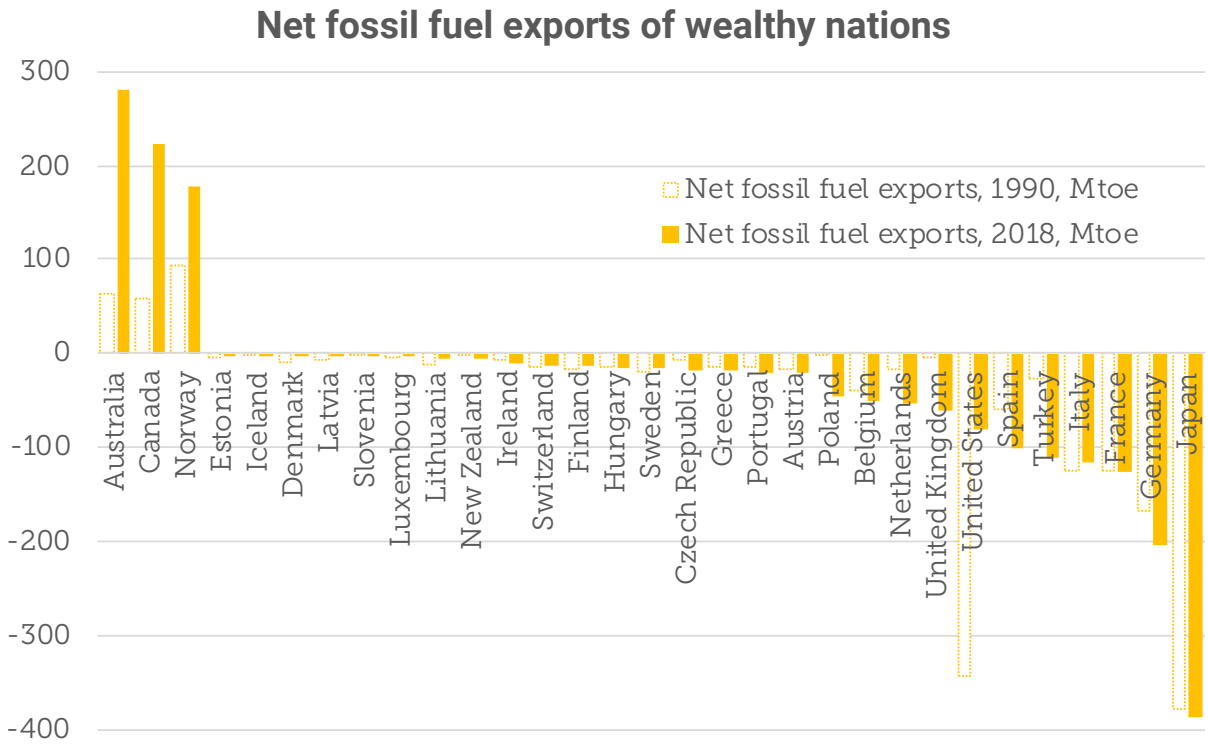


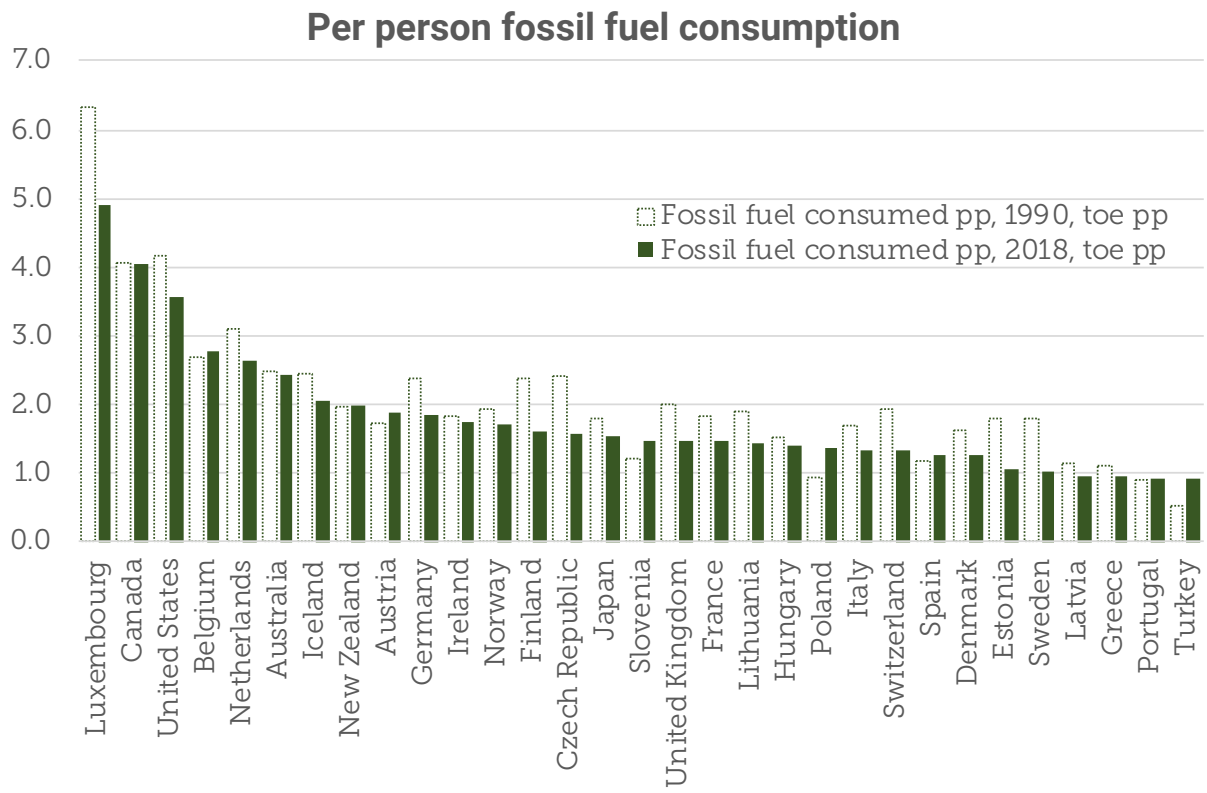




NB: See main text of methodology for important notes.


Total fossil fuel exports
600
500
400
300
200
100
0
Total fossil fuel exports, 1990, Mtoe
Total fossil fuel exports, 2018, Mtoe
United States
Australia
Canada
Norway
Netherlands
United Kingdom
Belgium
Italy
Spain
France
Germany
Greece
Japan
Sweden
Poland
Denmark
Finland
Hungary
Lithuania
Austria
Turkey
Portugal
Czech Republic
New Zealand
Slovenia
Estonia
Ireland
Latvia
Switzerland
Luxembourg
Iceland


Net fossil fuel exports of wealthy nations
300
200
100
0
-100
-200
-300
-400
Net fossil fuel exports, 1990, Mtoe
Net fossil fuel exports, 2018, Mtoe
Australia
Canada
Norway
Estonia
Iceland
Denmark
Latvia
Slovenia
Luxembourg
Lithuania
New Zealand
Ireland
Switzerland
Finland
Hungary
Sweden
Czech Republic
Greece
Portugal
Austria
Poland
Belgium
Netherlands
United Kingdom
United States
Spain
Turkey
Italy
France
Germany
Japan



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