



Climate Change
CHIEF EXECUTIVES BOARD

Target 9 technical annex



This technical annex provides metadata, analytical notes and source information for the Target 9 trajectory graph and supporting indicators.

Indicator	Note	Source
Target 9 trajectory graph	<p>Shows historical and estimated trajectory data. Emissions are shown in megatonnes of CO₂-e, using 100-year global warming potentials (GWP100) from the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (AR5).</p> <p>Historical data includes Greenhouse Gas Inventory data up to 2021 and adjusted baseline data for 2022. The 2022 figure is consistent with the Second emissions reduction plan (ERP2) discussion document and includes adjustments because of subsequent Stats NZ livestock and fertiliser revisions.</p> <p>The estimated trajectory, used for 2023 onwards, uses projections. For consistency with the ERP2 discussion document, the estimated trajectory uses interim projections from the Emissions in New Zealand (ENZ) model.</p>	<p>Sources: The Greenhouse Gas Inventory, Emissions in New Zealand (ENZ) interim projections – ERP2 baseline, Ministry for Primary Industries land use, land-use change and forestry (LULUCF) estimates.</p> <p>For more information on the ENZ model and interim projections, see the ERP2 discussion document technical annex.</p> <p>Note: Future updates of the Target 9 trajectory graph will also include Stats NZ quarterly provisional emissions data.</p>
Emissions budgets 1 and 2 box plot. Consists of central, high and central estimates and targets for emissions budgets 1 and 2.	<p>Uses interim projections with existing measures, and central, high and low estimates. It does not include the impact of proposed ERP2 policies that were included in the ERP2 discussion document for consultation.</p> <p>The interim projections' high and low values are calculated using a historical deviation method.</p> <p>The range is the difference between the high and low estimates.</p>	Source: ENZ interim projections – ERP2 baseline.
Sectoral emissions. Consists of historical and projected gross emissions by sector.	<p>From the ERP2 discussion document.</p> <p>Uses the interim projections with existing measures central projections by sector. It does not include the impact of proposed ERP2 policies.</p>	Source: ENZ interim projections – ERP2 baseline.
EV chargers and EV charge-point target.	<p>EV chargers are devices that supply electric energy to charge electric vehicles (EVs).</p> <p>EV charge points are individual charging sockets where multiple EVs can be charged simultaneously.</p> <p>The 2030 target refers to New Zealand's target to expand EV charging infrastructure (EV charge points) to 10,000 by 2030.</p>	Source: Ministry of Transport, Energy Efficiency and Conservation Authority.
Historical and projected afforestation rates for exotic and native forests.	<p>From the ERP2 discussion document.</p> <p>Uses the interim projections with existing measures and central, high and low ranges. It does not include the impact of proposed ERP2 policies that were included in the ERP2 discussion document for consultation.</p> <p>The interim projections' high and low scenarios are calculated using a historical deviation method.</p>	Source: ENZ interim projections – ERP2 baseline.

Greenhouse gas emissions intensity by industry.	Greenhouse gas emissions intensity is tonnes of CO ₂ -e per unit of GDP. GDP is defined as chain volume value added in constant prices (2009/10 prices). It is seasonally adjusted and in constant prices.	Source: Customised data request from Stats NZ. Stats NZ's quarterly emissions estimates are based on the production of greenhouse gases by ANZSIC06, and by households on a residence basis. Includes direct emissions only; indirect emissions are excluded. Data is consistent with Greenhouse gas emissions (industry and household): December 2023 quarter , released on 11 April 2024. These figures use GWP100 factors from the IPCC's Fourth Assessment Report (AR4) to convert individual gases to CO ₂ -e.
Electricity generation emissions, renewable electricity generation and primary fuel emissions.	Renewable electricity generation is defined as the sum of hydro, geothermal, wood, wind and solar electricity generation. All converted to four quarter moving averages.	Source: Ministry of Business, innovation and employment - Energy statistics .
Agriculture emissions by gas.	1990–2022: agricultural emissions by gas. 1990–2021: 2024 Greenhouse Gas Inventory. 2022 value: 2024 inventory value adjusted for revised fertiliser and livestock assumptions.	Source: Ministry of Primary Industries.

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