

TRACKING 2 DEGREES

Quarterly report Q1 / FY2018

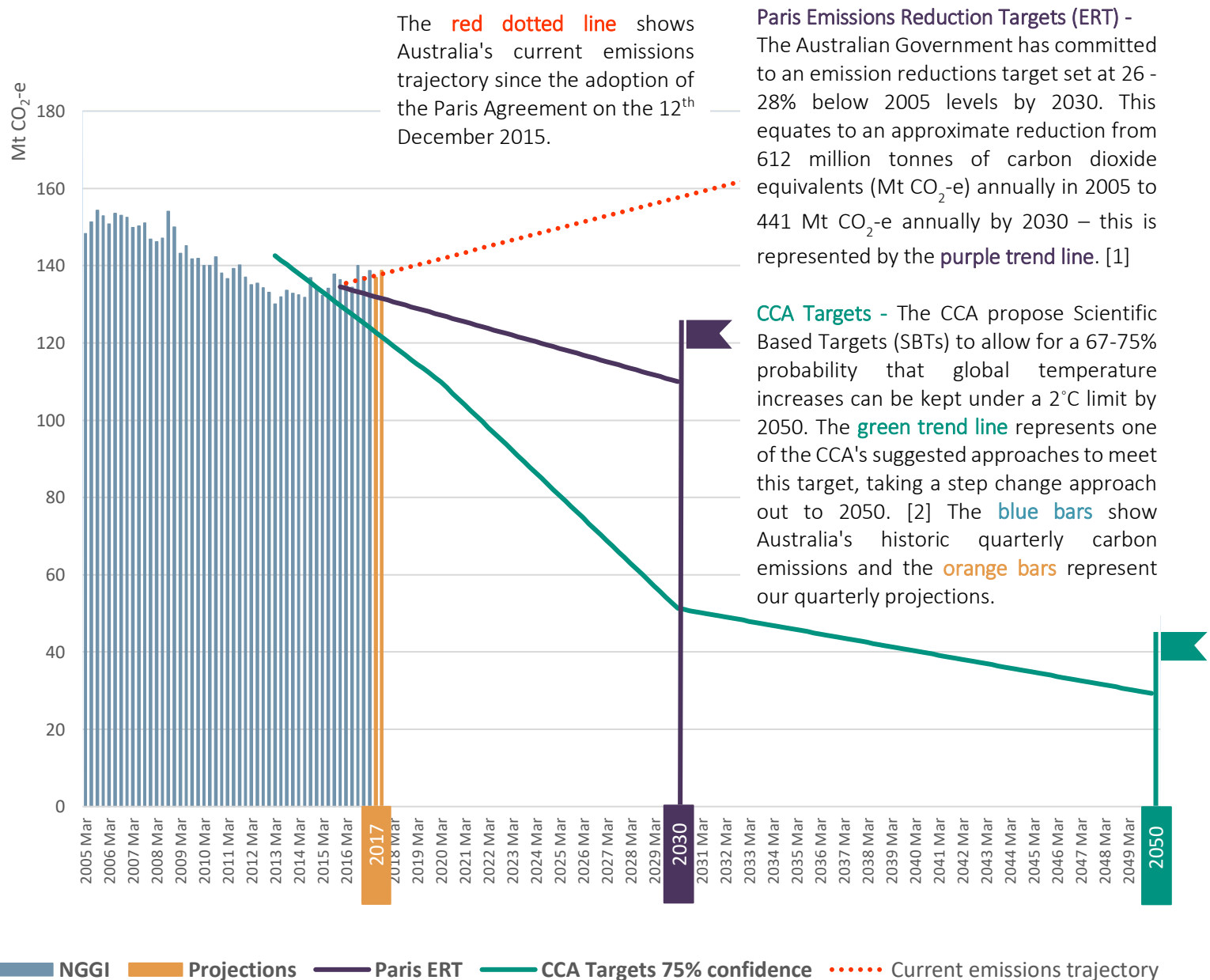
Under the Paris Agreement, the Australian Government has legally committed to reducing our emissions by 26-28% by 2030. However, to ensure global warming remains under 2 degrees, independent body the Climate Change Authority (CCA) has proposed Australia set a national Science Based Target (SBT). This is a target calculated from Australia's share of emissions for a 2°C global outcome. Ndevr Environmental has used this target to model a quarterly emissions budget for Australia.

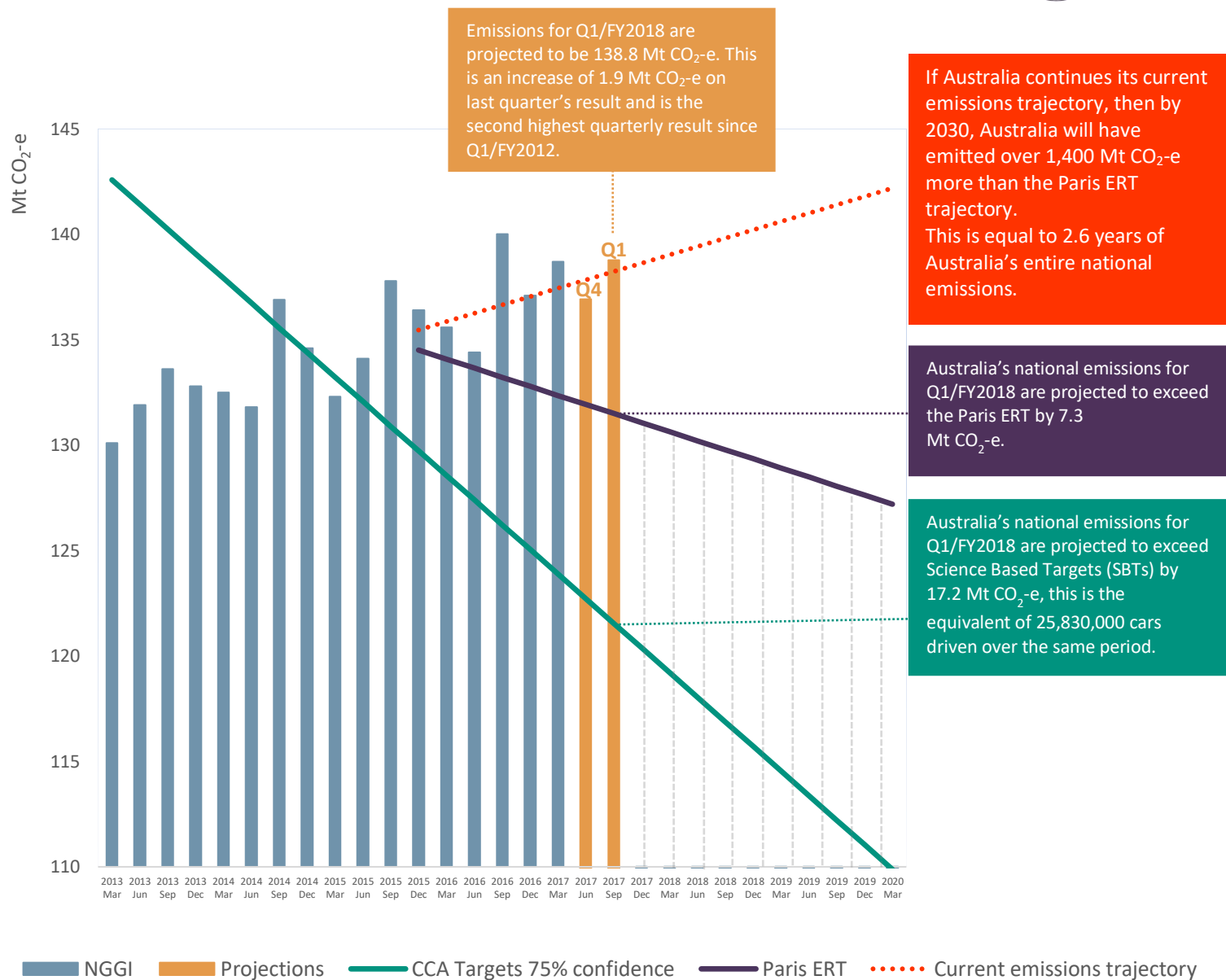
This report tracks Australia's performance against our Paris target and the CCA's carbon budget based on the latest available data, trends and industry movements **for the months of July, August and September 2017 (Q1/FY2018)**. Our results are presented in tonnes of carbon dioxide equivalents (tCO₂-e), 1t CO₂-e is equal to the emissions of a standard 5-seat passenger vehicle driving around 5,400km.

Headline Results

- The emissions for Q1/FY2018 were the second highest quarterly results in five years.
- National Energy Market (NEM) electricity generator emissions fell to three-year lows, driven by a massive increase in wind generated electricity in Victoria and NSW. Despite this, total emissions continue to increase.
- The emissions for Q1/FY2018 are projected to be 7.3 Mt CO₂-e higher than the required trajectory to meet the Paris Agreement and 17.2 Mt CO₂-e higher than the required trajectory to meet Australia's SBTs.
- Transport emissions for Q1/FY2018 are projected to be the highest on record.

AUSTRALIA'S QUARTERLY EMISSIONS PROJECTIONS TO A 2 DEGREE TARGET



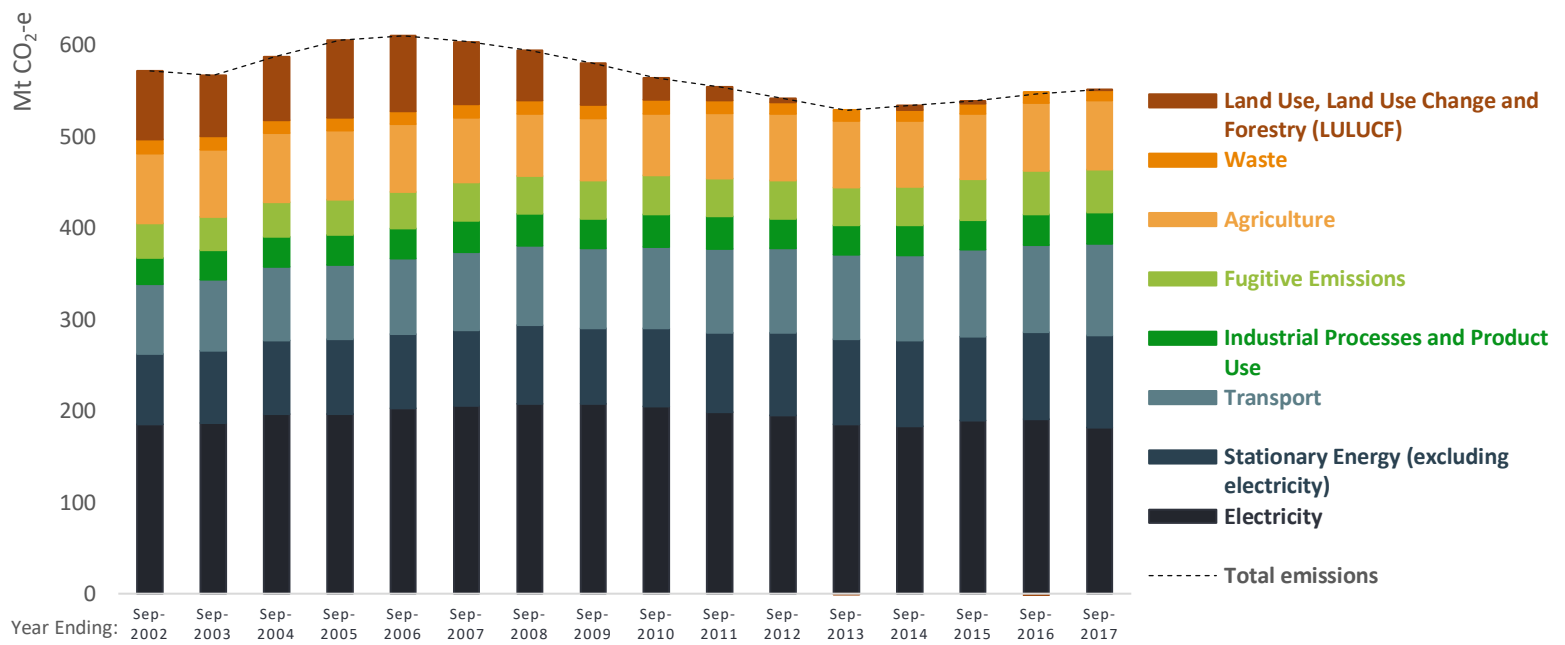


Detailed Findings

- 🔍 Electricity emissions from the NEM for Q1/2018 have fallen to three-year lows due to a decrease in emissions intensity from VIC and NSW; QLD and SA had a net increase in emissions. Emissions from the South West Interconnected System (SWIS) of WA increased 6.3% since the previous quarter.
- 🔍 VIC's energy mix has undergone a drastic transition since the closure of the Hazelwood Brown Coal Power Plant in April 2017. Since the previous quarter (Q4/FY2017), renewable generation increased from 10.6% to 14.0% for the state. The increase was driven by a doubling in wind energy generation. Generation from brown coal, gas and hydro decreased for the quarter.
- 🔍 NSW's energy mix also saw a fall in emissions driven by increased renewables. Since the previous quarter (Q4/FY2017), renewable generation rose from 5.3% to 7.1% driven by an uptake of wind energy which increased by a factor of 2.4. Generation from coal and hydro decreased for the quarter while generation from gas increased.
- 🔍 When excluding Land Use, Land Use Change & Forestry (LULUCF) emissions, the annual emissions result for the calendar year to September 2017 is the highest result on record (records commence calendar year to September 2002).
- 🔍 Transport emissions for Q1/FY2018 are the highest on record (records commencing Q1/FY2002). Diesel makes up 47% of all transport fuels sold in Australia and is the largest contributor of emissions in this sector.
 - » Diesel sales in Australia only increased 0.1% on the previous quarter, but have increased 14.3% since the same quarter last year (Q1/FY2017). Data from the Australian Bureau of Statistics shows that sales of diesel passenger cars in Australia are up 57% since 2012¹.
 - » Aviation fuels make up 16% of all transport fuels sold in Australia, sales of this fuel have also increased 6.2% since the previous quarter and have also contributed to the rise in emissions for this sector.
 - » Petrol sales in Australia make up 31% of all transport fuels sold in Australia and have remained relatively stable for several years.
- 🔍 Since the previous quarter, stationary energy emissions, fugitive emissions and emissions from industrial processes are all projected to increase in line with seasonal fluctuations. Emissions for all other sectors are expected to remain stable or increase slightly.

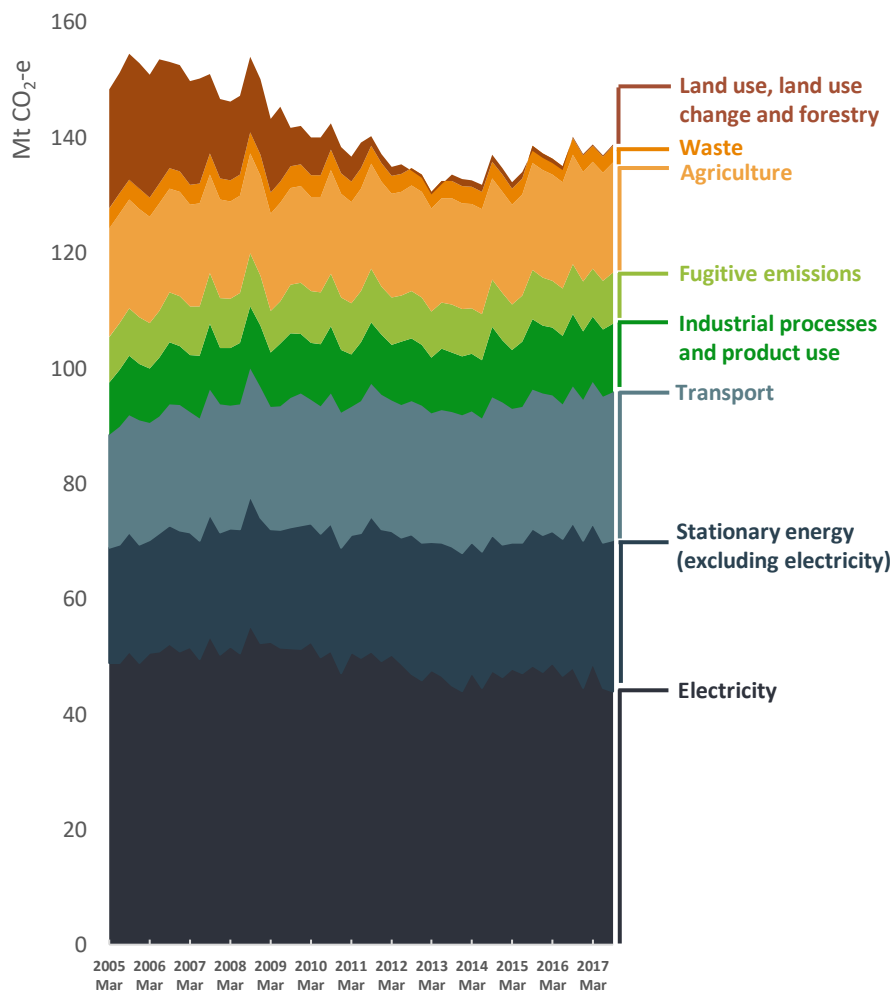
¹ <https://www.motoring.com.au/australians-are-buying-diesels-in-record-numbers-says-abs-108211/>

AUSTRALIA'S ANNUAL EMISSIONS, CALENDAR YEAR TO SEPTEMBER 2017*

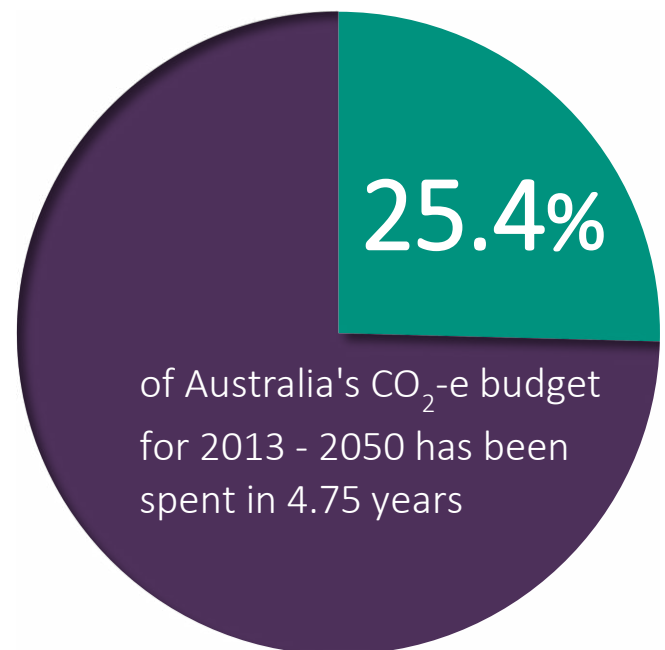


* This graph includes both published Government NGGI data and Ndevr Environmental projections for Q4/FY2017 and Q1/FY2018

AUSTRALIA'S QUARTERLY EMISSIONS BY SECTOR



2 DEGREE BUDGET EXPENDITURE TO DATE



This report has been compiled by Ndevr Environmental, using the latest information available from: AEMO, Office of the Chief Economist, Australian Petroleum Statistics and the Department of the Environment and Energy's National Greenhouse Gas Inventory reports.

GDP trends are sourced from Trading Economics, information about Australian car use is sourced from the National Transport Commission, 2016 and the Australian Bureau of Statistics. Emission factors are sourced from National Greenhouse and Energy Reporting (Measurement) Determination 2008.

Government and CCA target information is available at the following sources:

[1] - Australian Government (2015), Australia's 2030 Climate change target, Commonwealth of Australia

[2] - CCA (2013), Historical emissions from the Treasury and DIICCSRTE

Acknowledgement: David Leitch, ITK Services Australia

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