



Tackling net-zero carbon targets with strategies for Aotearoa's housing

For Aotearoa New Zealand to reach its 2050 zero-carbon target, we need to make drastic and systemic changes to the way we build and live in our homes. This year, BRANZ developed and tested strategies for potential carbon reduction in our housing to support decision makers to prioritise policy development and make informed changes for tomorrow.

Hailed as a survival guide for humanity, the 2023 report by the United Nations Intergovernmental Panel on Climate Change stressed that huge changes are needed, fast, to stave off the worst climate change predictions.

Aotearoa New Zealand is one of the largest carbon emitters per capita in the OECD and yet is one of the few OECD countries that has not yet made significant reductions to our emissions. Our homes play a big role in carbon emissions – building and living in residential dwellings accounts for 10% of New Zealand's total carbon footprint.

Based on current projections, our research shows that, between 2018 to 2050, New Zealand dwellings could emit six times more carbon than is consistent with keeping global temperature rise under 1.5°C.

It is a wake-up call for the sector. To help protect future generations from the potential impacts of climate change, we need to cut carbon emissions intensively, systemically and quickly. Widespread behaviour change, driven by both regulation and incentives, is needed from all corners of the industry – from consumers to builders to decision makers.

In February 2023, BRANZ published its own survival assessment for building and living in lower-carbon homes in Aotearoa. The *Housing stock strategies* report outlines key areas for policy development so that New Zealand is better able to meet our climate commitments. The research combines expertise from Manatū Mō Te Taiao | Ministry for the Environment, MBIE, Te Tari Tiaki Pūngao | Energy Efficiency and Conservation Authority (EECA), thinkstep-anz and BRANZ.

For the study, researchers developed three scenarios, each one examining progressively faster and deeper implementation of

changes to reduce carbon in our dwellings. They found that, even with the most ambitious interventions modelled and with full backing from consumers and industry, our housing stock is still estimated to have sizeable carbon emissions by 2050.

We need to be building smaller, more efficient houses with lower-carbon materials and retrofitting existing housing using lower-carbon materials to reduce operational energy use.

The research outlines early actions that can make the biggest difference quickly. These include accelerating limits on embodied carbon in new builds, upgrading to energy-efficient appliances and transitioning away from natural gas use. It also proposes medium-term and longer-term carbon-reduction measures such as increasing renewables supplying grid electricity and development and testing of alternative low-carbon building materials.

Our expectations of the way we live and build in Aotearoa New Zealand need to change. By evaluating potential scenarios for reducing carbon in our housing, BRANZ has created a guide for policy makers and key system players to make the changes today to protect our future.

READ MORE

BRANZ (2023). Study Report 478 *Housing stock strategies responding to New Zealand's 2050 carbon target*.



branz.co.nz/pubs/research-reports/sr478-housing-stock-strategies-responding-to-new-zealands-2050-carbon-target



IPCC (2023). *Climate change 2023: Synthesis report*. ipcc.ch/report/ar6/syr
