



engineering
new zealand
te ao rangahau

SUBMISSION BUILDING FOR CLIMATE CHANGE

Engineering New Zealand (formerly IPENZ) is New Zealand's professional home for engineers. We are New Zealand's strongest and most influential voice on engineering issues, with more than 22,000 members who want to help shape the public policy agenda and engineer better lives for New Zealanders.

Thank you for the opportunity to provide feedback on the first two frameworks that will shape the Building for Climate Change programme – *Transforming operational efficiency* and *Whole-of-life embodied carbon emissions reduction framework*.

This submission is high level and draws primarily from previous submissions we have made on these issues. In forming this submission, we invited the views of members and consulted with two of our technical interest groups – SESOC (Structural Engineering Society of New Zealand) and the Sustainability Society. The Building for Climate Change programme signals the beginning of a long journey and our members would like to have a continuing relationship with how the programme develops and the opportunity to feed into the development of policy and framework that will enable change.

Engineering New Zealand's members may submit individually, or on behalf of other organisations.

WE SUPPORT MOVES TOWARDS A ZERO CARBON ECONOMY

Climate change is a critical challenge facing New Zealand and an important issue for many of our members. The building and construction sector has an important role to play in reducing our carbon emissions and engineers will be central in New Zealand's transition to a low emissions economy.

We support the Government's Climate Change Response (Zero Carbon) Bill 2019 and we welcome the Government's ongoing consideration of its role in supporting New Zealand to carbon neutrality.

WE SUPPORT A WHOLE OF LIFE APPROACH

We support the cradle to cradle and non-prescriptive approach taken in the *Whole-of-Life Embodied Carbon Emissions Reduction Framework*.

The desire to build leaner should also be balanced with the need to consider the lifespan and durability of materials, the operational efficiency they contribute to, the timeframe for their replacement and their potential to be reused/recycled at the end of the building's life.

WORK WITH AND SUPPORT INNOVATORS IN OUR SECTOR

We consider one of the Government's key roles in the country's transition to a low emissions economy is to provide a supportive regulatory environment for innovation and the adoption of new technology. Innovation will play a significant role in helping us to achieve our goals. It is important that materials and design research be supported, and the results of research be available to be easily applied in a range of building types.

Research, development and implementation strategies also need to ensure that decarbonisation strategies don't destroy New Zealand's capability and capacity to provide appropriate material solutions which continue to deliver resilient buildings challenged by fire, seismic and other natural events.

Guidance and training for the sector to adapt current practice and apply new solutions should be made available and encouraged.

ALIGNMENT WITH INTERNATIONAL BEST PRACTICE

An approach that is aligned with international best practice will enable New Zealand to learn from others' journeys in the transition to a low emission circular economy.

CLEAR GUIDANCE FOR EXISTING BUILDINGS

As existing buildings will, for a long time, make up the majority of our building stock, they are an important consideration.

Retrofitting for energy efficiency does not have to be bespoke, nor should it be prescriptive. It should also consider the carbon of materials being added to the building against the building's remaining lifespan and the opportunities to heat the building using renewable energy sources.

AVOIDING DETRIMENTAL ECONOMIC IMPACTS

New Zealand needs to work through how our transition to zero can be achieved without a detrimental impact upon housing affordability/accessibility.

Engineers are at the forefront of the work needed to support New Zealand to transition to a low-emissions economy. We support the Government's ongoing engagement with industry and academia as the pursuit of the low-emissions economy continues, and momentum builds. We recognise the scale of the job ahead but also point out that engineers are in the business of finding solutions.