

TRACKING 2 DEGREES

Quarterly report Q4 / FY2017

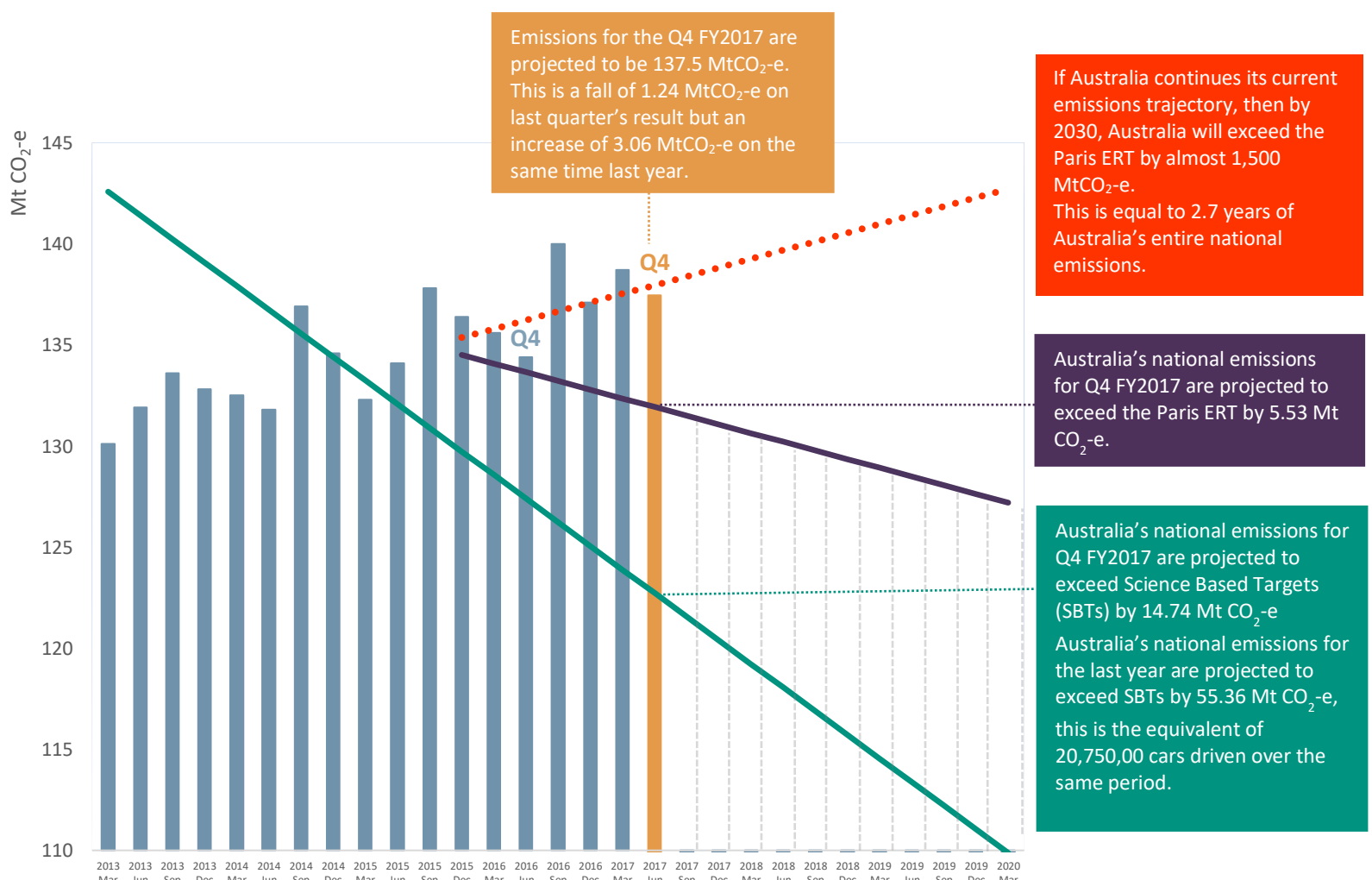
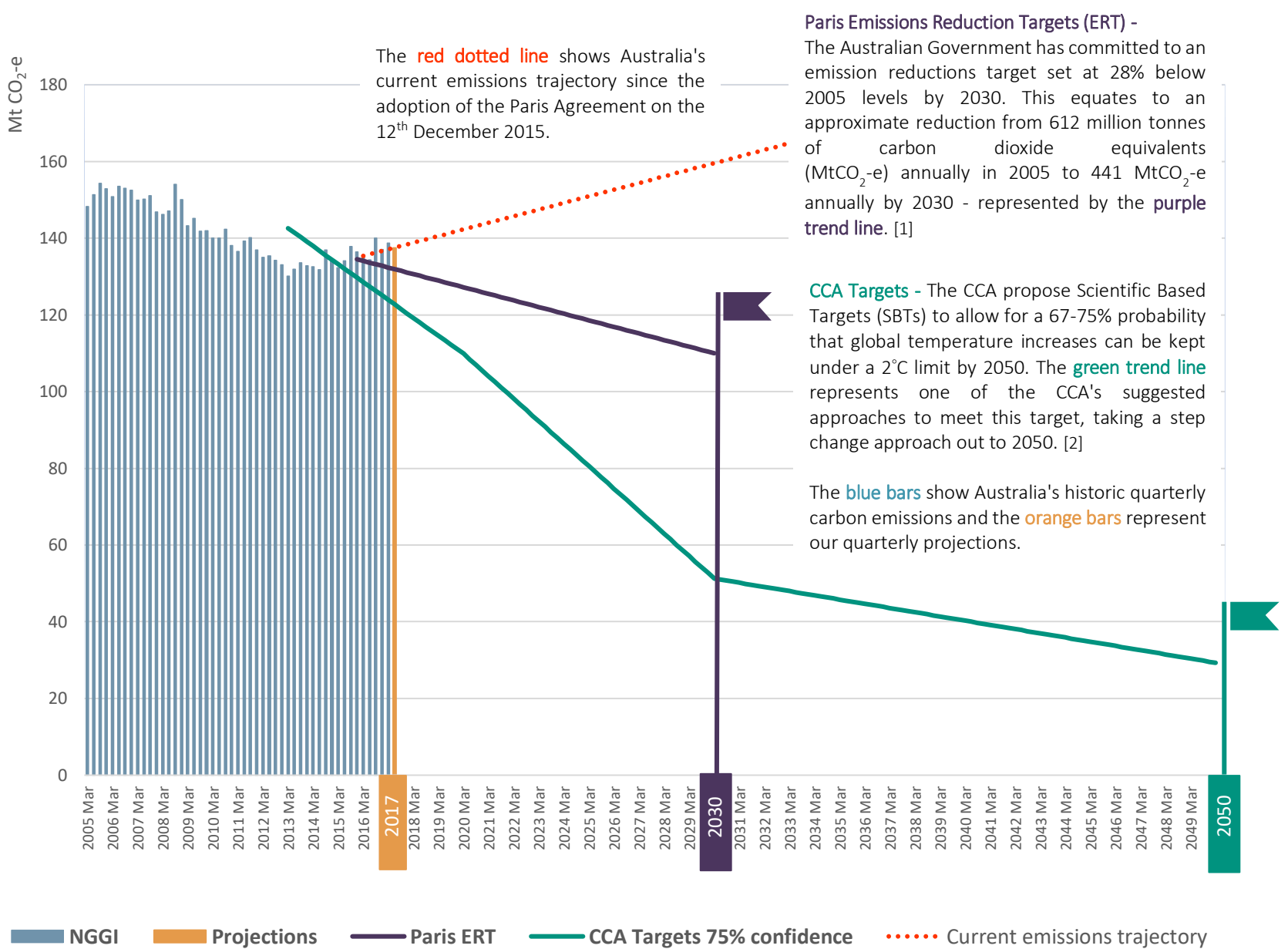
Under the Paris Agreement the Australian Government has legally committed to reducing our emissions by 26-28% by 2030. However, to ensure global warming remains under 2 degrees, independent body the Climate Change Authority (CCA), has proposed Australia set a national science based target (SBT). This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

This report tracks Australia's performance against the CCA's carbon budget based on the latest available data, trends and industry movements for the months of April, May and June 2017.

Headline Results

- Our direct emissions (which excludes land use, land use change and forestry - LULUCF) for the 2017 FY were the highest they've been dating back to 2002, which is the limit of the Government's adjusted records - see graph 3 below. Including the final quarter of 2017 FY, direct emissions from the year are 552.7 MtCO₂-e. This is almost 6 MtCO₂-e more than the previous high, which was 2016 FY.
- For the 2017 financial year, our total emissions (including LULUCF) were 9.1 MtCO₂-e more than the previous financial year – this equates to the emissions of an additional 3.37 million cars over the same time
- Emissions for Q4/FY2017 are projected at 137.5 MtCO₂-e, a decrease of 1.24 MtCO₂-e on last quarter's result. Importantly, an increase of 3.06 MtCO₂-e on the same time last year was noted
- Emissions this quarter exceed the Paris Emission Reduction Target by 5.53 MtCO₂-e and Science Based Targets by 14.74 MtCO₂-e
- Electricity sector emissions fell on last quarter's result, mainly attributable to the closure of Victoria's Hazelwood brown coal-fired plant and increased generation from cleaner hydro and gas assets. Stationary energy, transport and fugitive sector emissions all increased.

AUSTRALIA'S EMISSIONS PROJECTIONS TO A 2 DEGREE TARGET



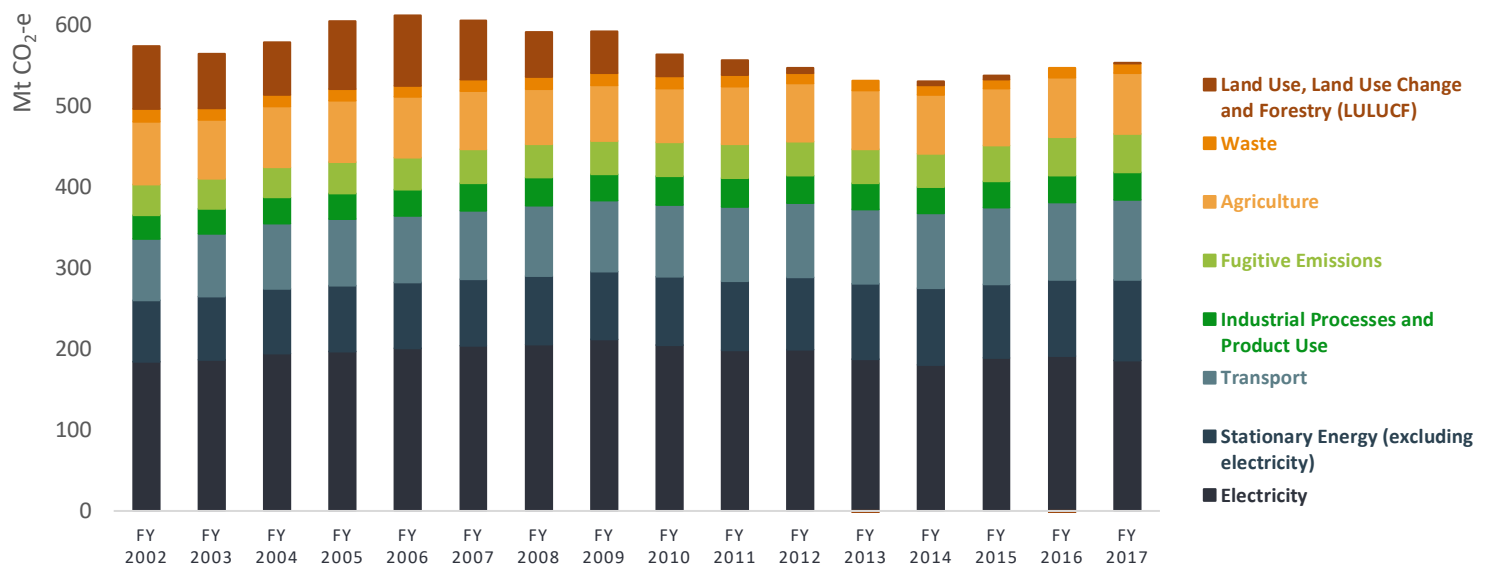
Detailed Findings

- Emissions for Q4/2017 (current quarter) are projected to be more than 3 MtCO₂-e higher than the corresponding quarter last year (Q4/2016). Electricity emissions from April, May, June 2017 have fallen 2.1 MtCO₂-e from the same period in 2016, however emissions from every other sector either increased or remained the same. The largest increases in emissions in the current period was a 1.4 MtCO₂-e increase in stationary energy emissions and a 2.2 MtCO₂-e increase in transport emissions. The increase in stationary energy emissions is due to increased LNG production and the increase in transport emissions is due to the increased consumption of diesel and aviation fuel.
- Electricity emissions fell this quarter due to the closure of Hazelwood Power Station in Victoria, which was shut down as of 1 April 2017 after 50 years of operation. Hazelwood is a brown coal-fired power station that accounted for 14% of Victoria's carbon emissions and emitted approximately 16 MtCO₂-e every year. ^[i] Due to the Hazelwood closure, Victoria's generation mix underwent several changes since last quarter: Brown coal generation fell from 11,360 to 9,500 GWh, gas generation increased from 480 GWh to 1,010 GWh and hydro generation increased from 460 GWh to 770 GWh.
- Electricity emissions also fell this quarter due to an increase in NSW hydro generation. NSW's Snowy Hydro Generator has flexibility around timing of water releases for energy generation needs. However, by the end of the water year in April, Snowy Hydro must release pre-determined volumes of water. For this reason, Hydro generation fell heavily in March and April of 2017 but increased rapidly for May and June of 2017. ^[ii]
- Emissions this current quarter increased for the stationary energy, fugitives and transport sectors. There were no significant changes in emissions for the industrial processes, agriculture, waste and land use/land change/forestry sectors.

[i] - <https://environment.victoria.org.au/hazelwood-faqs/>

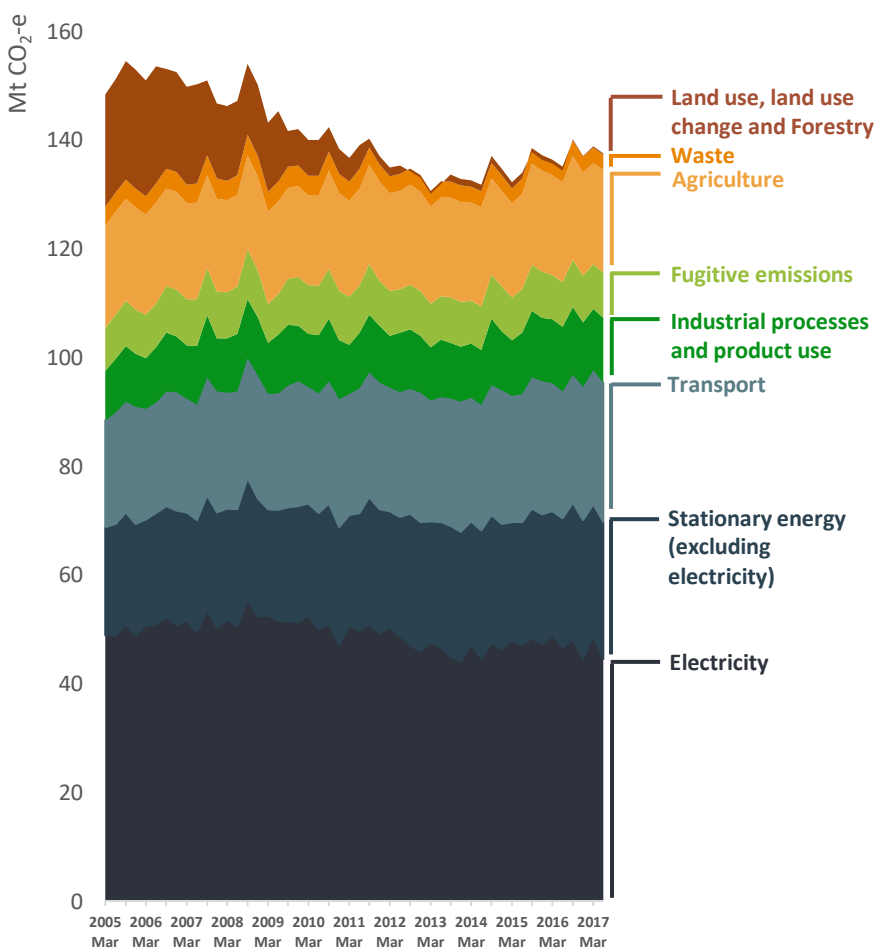
[ii] <http://www.snowyhydro.com.au/our-energy/water/understanding-water/>

AUSTRALIA'S ANNUAL EMISSIONS, YEAR TO JUNE*

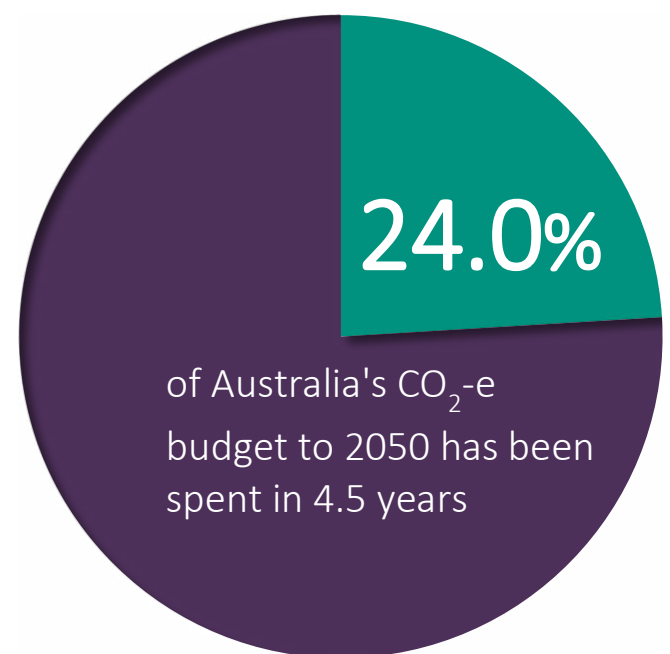


* This graph includes both published Government data and Ndevr Environmental projections for Q4 FY2017

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, National Greenhouse Gas Inventory, 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. All 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 DIICSRTE

Acknowledgement: Dylan McConnell, Climate & Energy College, Melbourne University

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