Government Commitments to Climate Change

Australia has committed to achieving net zero emissions by 2050

Australia will reduce greenhouse gas emissions by 43% below 2005 levels by 2030

- The Government's <u>Climate Change Act</u> passed the Senate in September 2022. Australia is one of 27* nations to have legislated its net zero targets. The Act:
 - outlines Australia's greenhouse gas emissions reduction targets of a 43% reduction from 2005 levels by 2030 and net zero by 2050
 - requires the minister to prepare and table an annual climate change statement
 - requires the <u>Climate Change Authority</u> to give the minister advice concerning the annual statement and future greenhouse gas emissions reduction targets
 - > provides for periodic reviews of the operation of the Act.
- The commitment forms part of Australia's Nationally Determined Contribution (NDC) to the United Nations Framework Convention on Climate Change (UNFCCC), submitted in June 2022.

*Source: https://eciu.net/netzerotracker. Including EU member states, there are 41 countries with legislated net zero targets

Recent updates

- <u>Budget 2023-24</u> sets out \$4.6 billion in new climate-related spending commitments for climate action out to 30 June 2030. This is further to the \$24.9 billion of climate-related spending committed in the October 2022–23 Budget.
- In MYEFO 2023-24, the Government committed around \$3 billion from 2023-24 to 2029-30 in additional funding to support Australia's net zero economic transformation, including renewable, reliable and affordable energy sources and developing clean energy industries.
- The Government is developing a climate reporting framework for Commonwealth budgeting purposes. The four categories of climate action are:
 - > reducing emissions in Australia's energy system and the broader economy through investments in:
 - Renewable energy
 - Energy efficiency
 - Pollution prevention and control
 - o Clean transportation.
 - > improving climate change adaptability and disaster resilience, including:
 - Creating climate resilience
 - Sustainable management of living natural resources
 - Sustainable water management
 - Climate change information support systems.
 - > international climate leadership.
 - building the Government's climate capability.

Reducing emissions in Australia's energy system and broader economy

<u>Powering Australia Plan</u> – The Government has committed \$23 billion to grow and modernise Australia's electricity grid, boosting energy performance and supporting electrification. Powering Australia policies include:

- Rewiring the Nation (RWN), which provides \$20 billion in concessional loans and equity for investment in transmission infrastructure projects. RWN will upgrade Australia's energy grid to allow and grow the National Electricity Market (NEM) renewables share to 82% by 2030. This includes committing up to:
 - o Low-cost debt for Tasmania's Battery of the Nation projects and low-cost finance to Marinus Link
 - \$2.25 billion of concessional financing to Victorian projects:
 - o This includes Renewable Energy Zones in Victoria, offshore wind projects and the Victoria-New South Wales Interconnector (VNI West).
 - o \$4.7 billion to unlock critical transmission and Renewable Energy Zones in partnership with the New South Wales government.
 - o \$3 billion to modernise the electricity networks in Western Australia.
- The \$2.0 billion <u>Household Energy Upgrades Fund</u> will create low-interest loans and fund upgrades to social housing to improve energy performance. This includes:
 - o Injecting \$1 billion into the Clean Energy Finance Corporation to unlock more than 110,000 low-interest loans for energy-saving home upgrades in partnership with private lenders.
 - \$300 million to partner with states and territories to make energy performance upgrades to social housing.
 - \$310 million for the Small Business Energy Incentive, providing small businesses with an additional deduction on spending on electrification and energy efficiency.

Reducing emissions in Australia's energy system and broader economy

- Powering the Regions Fund, which provides more than \$1.9 billion to support the decarbonisation of existing industries and the development of new clean energy industries. This includes three streams:
 - o \$600 million for Safeguard Transformation
 - \$400 million for Industrial Transformation
 - \$400 million for Critical Inputs to Clean Energy Industries (CICEI).

<u>Hydrogen Headstart program</u> - The Government will invest \$2.0 billion in the new Hydrogen Headstart program, providing revenue support for large-scale renewable hydrogen projects through competitive hydrogen production contracts.

The <u>National Reconstruction Fund (NRF)</u> is the Government's plan to build Australia's industrial base. Up to \$3 billion from the \$15 billion NRF will be directed toward clean energy investments such as:

- Wind Turbine Manufacturing
- Battery and Solar panel supply chain and manufacturing
- o Modernising steel and aluminium manufacturing
- Hydrogen Electrolysers
- Bioenergy and biomass
- o Innovative packaging solutions for waste reduction.

National Electric Vehicle Strategy – aims to increase the uptake of electric vehicles (EVs) to reduce emissions. The strategy sets out three key objectives:

- o increase the supply of affordable and accessible EVs
- o establish the resources, systems and infrastructure to enable rapid EV uptake
- o encourage increased EV demand.

Reducing emissions in Australia's energy system and broader economy

<u>Critical Minerals Strategy 2023</u> – The Critical Minerals strategy plan outlines the Government's plan to grow Australia's critical mineral sector. The strategy will guide future policy decisions to maximise the national benefits of Australia's significant critical minerals endowments. Export Finance Australia manages the Government's Critical Minerals Facility, which was expanded to \$4 billion in October 2023.

<u>APS Net Zero 2030</u> – In November 2023, the Government released the Net Zero in Government Operations strategy. The strategy commits to reducing the Australian Public Service's emissions to Net Zero by 2030.

Key actions include:

- transitioning to renewable energy, facilitated through a whole of government coordinated procurement of electricity
- improving building energy efficiency and electrification
- transitioning the APS fleet to Zero Emission Vehicles where appropriate.

Improving climate change adaptability and disaster resilience

Resilience and adaption strategy

The <u>National Climate Resilience and Adaptation Strategy 2021 – 2025</u> includes three objectives to better anticipate, manage and adapt to our changing climate:

- Driving investment and action through collaboration
- o Improving climate information and services
- o Assessing progress and improvement over time.

Since July 2022, the Government has provided \$1.5 billion to individuals through the Australian Government Disaster Recovery Payment and Disaster Recovery Allowance. From 2023–24, the Government is providing up to \$200 million a year over the next five years through the <u>Disaster Ready Fund</u> to support communities to strengthen their resilience against natural disasters.

The 2022-23 Budget allocated \$15.9 million over four years to engage with First Nations people on climate adaptation and mitigation, including establishing the Torres Strait Climate Centre of Excellence.

Biodiversity and climate change

Australia is a Party to the <u>UN Convention on Biological Diversity</u> (CBD).

<u>Australia's Strategy for Nature 2019-2030</u> outlines Australia's approach to biodiversity conservation. The Strategy is being updated to show how Australia will contribute to the goals of the <u>Kunming-Montreal Global Biodiversity Framework</u>.

The <u>Nature Positive Plan</u> will invest \$121 million to establish Environment Protection Australia and \$51.5 million to establish Environment Information Australia.

Climate change adaptation and inclusive social outcomes

The new Net Zero Authority will promote the orderly and positive economic transformation associated with achieving net zero emissions.

The <u>Net Zero Economy Agency</u> commenced in the Department of the Prime Minister and Cabinet on 1 July 2023 as a precursor to establishing a legislated Net Zero Authority. The agency is chaired by Greg Combet AM and is supported by an <u>advisory board</u> to design and develop the Net Zero Authority, which will ensure its effective operation.

The new Net Zero Economy Agency will:

- o Support workers in emissions-intensive sectors to access new employment, skills and support as the net zero transformation continues.
- o Coordinate programs and policies across government to support regions and communities to attract and take advantage of new clean energy industries and set those industries up for success.
- Help investors and companies to engage with net zero transformation opportunities.
- o Build community understanding and engagement with net zero transformation.

Australia is pursuing the majority of its climate, emissions, energy and technology polices and initiatives through the following government departments

Key Government Agencies

 Department of Climate Change, Energy, the Environment and Water (DCCEEW)

The following agencies report to DCCEEW

- Australian Energy Market Operator (AEMO)
- Clean Energy Regulator (CER)
- Clean Energy Finance Corporation (CEFC) the world's biggest 'green bank' Clean Energy Innovation Fund
- o Australian Renewable Energy Agency (ARENA)
- The Climate Change Authority
- Bureau Of Meteorology
- Department of Industry, Science and Resources (DISR)
 - CSIRO Climate Science Centre
- Department of Agriculture, Fisheries and Forestry (DAFF)
- <u>Department of Foreign Affairs and Trade</u> (DFAT)
- Department of Prime Minister and Cabinet Net Zero Agency

Progress Reporting

- Emissions Reporting
 - Quarterly Update of Australia's National Greenhouse Gas
 Inventory
 - National Greenhouse Gas Inventory Paris Agreement Inventory
 - o <u>State and Territory Greenhouse Gas Inventories</u>
 - National Inventory by Economic Sector
 - o <u>Australia's National Inventory Report</u>
- National Greenhouse and Energy Reporting Scheme (NGERS) (CER)
- Quarterly Carbon Market Report (CER)

Progress Towards Climate Change Commitments

Australia's climate change commitments include:

The Paris Agreement.

Australia submitted its revised <u>National Determined Contribution</u> (NDC) to the UNFCCC in June 2022.

This included:

- Reaffirming a target of net zero emissions by 2050.
- Committing to reduce Greenhouse gas emissions by 43% from 2005 levels.
- Committing to providing an annual statement to parliament on progress towards these targets.

Paris Agreement Emissions Reduction Target:

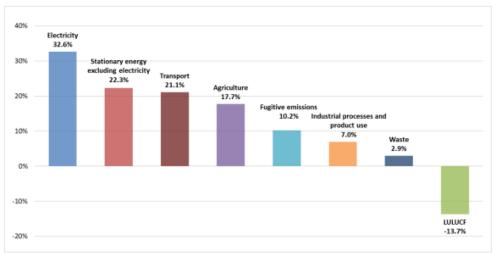
- To reduce emissions by the above levels, Australia will need to reduce emissions to around 350mt CO2-e.
- Australia will not use over-achievement (or carryover) from its 2020 and Kyoto Protocol targets to meet its Paris Agreement targets.

Progress to date

Emissions Reduction Target:

- The <u>National Greenhouse Gas Inventory</u> Quarterly Update June 2023 shows Australia's annual emissions at 466 Mt CO2-e, 24.5% lower than 2005 levels.
- The relatively unchanged annual emissions to March 2023 reflect ongoing decreases in electricity, fugitive and stationary emissions, offset by an increase in transport and agriculture emissions.

Share of total emissions by sector for the year to June 2023



Source: Department of Climate Change, Energy, the Environment and Water

Source: Department of Climate Change, Energy, the Environment and Water



Progress Towards Climate Change Commitments

Domestic programs

The <u>Clean Energy Finance Corporation</u> (CEFC) is the world's largest government-owned 'green bank' and has mobilised over \$12.7 billion for clean energy projects with a total value of around \$48.8 billion.

<u>The Australian Renewable Energy Agency</u> (ARENA) has committed more than \$2.25 billion in funding to 663 renewable energy projects with across Australia, leveraging more than \$7.5 billion in additional private and public sector investment.

The <u>Clean Energy Regulator</u> manages several programs to accelerate carbon abatement. They have administrative responsibilities for the:

- National Greenhouse and Energy Reporting Scheme
- Emissions Reduction Fund
- o Renewable Energy Target
- Australian National Registry of Emissions Units.

Renewable Energy Target includes

The large-scale Renewable Energy Target (LRET):

- o encourages investment in large-scale renewable power stations through a Renewable Energy Certificate Market for the creation and sale of certificates called large-scale generation certificates (LGCs).
- o The accreditation of power stations and creation of LGCs continues under the LRET until 2030.

The small-scale renewable energy scheme (SRES):

o encourages adopting small-scale renewables such as household PV and solar water heaters. Australia has the highest uptake of rooftop solar in the world, with over 3 million solar systems (1 in 3 households) installed across Australia.

Progress Towards Climate Change Commitments

Domestic programs

The Emissions Reduction Fund (ERF):

- Invests in projects reducing emissions by incentivising organisations and individuals to adopt practices/technologies that reduce emissions
 through the issue of <u>Australian Carbon Credit Units</u> (ACCUs). Entities buy ACCUs eligible carbon abatement schemes, which can be traded in the
 market or sold back to the Government.
- <u>A review of the ACCU scheme</u> in July 2022 found the scheme is essentially sound and recommended several changes to enhance the integrity and effectiveness of the system. The Government accepted all <u>16 recommendations</u> in principle, and the implementation plan is published <u>here</u>.

Safeguard Mechanism

The Safeguard Mechanism (SM) requires Australia's largest greenhouse gas emitters to keep their net emissions below an emissions baseline.

The SM applies to all facilities emitting more than 100k tonnes of CO₂-e a year, including in:

- mining
- o oil and gas production
- manufacturing
- transport
- waste facilities.

About 215 large industrial facilities are covered by the SM, accounting for around 28% of national emissions.

Under recent changes to the SM, these emitters will be required to cut emissions by an average of 4.9 per cent each year to 2030 to help meet the 43 per cent reduction target and aim to reach net zero by 2050.

International Climate Framework

Australia is a member of many international working parties on climate change, partnerships and related agreements:

Australia participated in COP 28 in the UAE in Nov/Dec 2023

- Paris Agreement (joined in 2016), Kyoto Protocol (signed 1998, ratified in 2007) & Cancun Pledge (2010)
 - United Nations Framework Convention on Climate Change (UNFCCC)
 - o <u>Latest submission to UNFCCC NDC Registry</u> June 2022
 - Intergovernmental Panel on Climate Change (IPCC)
- Asia-Pacific Rainforest Partnership
- International Partnership for Blue Carbon
- International Coral Reef Initiative
- Global Oceans Alliance
- Mission Innovation (global clean energy initiative)
- <u>Leadership Group for Industry Transition</u> (committed to achieving the Paris Agreement)
- International Solar Alliance
- At the G7 Summit in June 2021, Australia joined the High Ambition Coalition for Nature and People.

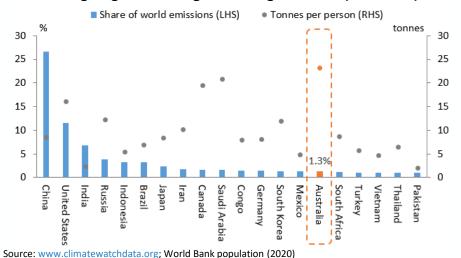
<u>Australia's international clean energy</u> <u>partnerships</u>

Recently finalised:

- Australia has joined the 'Climate Club', joining the G7 and other high ambition countries.
- o Australia Germany Hydrogen Accord
- Australia-India Letter of Intent on New and Renewable Energy Technology
- o Australia-India Green Hydrogen Taskforce
- Australia Japan Partnership on Decarbonisation through Technology
- Australia-Netherlands Memorandum of Understanding on Cooperation in the Field of Hydrogen
- Australia-Republic of Korea Low and Zero Emissions Technology Partnership
- Australia Singapore Initiative on Low Emissions Technology for Maritime and Port Operations
- Australia-UK partnership Clean Technology Partnership
- Australia United States Climate, Critical Minerals and Clean Energy Transformation Compact
- Australia-United States Net Zero Technology Acceleration Partnership.

Australia's Progress Towards Climate Change Commitments

20 largest greenhouse gas emitting countries (inc LULUC)



- Australia produces around emissions annually.
- · Australia has a revised target of reducing emissions by 43 per cent below 2005 levels by 2030.
- Australia's quarterly emissions have fallen by around 25% since 2005. Australia has reduced its emissions faster than many similar developed countries.

1.3% of global greenhouse gas

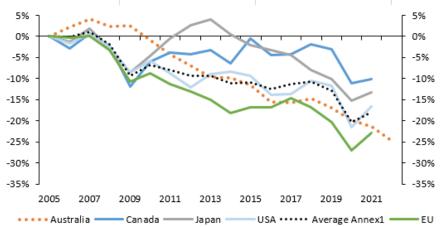
170 160 150 150 140 140 130 130 120 120 110 110 100

····· Actual emissions — — Seasonally adjusted and weather normalised — — Trend

Australia's decline in quarterly GHG emissions

Source: Department of Climate Change, Energy, the Environment and Water

Australia's decline in GHG emissions since 2005



Australia's emissions targets compared to G7

Country	Target
Australia	43% below 2005 levels by 2030
Canada	40-45% below 2005 levels by 2030
France	55% below 1990 levels by 2030
Germany	55% below 1990 levels by 2030
Italy	55% below 1990 levels by 2030
Japan	46% below 2013 levels by 2030
UK	68% below 1990 levels by 2030
USA	50-52% below 2005 levels by 2030

Source: www.climatewatchdata.org

Source: UNFCCC Annex1 parties. Last inventory year 2021.

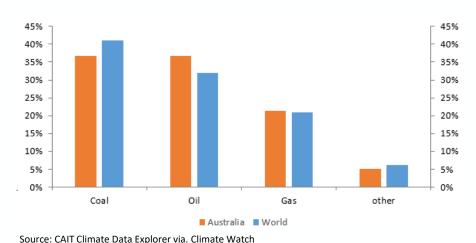
Year 2021, 2022 data for Australia: Department of Climate Change, Energy, the environment and Water - National Greenhouse Gas Inventory Quarterly Update:

December 2021, December 2022

Mt CO₂-e

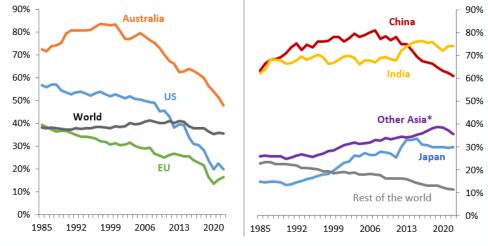
Australia's Progress Towards Climate Change Commitments

Carbon emissions by fuel source (2022)



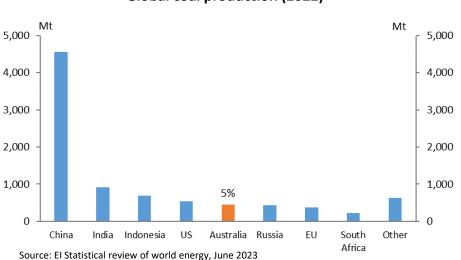
- Australia's overall emissions by fuel source profile is similar to the world average.
- Australia currently generates around 48% of its electricity from coal; however, this proportion decreases as the share of renewables increases.

Coal-fired electricity generation as a share of region's total electricity generation



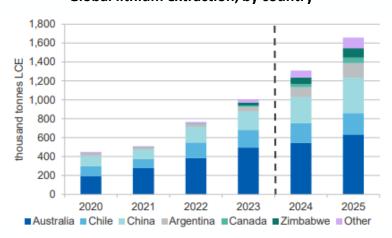
Source: Energy Institute statistical review of world energy, June 2023

Global coal production (2022)



- Australia accounts for around 5% of global coal production and around 1% of coal consumption.
- Australia leads global lithium extraction – a key component of electric vehicle batteries
- By 2028, lithium and base metals (and their raw material inputs) are forecast to equal the export value of all coal types combined.[^]

Global lithium extraction, by country



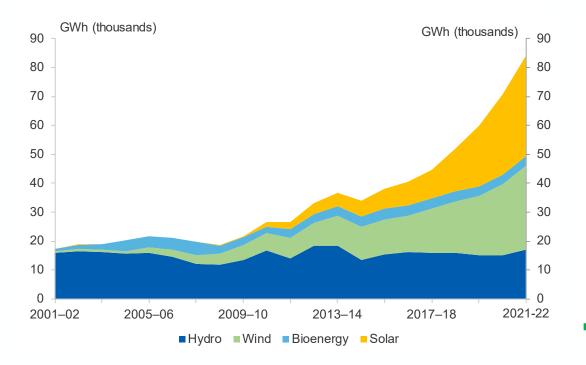
Source: Department of Industry, Resources and Energy Quarterly Report December 2023

 $^{{}^{\}wedge}$ Source: Department of Industry, Resources and Energy Quarterly Report March 2023

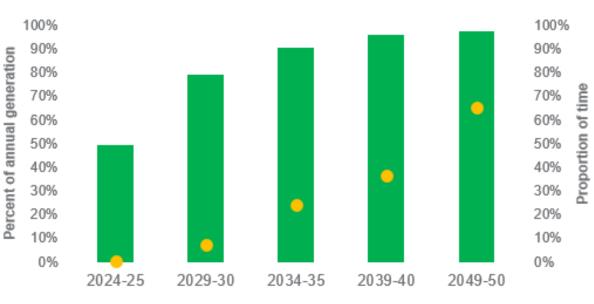
Australia's technology focus on renewable energy

- Australia plans to grow the renewable share of the National Electricity Market to 82 per cent by 2030.
- Australia has the highest uptake of rooftop solar globally, with around 3.4 million rooftop installations in use.

Historical electricity generation from renewable sources



NEM annual share of renewable generation and 100% resource potential, 2025-2050 Step Change scenario



■ Renewable share of annual generation (LH axis) • 100% renewable resource potential (RH axis)

 $Source: \ Department \ of \ Climate \ Change, \ Energy, \ the \ Environment \ and \ Water$

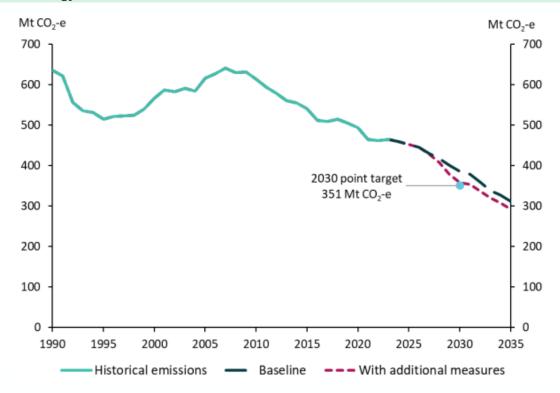
Source: AEMO 2022 Integrated System Plan

Australia's emissions projections

Australia's emissions projections show how Australia is tracking against its 2030 emissions reduction commitments by examining the potential impacts of policies and measures to reduce Australia's greenhouse gas emissions. Under the 'with additional measures' scenario, Australia is expected to:

- reduce its greenhouse gas emissions by 42% below 2005 levels by 2030
- be 1% below Australia's multi-year 2021-2030 emissions budget.

The 'with additional measures' scenarios builds on the baseline policies and includes renewable electricity target of 82% by 2030 and additional measures under the National Electric Vehicle Strategy.



Source: Department of Climate Change, Energy, the Environment and Water – Australia's emissions Projections report 2023

A Sustainable Finance Strategy

AOFM Sovereign Green Bonds

The <u>Australian Sustainable Finance Strategy</u> will assist the domestic financial markets keep pace with global developments in sustainable finance and supports Australia's transition to net zero and other sustainability goals.

The three key pillars of the strategy are:

Pillar 1: Improve transparency on climate and sustainability

Pillar 2: Financial system capabilities

Pillar 3: Australian Government leadership and engagement.

Issuance of the Sovereign Green Bonds forms part of Pillar 3 of the Sustainable Finance Strategy.

Sovereign Green bonds will help ensure high-quality Australian Government projects with robust environmental outcomes are financed, delivered, monitored and reported.

A Sustainable Finance Strategy

AOFM Sovereign Green Bonds

The AOFM has announced that the launch of Green Treasury bonds will occur in the June quarter of 2023-24. The bonds will mature in June 2034. Australian Government green bonds will finance government programs with positive climate change and environmental outcomes.

The Australian Government Green Bond Framework and accompanying Second Party Opinion (SPO) report are available on the <u>AOFM's website</u>. The framework details:

- the categories of projects that green bonds will fund
- arrangements for selecting projects
- how issuance proceeds will be managed
- ongoing reporting on projects.

The size of the bond will depend on the number and scale of eligible programs selected for green bond financing.

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