



**association of
consulting and
engineering**

ace association of consulting and engineering
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Ministry for the Environment

By email only: climateconsultation2021@mfe.govt.nz

Kia ora

Thank you for the opportunity to make a submission on the Emissions Reduction Plan (ERP).

About ACE New Zealand

The Association of Consulting and Engineering New Zealand (ACE New Zealand) is a firm-based membership organisation representing over 230 professional services firms working across the built and natural environment – from large global firms to employee-owned SMEs.

Our members employ approximately 13,500 staff, including engineers, project managers, planners, scientists, architects, surveyors and other technical disciplines. Our teams work together to advise, design and deliver on critical technology, policies and practices, and construction and infrastructure across the built and natural environment in Aotearoa. They are at the frontline delivering new technologies and innovative approaches to meeting Aotearoa's emissions reduction goals.

For our members it is critical that government is thinking beyond what we need to do to achieve our emissions reduction goals, but also to how we set ourselves up well to do it. ACE New Zealand's voice for its members in this kōrero centres on creating the right settings across our businesses and market sectors to enable emissions reduction. This includes addressing current and future workforce challenges, creating the right commercial settings to allow innovation to flourish, and that we are choosing the right projects and have the right regulatory settings in place. Government has a key role in supporting the sector in these areas, in the interests of meeting our emission reduction targets.

Size of the infrastructure task

To meet our emissions goals, we will need to transform the homes we live in, the transport systems we use, the industries that drive our economy, and how we supply them all with energy. Each of these implies many infrastructure projects – some in the multi-billion-dollar scale (such as light rail), some much smaller but in huge numbers (such as retrofitting housing).

Alongside this, the next 30 years are projected to see continued population growth, with the Infrastructure Commission estimating another 1.7m people living in New Zealand cities by 2050 – creating infrastructure demand equivalent to a new Auckland. At the same time, a large proportion of existing infrastructure will need to be replaced (where it has reached the end of its life) or retrofitted to enable our zero-carbon target.

This will be the largest infrastructure programme this country has ever undertaken. The Infrastructure Commission estimates it will cost around 9.6 per cent of GDP over a 30-year period (equivalent to around \$31 billion per year) and almost double what we currently spend.

Professional services in the engineering sector are critical to meeting our emissions reduction targets. Our members are driving the innovation and technology behind the design and practices that will enable us to meet emissions reduction in the construction and infrastructure sector.

Workforce

Workforce capacity is already a major challenge in the construction and infrastructure sector. This is only set to increase in the medium to long term as we welcome large financial investment in critical projects to address our infrastructure deficit and to decarbonise. Without the required workforce, some infrastructure will not be delivered, and our decarbonisation plans will be significantly affected.

[The results of a recent survey showed](#) there are 3229 current vacancies across 135 firms in the construction and infrastructure sector. Employers are experiencing significant difficulty filling these positions from the New Zealand market and are either receiving no applicants for advertised positions, or not the right applicants. Ninety per cent of firms are having difficulty recruiting in New Zealand, with 66 per cent getting no domestic applicants.

To fill these skills gaps we need to look at short, medium, and long-term strategies. Our short-term strategies lie in supplementing the current market with overseas talent, and our medium to long term strategies lie in growing and upskilling local talent.

There will be enormous international demand for specialist staff with skills relevant to low-carbon infrastructure and decarbonisation and we need immigration settings that support attracting these skills into Aotearoa. We will also have to supply as much of that workforce domestically as possible, given the level of international demand. That means more education on core skills relevant to professional services and engineering throughout our schools, support for larger tertiary intakes, and better pathways from training to work through tertiary and vocational education. This requires considerable investment from government and industry together, and we welcome the opportunity to talk with Government about how to deliver this so that we have the skilled workforce we need to deliver to our emissions reduction targets.

Procurement

Procurement is a lever to drive better outcomes, including in our climate responsibilities. As the largest procurer of construction and infrastructure services government plays a critical role in creating and supporting commercial environments where innovation and carbon reduction practices can flourish.

A recent example of the Government using its procurement power positively to tackle emissions has been the announcement that from 1 April 2022, new non-residential government buildings with a capital value over \$25 million will have to meet a minimum Green Star rating of five, boarding to all new non-residential government buildings with a capital value over \$9 million from 1 April 2023.

It is important that work on improving procurement processes doesn't result in a race to the lowest cost. As noted in Infrastructure New Zealand's 2018 report *Creating Value Through Procurement*, a funding and procurement environment that rewards least cost offers and risk-shifting ends up exposing all parties to higher whole-of-life cost. A lowest cost focus will often be inimical to climate change objectives – low-carbon options may involve more complex and costly design and engineering, as well as new technologies, innovations, and construction practices that can add to cost.

If we want to ensure we have strong businesses and a strong sector to deliver to our emissions reduction challenges, then we need to think carefully about the contractual frameworks we are working to. We would like to see more consistent and widespread use of industry-accepted standardised contracts that ensure risk and liability are fairly apportioned to the parties best able to manage them. This will allow innovation, increase productivity, reduce costs, ensure parties clearly understand their obligations, and that risk is allocated fairly. This means government ensuring that the commitments to fair contractual settings as laid out in the

Construction Sector Accord are amplified and honoured across all tranches of its business. Currently, we see a gap between the Accord's commitments and practice.

Greening the infrastructure pipeline – choosing the right projects

A vital first step to helping achieve this enormous infrastructure task is to stop building infrastructure that is incompatible with our climate goals.

For example, many transport projects on the books still don't contribute to sustainability (eg enabling sprawl or freight movement by truck). To that end, we welcome the proposal to "Ensure further investment in additional highway and road capacity for light private vehicles is consistent with climate change targets" and complement Waka Kotahi on their recent thinking in this space. If this will apply to currently planned projects, we request early and decisive decision-making to prevent waste of effort and money.

We are pleased that Rapid Transit is a very high priority, and we support its role in mode shift to reduce vehicle emissions. Increased operational funding for buses and behaviour change programmes and bigger sticks like pricing should also be high priorities to further reduce vehicle emissions and volumes.

We would like to see a similar level of ambition regarding building and construction, including rapid implementation of the Building for Climate Change energy efficiency standards. The energy use in buildings, both new and existing, is projected to cause more emissions over the coming 30 years than the embodied carbon emissions over the same period. It makes sense, therefore, to prioritise energy efficiency as a measure to reduce emissions that often has negative lifetime costs (albeit with significant initial capital investment).

We welcome the proposals to reduce construction waste and increase reuse, repurposing and recycling of materials as ways to reduce the carbon embodied in infrastructure projects.

Regulation that keeps up with the pace of change

Meeting our emissions goals requires new innovation, including in materials and practices. We need to ensure that our regulatory settings are principle-based and flexible to enable innovation and support the adoption of new technologies and techniques. As new, low-carbon construction materials - such as low-carbon steel, low-carbon cement, and wood products - and low-carbon building practices become available, regulators will need to be prepared to move rapidly to allow their use.

Summary

In summary, it is critical that government is thinking beyond what we need to do to achieve our emissions reduction goals, but also to how we do it. For our members, that means taking steps now to work with industry to address our current and future workforce challenges, to realise the potential of procurement and the important role it plays in creating the commercial frameworks that will allow innovation for decarbonisation to flourish, and that we are choosing the right projects and have the right regulatory settings in place.

Please feel free to get in touch if you would like to discuss any aspect of this submission. We welcome the opportunity to input into government responses in these key areas.

Nga mihi,



Helen Davidson
Chief Executive