



Australian Government

Australian Office of Financial Management

AOFM

Australian Government Climate Change commitments, policies and programs

A guide for AGS investors

July 2021

Australian Government Statements

“Our goal is to reach net zero emissions as soon as possible and preferably by 2050”

Prime Minister Scott Morrison’s speech: National Press Club, Canberra, 1 February 2021

All Australian States have stated or made commitments to reach Net Zero by 2050.*

This will be achieved via both Renewable Energy Commitments as well as a Net Zero Carbon Commitment.

The Australian Federal government plans to reduce emissions and build economic growth through the use and investment of technologies.

* Source: [Australian Government Climate Change Authority](#)

International Climate Framework

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

- **Paris Agreement (joined in 2016)**, Kyoto Protocol (signed 1998, ratified in 2007) & Cancun Pledge (2010)
 - United Nations Framework Convention on Climate Change (UNFCCC)
 - [Latest submission to UNFCCC NDC Registry December 2020](#)
 - 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)
- [Leadership Group for Industry Transition](#) (committed to achieve the Paris Agreement)
- [International Solar Alliance](#)
- At the G7 Summit in June 2021, Australia joined the High Ambition Coalition for Nature and People.

Australia's Bilateral Technology Agreements

Recently signed or being finalised:

- Japan - Australia Partnership on Decarbonisation
- Australia - Germany Hydrogen Accord
- Australia and Singapore Establishment of a \$30million partnership to accelerate the deployment of low emissions technology fuels and technologies.
- Australia and the UK to finalise a Clean Energy Technology Partnership.

Source: [Department of Industry, Science, Energy and Resources](#)

Australia's Progress towards Climate Change Commitments

The Government's climate change commitments include:

The Paris Agreement commits Australia to limiting global warming to well under 2 degrees and preferably to keep it no higher than 1.5 degrees compared to pre industrial levels.

Australia submitted its revised National Determined Contribution (NDC) to the UNFCCC in Dec 2020.

Paris Agreement Emissions Reduction Target:

- Under the Cancun agreement, reduce emissions by 5 per cent below 2000 levels.
- Under the Paris agreement, Australia will reduce emissions by 26 to 28 per cent below 2005 levels by 2030. To reduce emissions by the above levels Australia will need to reduce emissions to 455-443mt CO₂-e.

Progress to date

Emissions Reduction Target:

- The [National Greenhouse Gas Inventory](#) Quarterly Update December 2020 shows Australia's annual emissions at **499mt CO₂-e**, the lowest in over 30 years!
- Under a scenario aligned with the [National Technology Investment Roadmap](#), Australia's emissions are projected to be 29 per cent below 2005 levels by 2030.

Australia's Progress towards Climate Change Commitments

Renewables Program Targets:

- Renewable Energy Target (RET) made up of
- [the Large Scale RET](#): aiming to deliver over 23 per cent (33 000 gigawatt hours) of Australia's electricity supply in 2020
- [The Small Scale Renewable Energy Scheme](#): supporting household solar installations

Australia has the highest uptake of solar globally. [Clean Energy Regulator](#) data shows that more than 2.68 million rooftop solar power systems have been installed in Australia in total, as of 31 December 2020; that means one in four homes have solar panels on their roof.

Progress to date

Renewable Energy Target:

- In the [Quarterly Carbon Market Report – March 2021](#), the Clean Energy Regulator announced that Australia had exceeded its Large-scale Renewable Energy Target of 33,000 GWh in January 2021.
- [IRENA's Renewable Capacity Statistics 2021](#) report indicates that, in total across 2018, 2019 and 2020, Australia has added the highest wind and solar capacity per capita of any developed nation at 578 watts per person.

Australia's Technology and Innovation focus on Climate Change

Australia's investment in innovation and technology is conducted by several government agencies and funds

- The Clean Energy Finance Corporation (CEFC) is the world's largest government owned 'green bank' and has mobilised over \$9.1 billion for clean energy projects with a total value of over \$31 billion.
- Australian Renewable Energy Agency (ARENA) has contributed \$1.7 billion in funding to 579 renewable energy projects with a total value of more than \$6.84 billion since 2012.
- The Clean Energy Regulator via the administration of the Emissions Reduction Fund has already invested \$4.55 billion to reduce emissions.

Pathway to a lower emissions future through technology and innovation:

- [National Hydrogen Strategy](#)
- Future Fuels Strategy (to be released soon)
- Future Fuels Package (grants from the Future Fuels Fund to support public fast charging stations of electric vehicles (EVs))
- Developing a Long Term Greenhouse Gas Emissions Reduction Strategy
- [ARENA Bioenergy Roadmap](#)
- [Climate Change Action Strategy for international development investments](#)
- [Australia Pacific Climate Partnership](#)

Source: [Department of Industry, Science, Energy and Resources](#), [CEFC](#), [ARENA](#), [Treasury – Budget Paper No.1](#)

Technology Investment Roadmap

Australia produced its Technology Investment Roadmap in May 2020

- The first Low Emissions Technology Statement (released Sept 2020) undertaken by a ministerial reference panel chaired by former Australian Chief Scientist, Dr Alan Finkel and including industry, private investment, government and research leaders.
- Highlighted the 5 goals for priority low emissions technologies in Australia:
 - Clean Hydrogen
 - Energy Storage
 - Low Carbon Materials (production of Steel and Aluminium)
 - Carbon Capture and Storage (Afforestation and Reforestation)
 - Soil Carbon (Sequestration of carbon within soils)

Over the next decade, the Government will invest around \$20 billion in low emissions technology and leverage another \$80 billion from the private sector and governments.

Australia will release our **Long Term Emissions Reduction Strategy** prior to COP 26 in November 2021.

Key Government Agencies

- [Department of Industry, Science, Energy and Resources](#)

The following agencies report to the Dept. of Industry et al.:

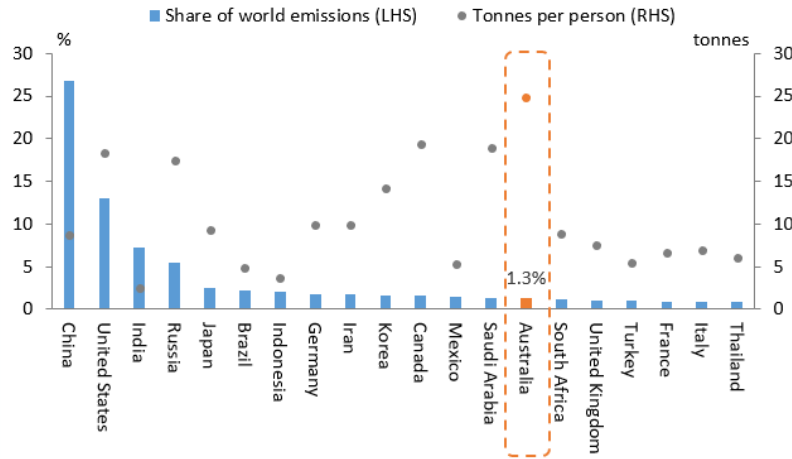
- [Clean Energy Regulator](#)
- [Clean Energy Finance Corporation](#) (world's biggest 'green bank'). [Clean Energy Innovation Fund](#)
- [Australian Renewable Energy Agency](#)
- [The Climate Change Authority](#)
- [CSIRO Climate Science Centre](#)
- [National Climate Science Advisory Committee](#)
- [Department of Agriculture, Water and the Environment](#)
 - [Bureau Of Meteorology](#)
 - [National Environmental Science Program](#)
- [National Climate Change Adaptation Research Facility](#)
[Australian Research Council](#)
- [Department of Foreign Affairs and Trade](#)

Tracking and Reporting

- [National Greenhouse Accounts – Inventory](#) (Department of Industry, Science, Energy and Resources)
 - [Quarterly Update of Australia's National Greenhouse Gas Inventory](#)
 - [Australian Greenhouse Emissions Information System](#)
 - [State and Territory Greenhouse Gas Inventories](#)
 - [National Inventory by Economic Sector](#)
 - [Australia's National Inventory Report](#)
 - [Land Sector Reporting](#)
- [National Greenhouse and Energy Reporting Scheme \(NGERS\)](#) (Clean Energy Regulator)
- [Quarterly Carbon Market Report](#) (Clean Energy Regulator)

Australia's Progress towards Climate Change Commitments

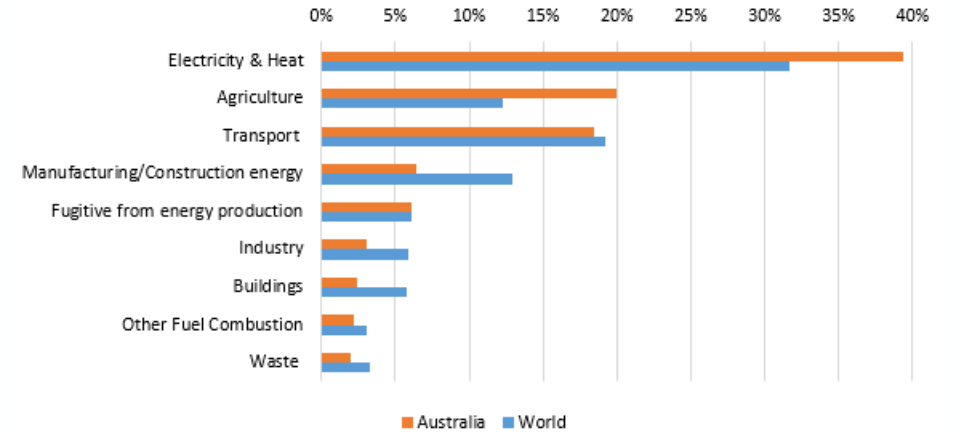
20 largest greenhouse gas emitting countries (ex LULUC)



- Australia produces around 1.3% of global green house gas emission on an annual basis.
- Australia is on track to achieve its target of reducing emissions by 26 to 28 per cent below 2005 levels by 2030.
- The largest expected reductions are in the electricity sector, with improvements also expected in the agriculture and transport sectors.

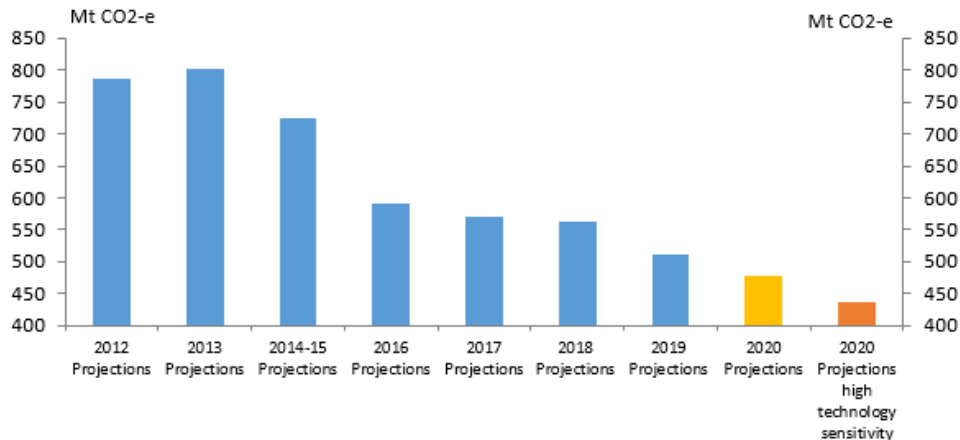
Source: www.climatewatchdata.org; World Bank population (2018)

Greenhouse gas emissions by sector, 2016 (ex LULUC)



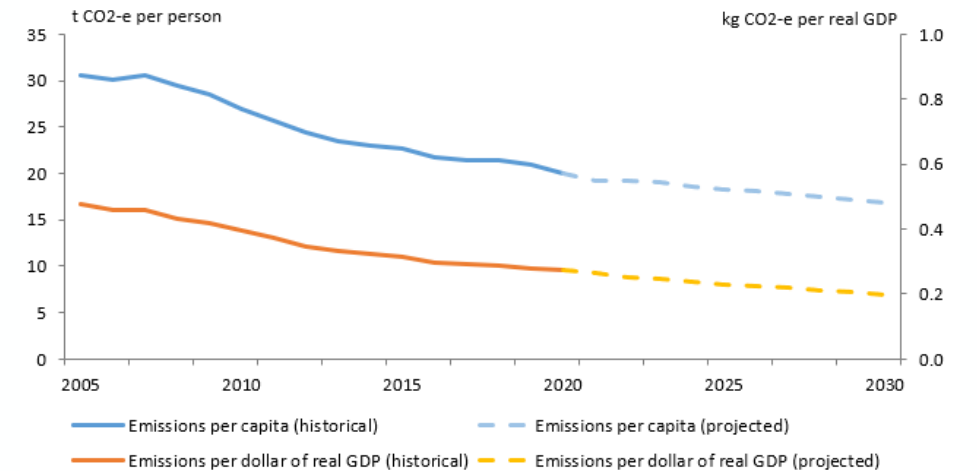
Source: Our World in Data based on Global Carbon Project; BP; Maddison; UNWPP

Australia's projected emissions in 2030 over time, Mt CO2-e



Source: Department of Industry, Science, Energy and Resources

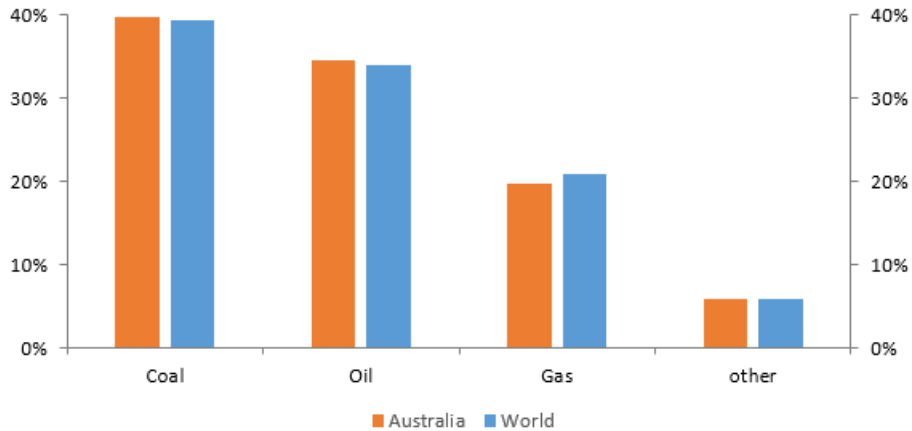
Australia's emissions per person and emissions intensity of GDP



Source: Department of Industry, Science, Energy and Resources

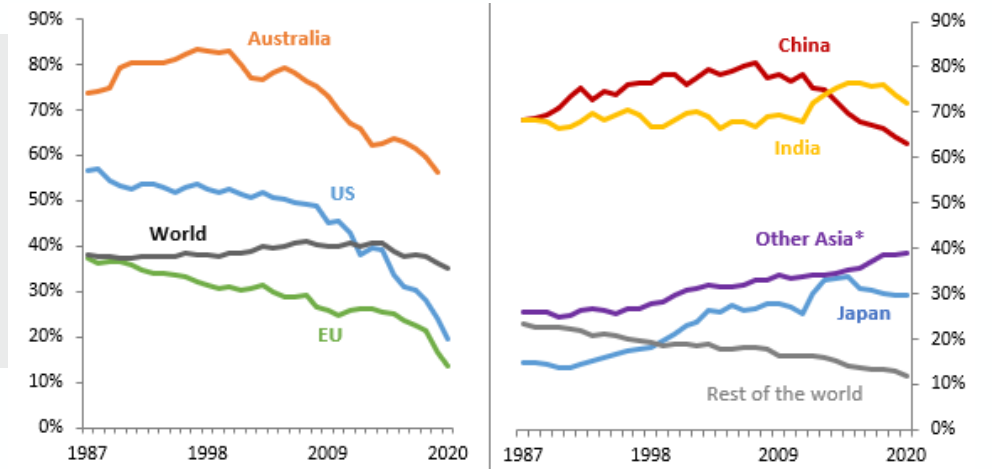
Australia's Progress towards Climate Change Commitments

Carbon emissions by fuel source



- Australia's overall emissions by fuel source profile is similar to the world average.
- Australia currently generates just over 50% of its electricity from coal, however this proportion is decreasing as the share of renewables increases.

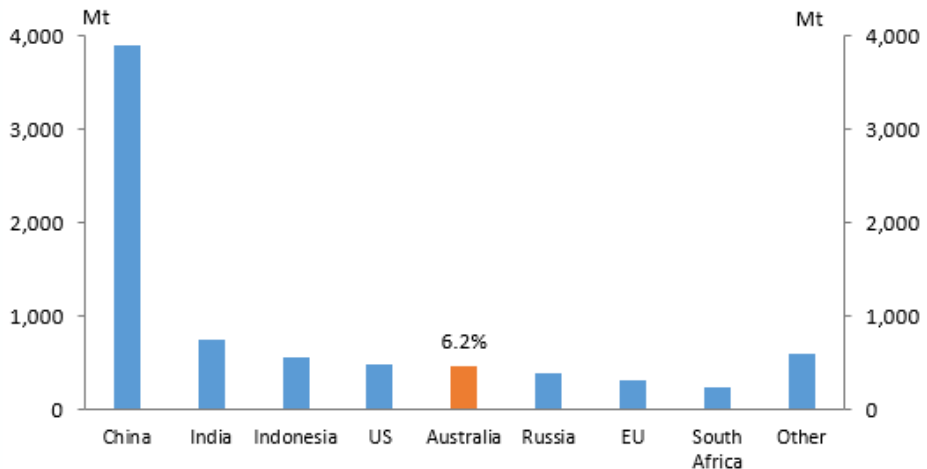
Coal-fired electricity generation as a share of region's total electricity generation



Source: BP statistical review of world energy, June 2021

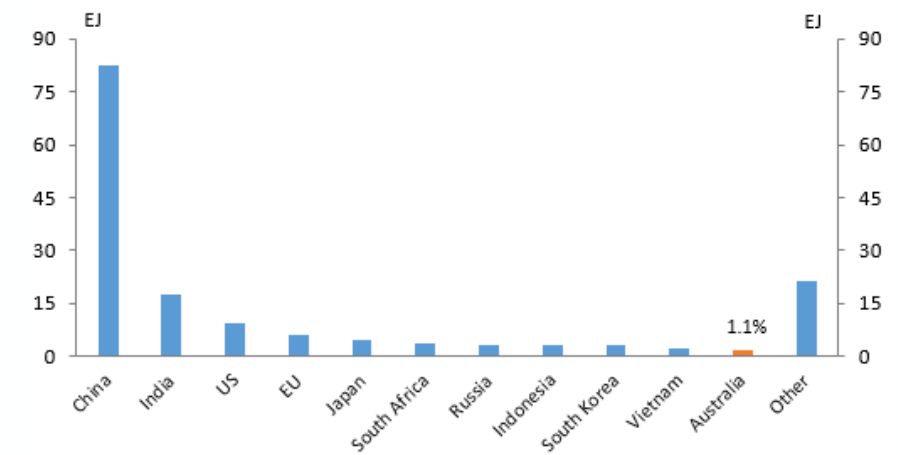
Source: CAIT Climate Data Explorer via. Climate Watch

Global coal production (2020)



- Australia accounts for around 6% of global coal production and around 1% of coal consumption.
- Coal exports comprise a relatively small proportion of global coal production.
- Australia is a significant exporter of coal. It contributes around 20% of thermal coal exports and 50% of metallurgical coal exports.

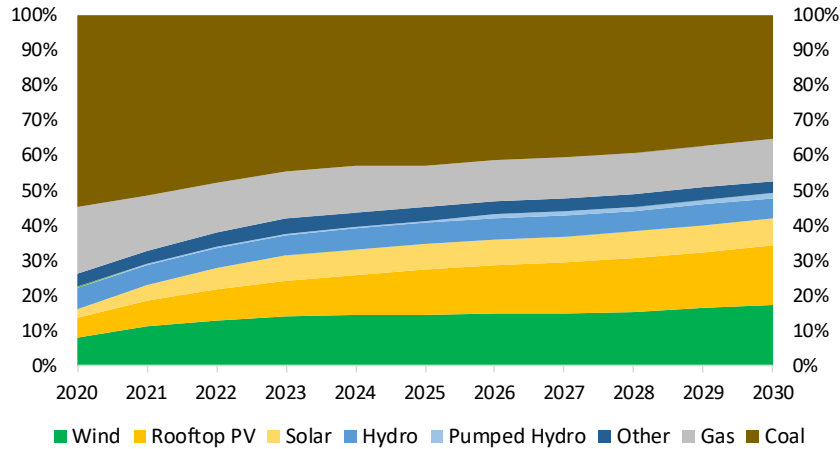
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Source: BP statistical review of world energy, June 2021

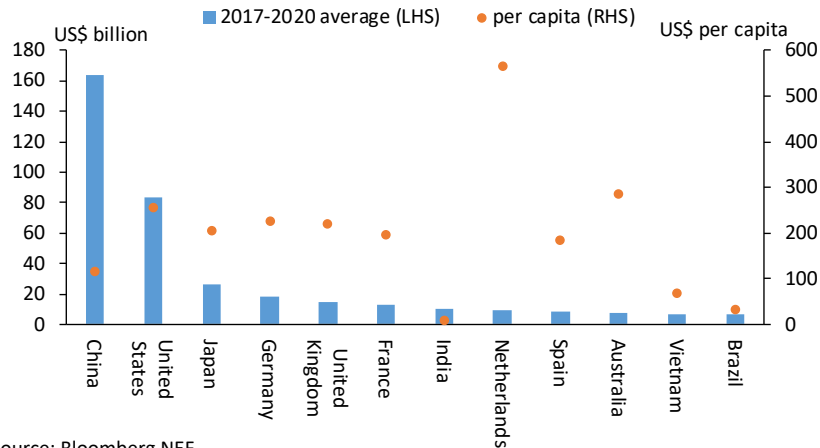
Australia's Technology and Innovation focus on Climate Change

Australia's electricity projections by fuel type



Source: Department of Industry, Science, Energy and Resources

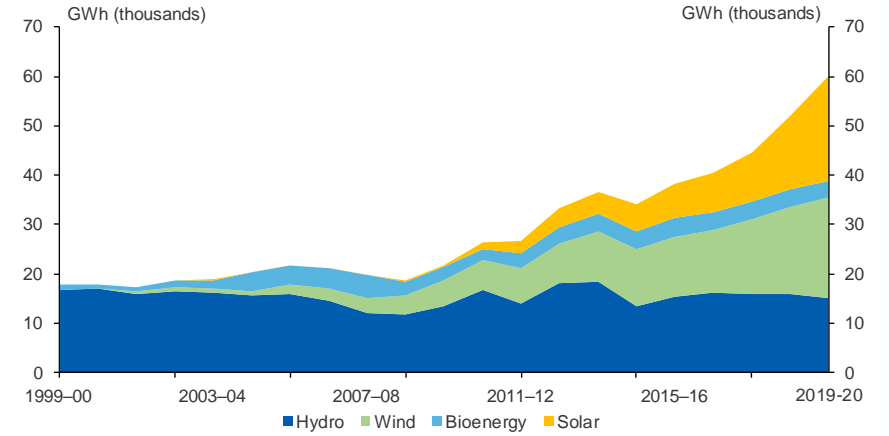
New renewable energy investment 2017-2020



Source: Bloomberg NEF

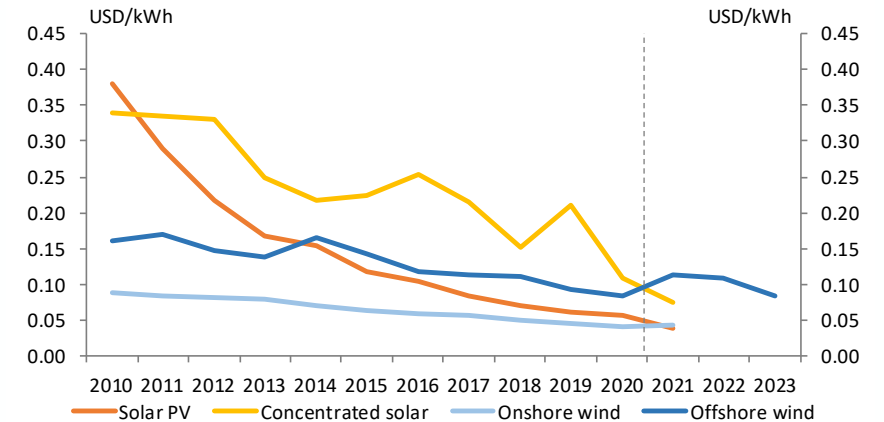
- The share of electricity generated in Australia by renewables is forecast to increase from around 22% in 2020 to 50% in 2030.
- Australia is one of the largest overall and per capita investors in renewable energy.
- Declining renewable energy costs, especially solar is contributing to high investment and uptake rates.
- Australia has the highest uptake of solar globally, with more than 25% of homes with rooftop solar PV.

Australia electricity generation from renewable sources



Source: Department of Industry, Science, Energy and Resources

Declining LCOE for renewable energy



Source: International Renewable Energy Agency