

THE AMBITION CALL

The Ambition Call provides country recommendations for immediate climate action in response to the UN Secretary-General's request for countries to:

- present concrete, realistic plans that are compatible with the latest IPCC Special Report on global warming of 1.5°C
- enhance their NDCs by 2020 and
- reduce GHG emissions by 45% over the next decade, and to net zero by 2050.¹

The 2019 Summit in Osaka saw the G20 countries (with the exception of the USA) reaffirming their commitments to fully implement the Paris Agreement.² Many have already announced their willingness to increase their mitigation targets, aiming for net-zero emissions by 2050.

AUSTRALIA

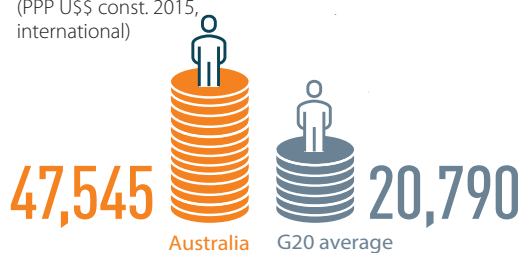


GREENHOUSE GAS (GHG) EMISSIONS
(INCL. FORESTRY) PER CAPITA
(tCO₂e/capita)



Data from 2015 | Source: PRIMAP 2018

GDP PER CAPITA
(PPP US\$ const. 2015,
international)



Source: World Bank 2017

HUMAN
DEVELOPMENT
INDEX



Data from 2017 | Source: UNDP 2018

RECOMMENDED ACTIONS

#1

Phase out coal-fired power plants by 2030 and achieve 100% renewable electricity generation in the 2030s.

#2

100% share of sales of new passenger cars to be zero-emissions before 2035.

#3

Decarbonise the entire energy system (demand and supply sectors) by 2050.



Climate Transparency is a global partnership with a shared mission to stimulate a 'race to the top' in G20 climate action and to shift investments towards zero carbon technologies through enhanced transparency. Climate Transparency is made possible through support from the Federal Ministry for Environment, Nature Conservation and Nuclear Safety (BMU), through the International Climate Initiative, ClimateWorks Foundation and the World Bank Group.

<https://www.climate-transparency.org/>



Climate Analytics Australia is a branch of Climate Analytics, a non-profit climate science and policy institute. Building on strong networks, including through cooperation with universities and other research institutions, Climate Analytics Australia focuses on the development of climate policy and energy transformation strategies in the Asia-Pacific Region. Climate Analytics Australia develops projects aiming to inform policymakers and stakeholders of climate policy options around fossil fuel phase-out and renewables phase-in strategies and related benefits for social and economic development, as well as issues relating to just transition.

<https://climateanalytics.org/>

Phase out coal-fired power plants by 2030 and achieve 100% renewable electricity generation in the 2030s

#1

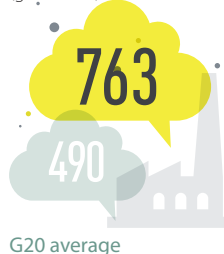
In 2018, Australia's electricity sector was the largest contributor to emissions and represented 33% of the national total.³ Currently, power generation is dominated by fossil fuels (81% in 2018), in particular coal (60% in 2018) and renewables represent only a small share of the fuel mix (19% in 2018), lower than the G20 average.⁴ The renewable energy target will expire in 2020 and there are virtually no other national policies to push for a higher share of renewables in electricity generation. Coal has prominently featured in government statements on energy security and the future of Australia's power system. The government continues to plan to underwrite a new coal power plant, despite nine coal power stations being retired in the past five years due to lack of economic viability.^{5,6}

The state of South Australia is a global leader with up to 53% share of wind and solar PV in 2018.⁷ In 2017 alone, an estimated 20,800 battery storage systems were installed in Australia.⁸ Most of these were sold with rooftop solar photovoltaic panels, driven by rising retail rates and the desire to maximise energy independence.⁹



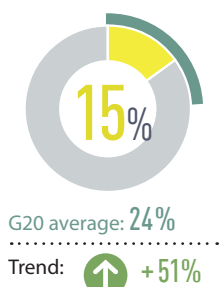
POWER SECTOR

EMISSIONS INTENSITY OF THE POWER SECTOR (gCO₂/kWh)



Data from 2016
Source: Enerdata 2018

SHARE OF RENEWABLES IN POWER GENERATION (incl. large hydro)



Data from 2017
Source: Enerdata 2018

What does this mean?

A full coal phase-out by 2030 is key to Australia's contribution to achieving the Paris Agreement temperature goal.¹⁰ Renewable energy is already the cheapest option for new power generation in Australia.¹¹ Installation of renewable energy and storage facilities and the need for new skills and infrastructure in the industry will spur investment in local communities and generate more jobs, while continued investment in coal will lead to stranded assets. Halting coal's use for

electricity production would bring important economy-wide benefits for the country by reducing ambient air pollution, which reportedly causes premature deaths, increases healthcare costs and slows the economy due to lost working days.

Additional development benefits



SDG 3

Renewables reduce air pollution when displacing polluting energy sources, such as coal.



SDG 8

Development of industry related to renewable energy and its supply chain supports full employment through the creation of decent jobs.



SDG 9

Development and integration of new clean technologies supports sustainable industrialisation and infrastructure upgrading.



SDG 11

When displacing coal-fired power plants, renewables help limit the environmental impact of cities by reducing the amount of GHG and air pollutants from power generation.



SDG 15

Renewables contribute to conservation of natural habitats through reduced air and water pollution and decreasing water consumption, especially when displacing more polluting or intensive alternatives, such as coal.

Good practice in other countries

The **UK** was the first national government to announce a commitment to phase out unabated coal use, setting a target date of 2025.¹² Starting from 35% in 2005, the share of coal-fired power generation went down to 9% in 2016.



Denmark has been a pioneer and global leader in supporting renewable energy, increasing its share in power generation from 5% to 65% in 1994–2015 and decreasing its coal share in power generation from 83% to 25%, pledging to phase out coal by 2030.¹³

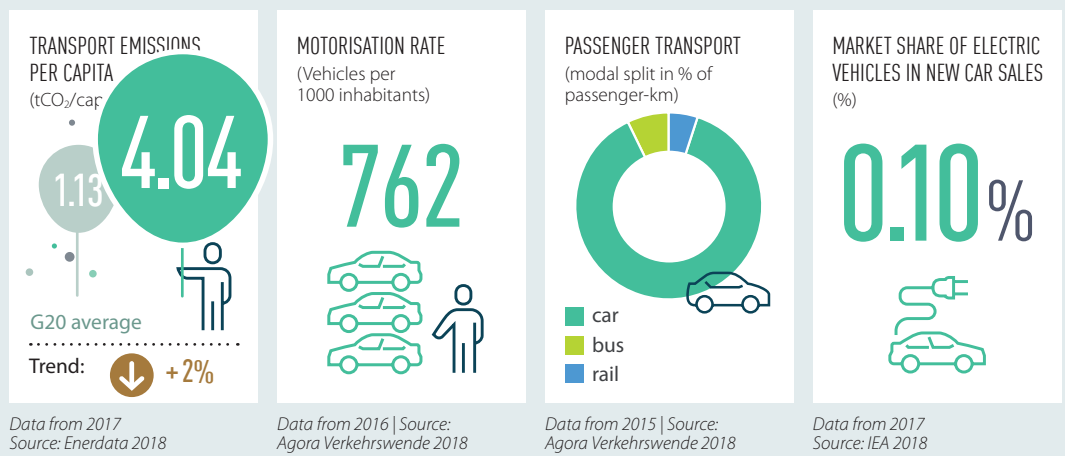


100% share of sales of new passenger cars to be zero-emissions before 2035

#2

Australia's transport emissions continue growing but with few policies in place to limit this growth. Emissions per capita for the sector (4.04 tCO₂/capita) are almost four times higher in Australia than the average in the G20 (1.13 tCO₂/capita).¹⁴ In contrast to other developed countries and major economies, Australia does not have any efficiency or emissions standards for passenger vehicles, which cause the largest share of emissions of the sector.^{15,16} Australia's combined vehicle fleet of 19.2 million vehicles is one of the world's most polluting and least efficient, with an emissions intensity of 262 gCO₂ per vehicle kilometre.^{17,18}

TRANSPORT SECTOR



To reach the Paris Agreement temperature goal, the last combustion engine vehicle must be sold by 2035.¹⁹ However, the current national uptake rate for new electric

vehicles is only 0.1%,²⁰ compared to 3.8% at the global level in December 2018.²¹ To address this and align the transport sector with recent findings of the IPCC Special Report on

global warming of 1.5°C, Australia should adopt the target of 100% sales of zero-emission vehicles before 2035.



What does this mean?

Adopting a goal of 100% sales of zero-emission vehicles before 2035 would be a key step in decarbonising the passenger transport sector. Most of Australia's transport fuel is imported either as oil to be refined in Australia or as refined fuel products, so this action would also help significantly decrease this reliance on energy imports, as well as reduce

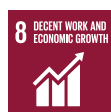
air and noise pollution. This action will also help align Australia's climate policies with the Paris Agreement long-term temperature goal and the findings of the IPCC Special Report on global warming of 1.5°C.

Additional development benefits



SDG 3

Switching to zero emissions vehicles reduces air pollution by lowering fuel use and improves mental health and well-being by reducing noise.



SDG 8

Zero-emissions vehicles increase resource efficiency by reducing fossil fuel use and help decouple growth from environmental degradation. New vehicle and fuel types contribute to technological and infrastructure upgrading.



SDG 9

Development and integration of zero carbon vehicles and associated infrastructure (e.g. charging network) supports sustainable industrialisation, adoption of clean technologies and infrastructure upgrading.



SDG 11

Shifting to zero carbon vehicles contributes to access to safe, sustainable transport systems for all and significantly reduces air pollution in cities.



SDG 12

Switching to zero carbon vehicles increases resource efficiency, reduces air pollution and can support adoption of sustainable practices, such as encouraging users to reduce their transport related emissions.

Good practice in other countries

In its National Transport Plan 2018-2029, published in 2016,



Norway announced that cars and light vans will be zero-emission vehicles by 2025.²²

France has announced an end to the sales of petrol and diesel cars by 2040.²³



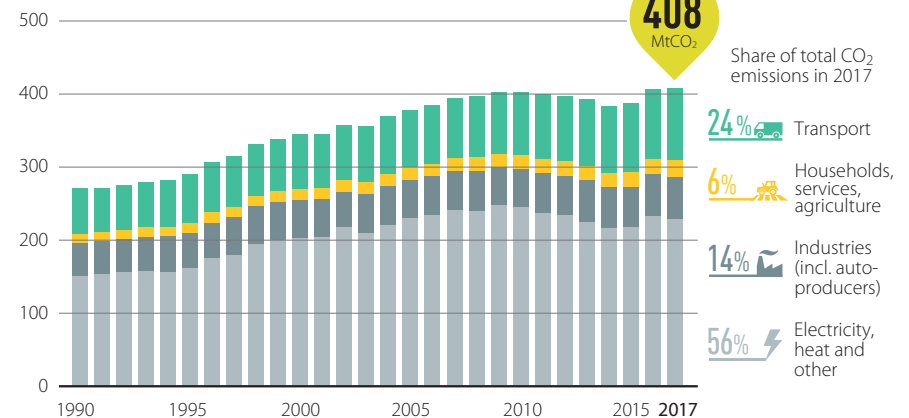
Decarbonise the entire energy system (demand and supply sectors) by 2050

#3

In 2017, the share of Australia's TPES from fossil fuels was 94%, whereas renewables made up only 6% of the total energy mix.²⁴ Australia has the G20's second lowest share of zero-carbon fuels in the energy mix and the highest carbon intensity.²⁵ Still, Australia's climate policy continues to focus on propping up the coal industry and has announced it will no longer provide funds to the Green Climate Fund (GCF) and will continue to subsidise fossil fuel extraction and export.²⁶ Australia's emissions from fossil fuels and industry continue to rise and are now 7% above 2005 levels, with increase of around 1% per year on average since 2014.²⁷ To align with the Paris Agreement of 1.5°C temperature limit, Australia needs to decarbonise the entire energy system by 2050.²⁸



ENERGY RELATED CO₂ EMISSIONS

Emissions from fuel combustion (MtCO₂/year)

What does this mean?

CO₂ emissions from energy constitute the largest driver for overall GHG emissions in Australia. In 2018, the energy sector emitted more than 440 MtCO₂e, or over 80%, of total national emissions.²⁹ Accordingly, decarbonising the entire energy system by 2050 would place Australia on a pathway to reach Paris Agreement's 1.5°C temperature

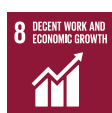
limit. Apart from decarbonising the power sector, Australia has many opportunities to transition away from fossil fuels by 2050 in all energy sectors, replacing heating processes in industry with electricity from renewable energy sources or with green hydrogen based on renewable energy.³⁰

Additional development benefits



SDG 3

Decarbonising the energy sector will reduce air pollution by displacing polluting energy sources, such as coal, oil and gas.



SDG 8

Development of industry related to renewable energy and zero carbon technologies supports full employment through creation of decent jobs.



SDG 9

Development of industry related to renewable energy and its supply chain supports full employment through the creation of decent jobs, and innovation in related technologies.



SDG 11

When renewables and other zero carbon technologies displace the use of fossil fuels, they help limit the environmental impact of cities by reducing GHG and air pollutants from their activities.



SDG 15

Renewables and other zero carbon technologies contribute to conservation of natural habitats through reduced air and water pollution and decreasing water consumption, especially when displacing more polluting or intensive alternatives, such as fossil fuels.

Good practice in other countries

In June 2019, the **UK** government passed a law to move the UK to net zero emissions by 2050.³¹



In 2018, **Denmark** set the goal to build a 'climate-neutral society' by 2050. Accordingly, the Danish government updated its 2030 target to -70% below 1990 (which would cut emissions in half from current levels).³²



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