

# Australia's progress towards a low carbon economy

## Recent Progress

Australia has embarked on the transition to a low carbon economy, with an increase in activity across the economy to improve energy efficiency and reduce greenhouse gas emissions.

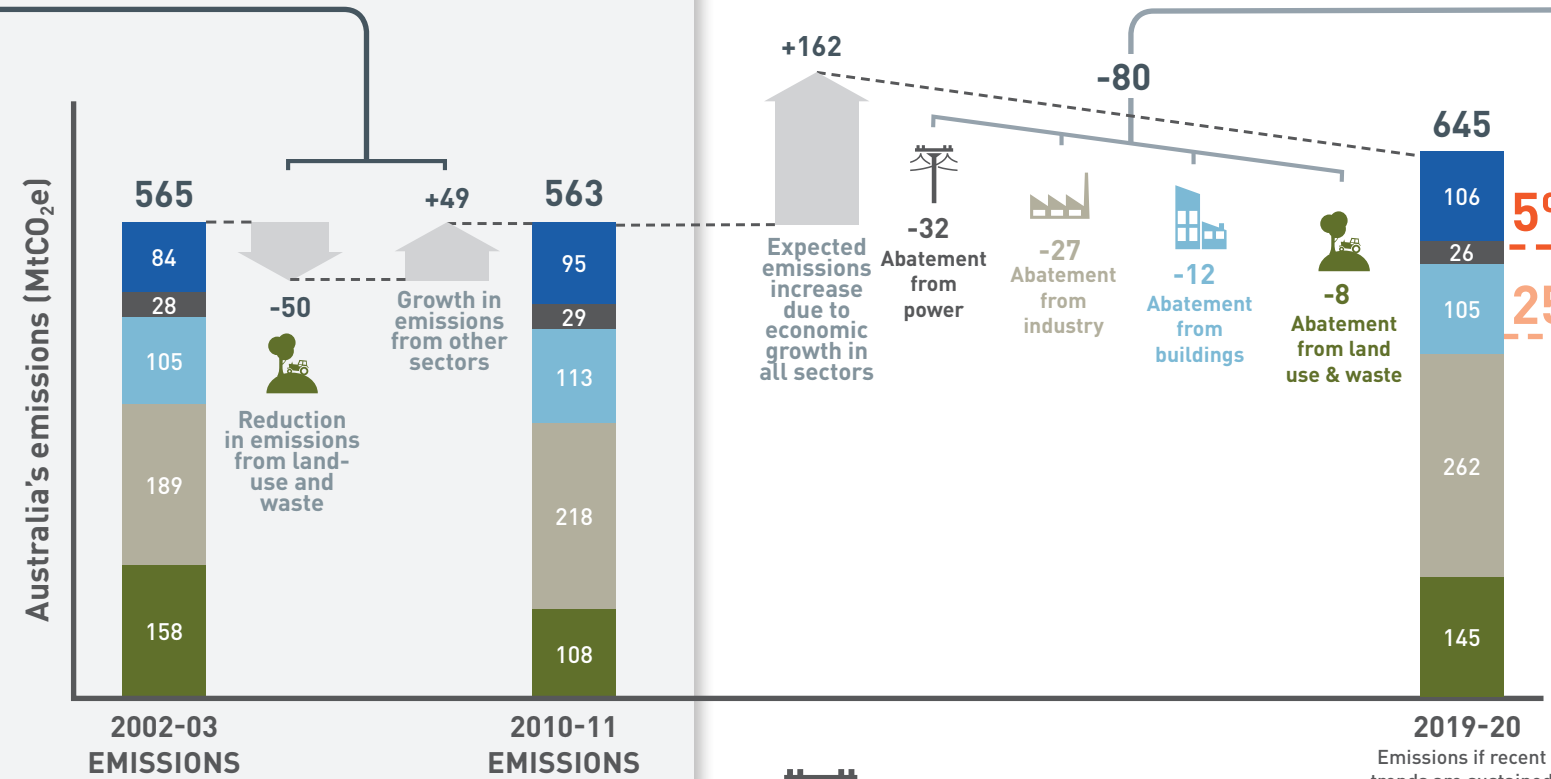
### Legend

- POWER
- BUILDINGS
- INDUSTRY
- LAND-USE AND WASTE
- TRANSPORT & OTHER\*

1

**THE AUSTRALIAN ECONOMY HAS GROWN STRONGLY OVER THE LAST DECADE, BUT EMISSIONS HAVE REMAINED STABLE**

This was mostly due to reduced deforestation, increased plantation forestry and reduced coal generation which resulted from a combination of more renewables and lower demand for grid-supplied electricity



## Outlook to 2020

2

**IF RECENT LEVELS OF EMISSION REDUCTION ACTIVITY ARE SUSTAINED, IT WOULD REDUCE BY HALF THE EXPECTED GROWTH IN EMISSIONS TO 2019-20.**

If the pipeline continues to deliver emissions reductions, and recent trends are sustained, emission reduction activity would be led by continued industrial and residential energy efficiency and renewable energy including large-scale wind and smaller-scale solar PV.

3

### HOW ARE WE DOING?

THIS WOULD GET US OVER 40% OF THE WAY TOWARDS THE 5% MINIMUM 2020 EMISSIONS REDUCTION TARGET.

The remaining years from now to 2019-20 provide time to identify increased incentives to support local action, explore the role of international offsets, and consider increasing the target.

4

### OUR POTENTIAL

AUSTRALIA HAS THE POTENTIAL TO REDUCE EMISSIONS BY AT LEAST 25% BELOW 2000 LEVELS, THE MINIMUM ADVISED BY IPCC SCIENTISTS.

Major remaining opportunities lie in further increasing renewables, avoided deforestation, reforestation, increased energy efficiency in buildings and industry, and a decrease in fugitive emissions from coal mines.

**POWER**

Emissions from power generation dropped by 13% between '08-'09 and '12-'13

↓ 5%

Reduction of 5% in demand for grid-supplied electricity since its peak in 2009-10, equivalent to the annual electricity consumption of Tasmania

↑ 12%

Large-scale renewables now produce 12% of Australia's energy, up from 7% in 2003-04

↓ 14%

Coal generation decreased by 14% since 2003-04, mostly replaced by lower emissions gas and renewables

**INDUSTRY**

Strong improvements in energy efficiency and process emissions partially offset large increases in production

800,000

Over the last 4 years, large industrial companies saved as much energy as around 800,000 households use in a year

↓ 95%

Highly potent PFC emissions from Aluminium reduced by 95% since 1989-90

↑ 58%

Self-generated electricity and other off-grid electricity has increased by 58% between 2008-09 and 2011-12, mostly using lower emissions gas

**BUILDINGS**

Improvements in energy efficiency of new buildings and distributed energy

↓ 32%

New offices now use about 32% less energy for heating, cooling and other base building uses than offices built 10 years ago

6 ★

Most states improved residential energy efficiency standards from 5 to 6 stars in 2010

↑ 1,000,000

Over 1 million homes now have solar panels installed, more than any other country

**LAND-USE AND WASTE**

Large reductions in net emissions from de- & re-forestation more than offset growth in other sectors since 2002-03

52%

Annual area deforested halved since 2003, and area of plantation forests increased by 21%

3,000,000

Almost 3 million hectares (equivalent to 4.2 million football fields) of land being managed to reduce emissions from wildfires

200,000

Increased capture of methane from landfills and wastewater treatment plants, now used to generate enough electricity to power over 200,000 homes

**POWER**

Strong pipeline of renewable energy projects and slow growth in energy demand expected to bring power emissions down further by 2019-20

↑ 113%

Meeting the Renewable Energy Target would more than double renewable generation between 2012-13 and 2019-20

7%

Recent improvements in energy standards expected to drive a reversal of historic growth in energy use per household, leading to a 7% decline by 2019-20

**INDUSTRY**

Across-the-board improvements expected, partially offsetting strong growth in emissions from higher future production

600,000

Energy efficiency projects already in the pipeline could save as much energy annually as 600,000 homes use in a year

**BUILDINGS**

Improved energy standards for buildings and appliances in homes, and distributed energy continuing to increase

**LAND-USE AND WASTE**

Future activity highly dependent on policy certainty and future carbon revenues

30%

By 2019-20, waste from 30% of Australian pigs is expected to be used to generate electricity for their farms

\*This report does not investigate emissions reductions from transport. This sector will be included in future reports. A very small volume of emissions from other activities are not covered in the scope of the report.