Sustainable Business Council

wbcsd Global Network Partner

CLIMATE LEADERS COALITION

ON A MISSION TO REDUCE EMISSIONS IN NEW ZEALAND

Submission to the Climate Change Commission on 2021 Draft Advice for Consultation

March 2021

Foreword – Sustainable Business Council

The Sustainable Business Council (SBC) is proud to partner with the Climate Leaders Coalition (CLC) to respond to the Climate Change Commission's (the Commission) draft advice to Government.

This submission represents the collective views of the members of SBC and CLC, a group of around 150 businesses who contribute more than a third of New Zealand's GDP and are committed to reducing our net emissions to zero by 2050. The submission was prepared with the assistance of Sapere and DETA.

The submission asks the Commission and Government to continue to prioritise decarbonisation and to work in partnership with New Zealand businesses to accelerate that process.

We recognise the critical work of the Commission in identifying that New Zealand is currently not on track to meet our emissions reduction commitments, and in proposing a practical and achievable pathway for us to meet them.

Overall, we support the proposed pathway and are confident that most of New Zealand can support it too. We note that catching up to our counterparts in the OECD to meet our net zero carbon goal will not be easy, and will take the combined efforts of government, business, and all New Zealanders.

As the Commission notes, the impacts of the transition to a zero carbon economy will impact some more than others. For this reason, we would like to work with the Government to ensure that the transition is genuinely just.

Our submission identifies aspects of the Commission's advice to Government that we would like to see reframed or strengthened. We draw on the *Briefing to Incoming Government on Climate Action Priorities* report that we released last October. That report was prepared in response to a request from the Commission to identify priority policy and project recommendations on what an incoming Government could do to expedite a transition to a net zero New Zealand by 2050.

We believe our recommendations will augment the advice and improve the prospect of New Zealand achieving the proposed emissions budgets.

We are confident that by working together, we can bend the emissions curve over the next decade and put us on track to be a zero carbon country by 2050. We look forward to playing our part and working with Government and others to make this vision a reality.

Karen Silk
Chair
Sustainable Business Council

Mike Burrell
Executive Director
Sustainable Business Council

Foreword – Climate Leaders Coalition

CLC companies represent nearly one third of New Zealand's GDP and nearly 60 per cent of our gross emissions. We are collectively taking action to build irreversible momentum in New Zealand towards a zero carbon future. Our businesses extend across all sectors of the economy and support the bold moves that are critical to ensuring a successful transition.

Through CEO leadership on climate action, CLC is committed to giving confidence to stakeholders that climate change matters to business. We are demonstrating that business can and should take a leadership role.

The CLC was convened in 2018 and played a key role in brokering bipartisan support for the Zero Carbon Bill. This landmark piece of legislation has provided the framework for New Zealand to mount a meaningful response to the greatest challenge of our generation.

Now, starting with the Commission's draft advice, the rubber hits the road. We must set the emissions budgets that will guide the pathway of our country's emissions reductions for the next 15 years. We must put in place policies that signal a clear and enduring pathway to a low-emissions and climate-resilient future. The transition must be equitable, supporting those most vulnerable and disproportionately affected, to create a positive future for all New Zealanders.

The CLC thanks the Commission for taking a critical step on this journey. We support the overall direction of the Commission's proposed domestic transition pathway. In partnership with SBC, this submission identifies areas of the Commission's advice that could be strengthened or given further consideration.

Decisions made today and in the coming years will have significant impacts for decades and centuries to come. Our businesses acknowledge that 'business as usual' is no longer an option. Now is our moment to be ambitious and put our society and economy on a trajectory towards intergenerational prosperity. We believe that if Government implements the advice of the Commission, including our recommendations, New Zealand will be well-placed to achieve this.

Kaua e hoki i te waeae tūtuki, ā pā anō hei te ūpoko pakaru.
Do not turn back because of minor obstacles but press ahead with the desired goal.

Mike Bennetts
Convenor
Climate Leaders Coalition

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Executive summary

This submission by the Sustainable Business Council (SBC) and Climate Leaders Coalition (CLC) represents the combined view of our 150 member companies on the draft advice of the Climate Change Commission (the Commission) to Government.

SBC and CLC members are already taking action to transition to a zero carbon future. That includes implementing transition plans and working together to develop pathways that quantify the trade-offs and interdependencies that will be required for sectors and systems to decarbonise. We are also working on building a climate-resilient future, adapting to our climate as it continues to change.

SBC and CLC welcome the work of the Commission in producing this landmark document. We are broadly in agreement with the direction of the Commission's draft advice and the vision it sets out for the path to 2050. We believe it represents an achievable transition pathway that our country can get behind. The principles that underpin our approach are outlined in Section 1.2.

Our full set of recommendations are set out in a table on the following pages. These recommendations build on those we made in our *Briefing to Incoming Government on Climate Action Priorities* report in October 2020, taking into account the entirety of the Commission's advice, including the modelling, and informed by extensive consultation with our members.

Our **five headline recommendations** are:

i. **Invest in low carbon transport** by developing a roadmap with business to accelerate transformation across the light and heavy transport fleets, including introducing low carbon fuel standards;

ii. **Transition out process heat** through energy efficiency and the phase-out of coal-fuelled plants;

iii. Create an accelerated pathway for the development and adoption of **methane and nitrogen reduction technologies** through a dramatic increase in public and private investment into relevant applied research and development;

iv. Develop a major public-private partnership to **build a bioeconomy** in New Zealand; and

v. Introduce measures to incentivise a **significant scale-up of energy efficiency** across the economy and through behaviour change.

We also **recommend** the Commission strengthen its advice by:

- framing its advice to Government around the central role of the New Zealand Emissions Trading Scheme (ETS) first (noting the agricultural sector is on a unique collaborative pathway for an emissions pricing mechanism), with complementary non-price measures sitting alongside the ETS;
- framing its advice to Government in terms of the partnership between Government and the private sector that will be required for a successful, fair, and equitable transition, reflecting the critical role the private sector plays through significant capital and innovation investment; and
- being more explicit about the action and policy interventions it recommends Government take and the rationale and expected timeframes for each.

We look forward to seeing the Commission's final report and to working in partnership with Government to bend New Zealand's emissions curve and get us back on track to reach our zero carbon goal by 2050.

Key recommendations

Sector	#	SBC/CLC ask that the Commission recommend the Government:	Reference
Enabling	**1**	Develop a partnership between Government and business to support the development and implementation of the Emissions Reduction Plan	Consultation question 1
	2	Accelerate the introduction of an Equitable Transitions Strategy	Consultation question 13
	3	Seek cross-party support on the emissions budgets and, ideally, also the Emissions Reduction Plan	Consultation question 5
Equitable transition	**4**	Carry out and disclose sensitivity analysis to understand the geographic and sectoral impacts on the economy of the implicit NZU price path to enable robust planning for an equitable transition	Necessary action 1
Transport	**5**	Develop a transportation and mobility strategy with these outcomes: - limited term financial mechanisms to support the uptake of EVs incorporating the conversion of existing light and heavy vehicles - increased frequency and availability of public transportation - investment required to support national and local infrastructure - increased vehicle occupancy and system productivity	Necessary action 2, 3
	6	Accelerate the decarbonisation of aviation through a detailed feasibility study that assesses viable pathways for a local SAF industry and the establishment of an aviation-specific, public-private governance channel	Necessary action 4
	7	Develop a national freight strategy that builds on the SBC Freight Group's recommendations for de-carbonising heavy freight through low-carbon fuels and modal shift	Necessary action 4
HIP	**8**	Develop a vision and plausible scenarios for the integrated energy system covering all energy sources, transport, energy efficiency, and demand side response so decision makers can see where they fit in. Develop a strategy for the bioeconomy covering supply and demand	Necessary action 6
	9	Expand government support for process heat conversions	
	10	Provide funding support for localised biofuels generation plants (gaseous and liquid), waste generators, and biomass producers to meet forecast raw product demand	
	11	Reassess electricity regulation under the Commerce Act 1986, to ensure it delivers the services needed and fairly recover the cost to electrify the vehicle fleet and industry	Necessary action 5
	12	Pursue a comprehensive energy equity programme targeting easy energy efficiency wins, including: - more widely applying the Warmer Kiwi Homes programme - a national Voluntary Targeted Rates scheme as appropriate - energy labels for homes and commercial office buildings	Necessary actions 7, 9

	13	As a part of the *MBIE Building for Climate Change* building code revision, ensure that: - embodied emissions are captured satisfactorily (preferably at source) - existing and new building performance targets are included, with review periods set for altering targets towards a zero carbon building stock	Necessary action 9
Forestry & Agriculture	**14**	Create a forestry planting strategy that extends past the number of trees required for sequestration, incorporating co-benefits, including linking to the bioeconomy	Necessary action 12
	15	Provide enhanced leadership on agricultural emissions to complement existing initiatives by: - leveraging the funding required (mainly in the form of offshore private investment) to significantly accelerate research efforts - developing enhanced commercialisation pathways for applied R&D - strengthening international private partnerships to access international scientific expertise and attract private investment	Necessary action 11
	16	Amend and replace the current 2050 biogenic methane target range, legislated in the Climate Change Response Act 2002, with a specific level	Consultation question 24
Waste	**17**	Develop national standards for waste collection, inclusive of material type for collection and collection receptacles	Necessary action 13
Education & Training	**18**	Enhance education and public awareness to encourage behaviour change required to achieve the transition	Necessary action 15
	19	Undertake a comprehensive assessment of the role of the workforce in delivering the transformation, reflecting the critical role of education and training	Necessary actions 1, 16
ETS	**20**	Continue to improve the ETS with changes such as using proceeds from the ETS for investment in decarbonisation funds, or innovation and R&D targeted at emissions reductions	Necessary action 19
Finance	**21**	Expand planned mandatory climate-related financial disclosures regulations to cover public entities at the national and local level and develop a clear and comprehensive compliance standard	Time critical necessary action 6
	22	Develop plans to mobilise private sector finance for low emissions and climate-resilient investments, drawing on the Sustainable Finance Forum's Roadmap for Action	
	23	Incorporate green investment criteria across all public sector investment vehicles to open access to green financial products and ensure their impact and integrity	
	24	Embed climate considerations into all decisions being taken now, including on the deployment of the COVID-19 economic stimulus	
Voluntary Offsetting	**25**	Develop pathways for credible voluntary carbon offsetting, using New Zealand-generated mitigation, in the context of the Paris Agreement period of 2021–2030	Budget recommendation 5d
NDC	**26**	Ensure that any revision to New Zealand's current NDC is informed by a public conversation	Consultation question 21

1. Introduction

Our submission is focused on measures (policies and specific projects) that will accelerate decarbonisation in New Zealand. We build on our report *Briefing to Incoming Government on Climate Action Priorities* from October 2020 (2020 report).

The submission has been developed following workshops and direct engagement with SBC members and CLC signatories held during February and March 2021.

This submission follows the following structure:

- **Section 1** sets out our understanding, the key assumptions and principles that have guided our approach to responding to the Commission's draft advice.
- **Section 2** contains overarching considerations that cut across the Commission's specific consultation questions and go to broader issues, such as, the way the advice is framed and the modelling that underpins it.
- **Section 3** contains our detailed responses to the consultation questions in the Commission's draft advice.

Some of the contents of our submission go beyond the terms of reference for the Commission's advice and look ahead to how the Government may respond.

We look forward to engaging further with the Commission as it develops its final advice and, in due course, with the Government on its response.

1.1 Our understanding

Emissions budgets and plans to meet them

We understand that the emission budgets are intended to provide greater predictability for all those affected, including households, businesses, and investors, by giving advance information on the emissions reductions and removals that will be required.

The budgets will not, in and of themselves, reduce emissions. Section 5ZG of the Climate Change Response Act 2002 (the Act) also requires the Minister for Climate Change to prepare and make publicly available a plan setting out the policies and strategies for meeting the next emissions budget. It is through implementing this plan in a partnership between government, business, and New Zealanders more generally that we will drive emissions reductions in New Zealand.

We understand the Emissions Reduction Plan (the Plan) will be prepared by the Ministry for the Environment, in partnership with other government agencies, as the primary response to the Commission's final advice to fulfil the requirements of the Act.

We **ask** the Commission to recommend that the Plan contains a set of measures that, if followed, will lead to all the decision-making required by the public sector, private firms, and individuals to reduce emissions and, as a result, meet each emissions budget.

Notably, this does not just include the New Zealand Emissions Trading Scheme (ETS) settings and other non-price measures, it should include advice to Government about how it can encourage the support for the transition pathway across society through behaviours that are consistent with our emissions reduction targets.

Decarbonisation is not a single project

We said in our 2020 report that while it may be tempting to focus on individual measures for reducing emissions, it will take many measures in each emissions category to achieve our targets.

Our approach has been to consider all of the enabling budget and policy recommendations in the Commission's draft advice and identify projects that can be prioritised, acknowledging that new projects will have to be developed and implemented as technologies improve and costs decline.

1.2 Our approach to this submission

In responding to the Commission's draft advice, we have focused our submission on the overarching pursuit of a New Zealand with:

i. A society that is fair, inclusive, and diverse.
ii. An economy that is:
    - open, recognising New Zealand's role as a trading nation.
    - globally connected, virtually and physically.
    - supported by market regulation that is incentive focused, intervention cautious.
iii. A climate change response comprising:
    - science-based mitigation with effective measuring and reporting of emissions.
    - adaptation efforts that are technology-based, risk- and future-focused.
    - a just transition that is fair, equitable, and inclusive for all New Zealanders.

We have also considered the following specific principles in preparing this submission:

- We support the emissions reduction targets and purpose of the Act to contribute to the global efforts under the Paris Agreement to limit warming to 1.5 degrees above pre-industrial levels.
- We understand and support the focus on gross emissions reductions and agree that forestry offsets should not be the only mechanism relied on and that offshore mitigation should not be used to meet our first three domestic emissions budgets other than in circumstances prescribed in the Act.
- We want to work in partnership with Government to achieve the emissions budgets and shape and deliver the Plan.
- We think the ETS should be allowed to do its job and other interventions should only follow where there is a clearly articulated positive net benefit for other non-price policies.
- Non-price policies should focus on outcomes and promote efficiency rather than being specific regulation that disincentivises innovation.
- All parts of society will benefit from education and awareness raising on the imperative and the case for changing behaviours beyond ETS signals and justified non-price policies.

2. Overarching considerations

This section explores the following overarching key considerations:

- The role of the business sector;
- The role of the New Zealand Emissions Trading Scheme (ETS);
- Economic modelling – scenarios and sensitivity testing;
- Pace of the transition;
- Mobilising capital;
- Adapting electricity regulation for a zero carbon future;
- Supporting innovation and future infrastructure; and
- Contribution to global emissions reductions.

Section 3 specifically addresses the 24 consultation questions asked in the Commission's draft advice.

2.1.1 The role of the business sector

We are pleased the Commission acknowledges the critical role that businesses will play in helping New Zealand reach its zero carbon goal. We do not see New Zealand's emissions reduction targets as solely the Government's targets, rather they guide a partnership between government and all of society's actors who will need to commit capital, take risks, and change behaviours in order to achieve them.

We **recommend** the Commission reframes its advice to the Government to better reflect the vital role that business will play in this transition.

Businesses, including members of SBC and CLC, have a key role to play and are already doing so, for example by working to drive down emissions with the companies we work with in our supply chains. Many of the solutions the Commission alludes to will be provided by and tested by business, so we would like to see the Commission emphasise the need for government policy to provide businesses with the flexibility needed to shape their own transition.

In addition, we would like the Commission to consider adding an additional principle that acknowledges the role of the private sector as a partner with Government in the creation and implementation of the Emissions Reduction Plan.

2.1.2 The role of the New Zealand Emissions Trading Scheme (ETS)

We understand that the carbon price will need to rise significantly in order to change the incentives on emitting activity.

The Commission currently presents the ETS as one of a range of emissions reduction policies and interventions available to the Government. We recognise that the ETS will not be able to achieve New Zealand's net zero carbon goal on its own. However, given the central role that the ETS will play in reducing New Zealand's emissions, we **recommend** that the Commission frames the ETS as the primary lever for reducing our emissions, and all other measures as complementary.

Where non-price policies may be warranted, we **recommend** that they are outcome-orientated and that the Government completes the usual regulatory cost benefit analysis (including considering the

value of the externalities) before implementing them. For example, there is scope for policies to ensure that actions made economic by the ETS actually occur (e.g. by addressing available capital and behaviour change).

For clarity, we are not advocating that the ETS be the only mechanism New Zealand pursues to reduce emissions. While in theory that is possible, the resulting carbon price would have far-reaching impacts in terms of the ability to achieve a just and equitable transition. We therefore support the Commission's pragmatic approach in proposing alternative, supporting policies to accelerate the transition. However, we do suggest that the Commission more clearly explain the role and importance of the ETS, and that of supporting policies, in achieving New Zealand's zero carbon objective.

2.1.3 Economic modelling – scenarios and sensitivity testing

We **support** the direction of the advice and we have not focused on assessing the workings of the economic modelling. The Commission has identified a range of important actions to accelerate climate action in New Zealand. We do not want a debate on the modelling to distract from the urgency of the task at hand.

Given the long timeframe for the economic forecasts (14-29 years), we **recommend** the Commission provide more detail on the various growth scenarios, including the major assumptions underpinning them. We also **recommend** that the Commission releases the sensitivity testing that underpins this work so that all, including the Government, can understand the risks to the downside and the consequences to the economy if the economic outcomes fall short of the expectations in the advice. That will allow the Government to better plan for an equitable transition in a way that is flexible enough to adapt to pathways that depart from the presently modelled scenarios.

2.1.4 Pace of transition

The Commission recommends changes to the cost containment reserve trigger price and the auction reserve trigger price, as well as signalling the target-consistent long-term abatement cost values government and business should factor into policy and investment analysis. This is set out in more detail in section 3.4 (Time critical necessary action 7: Driving low emissions choices through the NZ ETS).

We acknowledge the levels that the carbon price must reach to incentivise meaningful action, as distinct from the rate of change and the cost of the transition. However, if the carbon price rises too fast, this risks the public and businesses facing costs resulting from not being able to keep up with the cost of new technology and the availability of it. At the same time, the risk of the carbon price rising too quickly, and costs being felt by consumers, is that the hardest hit consumers are likely to be lower income households without the flexibility to pay for new vehicles, appliances, and other technologies. This risk will also be borne by hard to abate industries for which decarbonisation will take time. For these reasons, we need a robust strategy to ensure an equitable and inclusive transition (see section 3.3.1).

As discussed in the modelling and economy section, the Commission needs to stress test the proposed pace of transition to ensure the impacts across the economy and society over the next 30 years are well understood, including from the expected increased carbon price. Based on those projected impacts, we **recommend** that the Commission ask the Government to develop a cohesive policy framework to

ensure that, working back from 2050, the right measures are in place to support a just transition across society.

2.1.5 Mobilising capital

The Commission's Time Critical Necessary Action 6 recommends that Government "Investigate and develop plans to mobilise private sector finance for low-emissions and climate-resilient investments."

This recommendation centres mainly around the concept of targeting consistent, long-term abatement cost values into policy and investment analysis. We **recommend** that the Commission also reflect the important role of Government in supporting businesses to bridge the gap between activity that is greenhouse gas (GHG) emitting and equivalent activity that reduces GHG emissions by monetising the value of the emission reduction outcomes. We **recommend** that the Commission advises Government to assist with mobilising capital in three ways discussed below.

Mobilising capital to target emissions outcomes

At the heart of the decarbonisation challenge lies the issue of either capital requirements or increased OPEX incurred as a result of switching from fossil fuels to low carbon "green" energy sources. Government can assist in increasing the pool of capital for reduced emissions projects by using public funding to mobilise private finance.

In many instances, externalities (benefits) of decarbonisation are not directly quantifiable in dollar terms, despite clear benefits to intergenerational wellbeing and hence to the economy, so there is a case for governments to meet that gap in investment proceeds. The ETS imposes obligations on some emitters and monetises emissions reductions, principally carbon sequestration from forestry. However, the effective ETS price does not necessarily completely reflect the full cost of carbon, nor does it monetise the mitigation of risk associated with climate adaptation.

There are also market failures, such as lack of information or high transaction costs holding up potential decarbonisation projects that governments can play a role in compensating for. The Green Investment Fund is an example of government assisting in this case.

We **recommend** that the Commission advise Government to bridge the gap between activity that is GHG-emitting and equivalent activity that reduces GHG emissions by monetising the value of the emission reduction outcomes. The assistance could take several forms, and these would be project specific.

One approach that could achieve this idea is results-based procurement or financing to incentivise mitigation over and above ETS obligations. This would see the Crown pay for the delivery of agreed emissions outcome but would not pay the full amount if pre-agreed outcomes are not achieved. The same would apply to an outcome-based financing arrangement.

For example, an environmental impact bond could be used to fund biodiversity improvements that both sequester carbon and enhance land resilience. It could also be linked to employment outcomes to ensure the projects help grow permanent jobs, or support the Government in achieving their employment objectives, such as those associated with the Jobs for Nature programme.

The benefits to the Crown of taking this and other approaches include increasing the ability to:

- mobilise capital to drive impactful change
- innovate and let private capital take the risk, with the Crown securing long-term benefits
- obtain data from pilot projects that enable success to be scaled up nationally
- avoid approaches that prove to be unsuccessful with the benefit that private capital has funded it, rather than the Crown.

Use proceeds from the ETS for innovation or R&D targeted at emissions reductions

The Government is currently exploring what course to take with the proceeds from the ETS. A Cabinet paper on the matter is currently under consideration.[1]

We **recommend** that the proceeds should be recycled into research and innovation targeted specifically at emissions reductions. A potential use could be to further support decarbonisation programmes, such as Energy Efficiency and Conservation Authority's Government Investment in Decarbonising Industry (GIDI) Fund or the Green Investment Fund, alongside investment crowded in from the private sector.

Decarbonisation requires significant investment and there is an opportunity to introduce measures that support revenue generated from the auctioning system to be used to help businesses advance carbon reduction projects.

Reducing methane emissions is one of New Zealand's (and the world's) greatest challenges. An additional use of ETS proceeds could be a transformational scale-up of support for methane emissions reduction research. This is further explored in our agriculture section (3.3.4).

2.1.6 Adapting electricity regulation for a zero carbon future

We support the Commission's *Enabling recommendation 2: Coordinate efforts across Government,* and in particular, the recommendation to establish Vote Climate Change as a specific multi-agency appropriation, which consolidates existing and future government funding for climate change mitigation and adaptation activities.

We note the heavy reliance on electrification in the proposed transition pathway and **recommend** that the Commission take a broader view of the impacts of the institutional arrangements on the sector. More joined-up thinking to enable the sector to access different funding and investment mechanisms could help the electrification agenda. Specifically, the level of funding and the type of investments that can be made by regulated entities is heavily influenced by the regulatory regime.

The Commission has raised the issue of whether electricity distributors are equipped, resourced, and incentivised to innovate and support the adoption on their networks of new technologies, platforms, and business models, including the successful integration of EVs to implement their necessary action. It also acknowledges that the regulatory regime must continue to adapt and respond to innovations, to ensure it can deliver access to abundant, affordable, and reliable low emissions electricity.

[1] See: https://www.mfe.govt.nz/sites/default/files/media/Legislation/2020-B-06919_proceeds_from_the_nzets_cabinet_paper.pdf

We **recommend** that the Commission consider advising Government that there be a fundamental re-assessment of electricity regulation under the Commerce Act 1986, to ensure that it can indeed 'deliver the services needed to underpin electrifying the vehicle fleet and industry'. In particular, the Government should test whether the proposed Transmission Pricing Methodology (TPM) disincentivises decarbonisation of large energy users by allocating greater costs for renewable electricity transmission. If that proves to be the case this is an example of a current change in arrangements that runs counter to the transition envisaged in the advice.

We would like to understand whether elements of all the existing institutional arrangements for energy are set up to encourage (or not impede) developments around the energy needs of next generation aircraft (electric, hybrid, and hydrogen aircraft).

Acknowledging the existing *Climate Implications of Policy Assessment* tool, we support the Commission's recommendation that all Government policies and procedures should consider climate change in the development of all new policies, regulations, and fiscal proposals. We **recommend** that the Commission consider further broadening this recommendation to include existing regulatory settings and specify that this includes both mitigation and adaptation considerations. As we noted in our 2020 report, this should also include consideration of climate impacts in the Government's Covid-19 stimulus package (often referred to as the "shovel ready" projects).

2.1.7 Supporting innovation and future infrastructure

To ensure New Zealand can capitalise on the full potential of emerging technologies it will be critical for Government and industry to work together to ensure we are building skills and innovation capabilities within New Zealand, and that the rollout of supporting infrastructure to enable innovation can continue at pace. Beyond specific R&D investments, we **recommend** that the Commission considers the role of technology and innovation in enabling climate change adaptation and mitigation from a system-wide perspective, given its applications and benefits transcend industries.

Digital technology should be a particular focus, as it offers the opportunity to drive efficiencies and de-carbonise our existing industries and sectors. It also paves the way to create new market opportunities and to promote growth in areas of the economy without environmental constraints. Emerging technologies, such as IoT (Internet of Things), Artificial Intelligence (AI), and the rollout of 5G mobile technology will drive business innovation and enable more transformative change, delivering emissions reductions and broader sustainable development benefits.

Our members are keen to play a role to develop and inform future advice to Government on policies, incentives and collaboration to support the role of digital technology to enable decarbonisation and economic transformation.

We **recommend** the Climate Change Commission consider a formal process to engage with enabling industries and sectors to work together, share evidence, data, and insights to support the Commission's future advice to Government.

2.1.8 New Zealand's contribution to global emissions reductions

At the heart of the Commission's advice is a strong focus on decarbonising New Zealand. That is reinforced in the Commission's modelling and reporting, the commission has undertaken, which

indicates that significant manufacturers will leave the country, freeing up zero carbon energy available to support New Zealand's transition. This represents one of New Zealand's "carbon leakage" exposure points. Carbon leakage is predicated on the idea that some countries do not have carbon policies of equivalent stringency. Such policies are largely focused on heavy-emitting industry. In practical terms this means New Zealand is relying on other countries finding the low-emissions technologies and processes for producing the products we in New Zealand consume. This could well simply export our emissions offshore and does not deal with the fundamental issue of emissions-heavy manufacturing.

To counter this, we **recommend** that the Commission advocates for policies that encourage the flow of low-carbon technology investment into New Zealand, or at least advocate for policy-making that is conscious of how policies impact on inter-country investment decisions and international trade. This should consider the relative emissions intensity of New Zealand's manufacturing, as, regardless of carbon policy settings, leakage only occurs if overseas production is more emissions intensive than local production.

We believe that New Zealand is in a unique position to show the world how to decarbonise in a relatively short timeframe. This is due to the significant renewable portion of our electricity grid. This also presents opportunities to export our knowledge to the rest of the world and become true global leaders.

A key part of the transition to a low-emissions and climate-resilient planet is showing the world that zero carbon manufacturing is achievable. Zero carbon manufacturing could present opportunities to New Zealand, including the potential to attract new industries, and to differentiate our existing industries to completely zero carbon outputs. Low carbon production across a range of sectors, including primary production, will have the added advantage of keeping New Zealand exports competitive in an evolving global environment in which our trading partners are considering measures that favour climate-friendly imports, such as carbon border tax adjustments.

If New Zealand were to change its orientation to global emissions, rather than focusing on its domestic footprint, there is real potential for New Zealand to be a world leader in cross-border decarbonisation. We think that New Zealand could do more, and could, with the right policies, develop into a testbed for zero carbon manufacturing. We **ask** that the Commission consider what it could recommend to Government in this area.

3. Response to the Commission's draft advice

This section contains our responses to the consultation questions in the Commission's draft advice.

3.1 Budget recommendations

Overall, we are comfortable with the Commission's emission budget recommendations. In terms of the four consultation questions, we support questions 2 (emissions budget levels) and 3 (proposed break down of emissions budgets between gross long-lived gases, biogenic methane, and carbon removals from forestry). We have specific comments on questions 1 and 4, which are outlined below.

3.1.1 Consultation question 1: Principles to guide our advice

We **support** the principles the Commission has outlined to guide its analysis. We make two additional recommendations:

- The principles should be explicit about the end goal of allowing both the economy and environment to thrive. This will require the decoupling of growth from emissions alongside pure abatement efforts. We think this could be brought out more strongly in the principles and would be a good fit for Principle two.

- Given the scale of decarbonisation that will occur in the private sector, business will be key to the transition. For this reason, we **recommend** Government partner with business to allow for the co-development implementation of solutions. This partnership should be focussed on the generation of outcomes to achieve the desired future state in 2050, providing pace that enables the market to respond and adapt, and flexibility in policy to enable business to shape solutions that work on the ground. We would like to see this reflected in a new principle.

3.1.2 Consultation question 4: Limit on offshore mitigation for emissions budgets and circumstances justifying its use

We support the Commission's recommendation that New Zealand's domestic emissions budgets should be met solely through domestic action.

We think that offshore mitigation may play a role, for example, in the circumstances already set out in the Climate Change Response Act, such as where an unforeseen event in New Zealand, like an earthquake, meant we were unable to meet our targets domestically. New Zealand is in a relatively advantageous position in that it is feasible for us to meet our domestic emissions budgets through onshore abatement, due in large part to our significant renewable electricity resources and ability to plant new trees. Against this background, in-built reliance on offshore mitigation, particularly in early budgets, could act as a disincentive to meaningful domestic action and further slow New Zealand's domestic transition to a low-emissions society.

In addition, New Zealand does not currently have access to offshore mitigation markets, therefore, relying at this stage on those markets to achieve our domestic emissions budgets risks neither meeting our domestic targets (and international target) nor transitioning our domestic economy.

3.2 Enabling recommendations

Overall, we are supportive of the Commission's enabling recommendations. They are an important underpinning of the policy recommendations which follow. We have made some recommendations for strengthening the Commission's proposed response to Government, these are outlined below.

3.2.1 Consultation question 5: Cross-party support for emissions budgets

We strongly support this recommendation. We see it as a critical element of a successful transition. The emissions budgets and underlying policies and actions will take years, if not decades, to achieve their emissions reduction goals. Therefore, we encourage all parties to continue to build upon the consensus achieved with the Zero Carbon Bill and support the proposed emissions budgets.

We have seen how important cross-party support is in the United Kingdom's decarbonisation success, and this was the foundation of the Zero Carbon Act and the establishment of the Climate Change Commission.

We **recommend** that the Commission advises the Government to pursue a cross-party agreement to support the emissions budgets in the first instance and pursue efforts on agreement to support the associated policy interventions (Emissions Reduction Plan). Bipartisan support is essential to creating an enduring, stable, and predictable pathway that provides the clear signals that business need to take corresponding action.

3.2.2 Consultation question 6: Coordinate efforts to address climate change across government

We support enabling recommendation two. The Commission identifies a need for close coordination amongst relevant government agencies and departments, and for roles and expectations of these and other agencies to be set out, and accountability mechanisms defined.

This needs to be accompanied by a clear and efficient structure for this coordination, which should allow for policy to be developed in close partnership with the private sector at the working level. It will also require sufficient resource to reflect the amount of work that will be required to develop and then implement the Government's emissions reduction plan. We suggest that the specifics of this recommendation be reflected in the Commission's recommendations under this section.

As part of the development of the Emissions Reduction Plan, it would be useful for Government to undertake a cross-agency stocktake of existing emissions reduction measures. This could consider whether current measures are fit for purpose in light of the Commission's recommendations.

3.2.3 Consultation question 7: Genuine, active and enduring partnership with iwi/Māori

We support genuine, active, and enduring partnership with iwi/Māori, including iwi/Māori business, as reflected in the draft recommendations.

We agree with the Commission's recommendation that, in transitioning New Zealand to a thriving, climate-resilient, and low-emissions future, central and local government need to take action to ensure a genuine and enduring partnership with iwi/Māori is given effect to.

3.2.4 Consultation question 8: Central and local government working in partnership

We support central and local government working in partnership to implement the transition at all levels of government. This will include, efficient and effective partnership structures as well as alignment of legislation and funding.

The Commission's draft advice contains a progress indicator requiring the Government to have, by 30 June 2022, outlined its progress on developing the necessary partnerships between central and local government. However, there is no corresponding recommendation requiring the development of these partnerships. We **ask** that such a recommendation be included in the Commission's final advice.

3.2.5 Consultation question 9: Ensuring inclusive and effective consultation, engagement, and public participation

We support inclusive and effective engagement and consultation, and the mechanisms to achieve this. We **recommend** that the Commission advises Government that central and local government consider the adequacy of existing mechanisms for public participation in climate change-related decision making. Determination of how these can be enhanced, and identification of any gaps will avoid duplication and inform the shape of any new consultation mechanisms and tools.

3.2.6 Consultation question 12: What a path to 2035 looks like in each sector

We support the level of ambition set out in the Commission's draft advice, which is consistent with the targets legislated in the Climate Change Response Act 2002. We remain firmly committed to playing our part in reducing New Zealand's emissions.

As mentioned in 2.1.3, we are satisfied that the Commission has undertaken a robust approach to modelling and note the forecasting has been internationally peer reviewed.

We accept that the Commission's phased approach to the transition will mitigate many of the social and economic transitional costs. However, even if the transition is sequenced, parts of the economy and of New Zealand's society will be disproportionately impacted. Therefore, having a good understanding of the range of possible scenarios is important to ensure that current and future governments can anticipate and mitigate those adverse impacts.

We **recommend** that the Commission present the following key elements in the body of their final advice to Government:

- the assumptions which underpin the base economic model;
- the high-level scenarios which the Commission considered in its modelling; and
- the sensitivity testing which underpins this work.

3.3 Policy actions

3.3.1 Consultation question 13: Ensuring an equitable, inclusive, and well-planned transition

We support the Commission's package of recommendations and actions proposed to increase the likelihood of an equitable, inclusive, and well-planned transition. We note that given the long timeframes we are discussing here (14 years), transition plans will need to be flexible so that they can evolve with changes in technology and skills demands.

We agree that the transition to a low-emissions and climate-resilient society needs to be well-signalled, equitable, and inclusive in order to maximise the opportunities, minimise disruption and inequalities, and be enduring as a result. This will require proactive, transparent, and co-developed localised transition planning.

To achieve this future for New Zealand, it is critical that consideration is given now to what new skills, knowledge, and capability will be needed in the current and future workforce. Jobs, education, and training is an area that we think requires further analysis. Business, as a partner to government in ensuring an equitable transition, can offer insights to support the development of a vision for the workforce of the future, identify enabling policy and skills transition pathways to support the transformation of key sectors, and provide signalling on future skill needs to help employees adapt to the changing nature of work and the labour market.

Questions we **recommend** the Commission more clearly address in its advice to Government include:

- Will the new jobs require a workforce commensurate with the population of New Zealand? For example, the Commission's Distributional Impacts Microsimulation for Employment (DIM-E) model may be too optimistic.
- Is it green jobs or the greening of jobs – i.e., new roles requiring new skills or evolution of existing roles that incorporates new technology? (We imagine it will be a mixture of both.)
- Given an average 5-year lag time in the education system to responding to new industry needs, how will the education system be incentivised to respond to the delivery of new skills in a co-ordinated way?
- How have the broader demographics of the workforce been considered, including the contribution of immigration (given negative replacement birth rates)?
- What are the impacts on business, and can New Zealand learn from the experiences of similar economies that may be further down the track in responding to those impacts?
- What policies to educate or retrain workers and provide support for those that need it to maximise the opportunities to create new jobs will Government invest in?

We also support the recommendation that the Government develop an Equitable Transitions Strategy that is linked to the Government's Economic Plan and outlines:

- How the Government will build the evidence base for assessing the distributional impacts of climate change policy decisions that align with tikanga values.

- A process for factoring distributional impacts into climate policy and designing social, economic and tax policy in a way that minimises or mitigates the negative impacts.
- Guidance for developing localised transition plans that are customised for and co-developed with local government and affected communities.
- How the Government will support affected workers to transition into new work.

We think this work needs to be progressed as a matter of priority to ensure these plans are in place as the transition is underway. We would welcome the opportunity to work with the Government in developing this strategy.

3.3.2 Consultation question 14: Transport

We broadly support the Commission's package of recommendations for the transport sector. There are a few areas that we would like to be strengthened or expanded in the Commission's final advice to Government, these are outlined below.

Integrated national transport network

We support the Commission's recommendation for an integrated national transport network to reduce travel by private vehicles and to increase walking, cycling, low-emissions public and shared transport. We **recommend** that the transformational element active travel is emphasised more strongly, and that focus is shifted to balance supply-side interventions (e.g., increasing infrastructure supply) with demand-side response.

Changing the nature of vehicle ownership and how people travel in urban areas will require a strategic rethink of mobility options. Transportation and mobility are on the cusp of a paradigm shift that will be brought by technological innovation and social change that will see more New Zealanders using transport as a service and other more flexible options. For this reason, we think there needs to be more research into the drivers of mobility choices within the New Zealand context.

Effort will also be required to ensure a high quality of new mobility services. This is essential if we are to succeed in breaking old habits and building confidence in new means of travel.

We think a clear mobility strategy is crucial for enabling these transformations to take place. Changing behaviours requires clear information on alternative transport options and on timelines for delivery. Businesses in this sector will need a clear and predictable pathway to be able to plan for this change.

As part of the mobility strategy, we **recommend** the following be considered:

- The overall outcome should be increased vehicle occupancy and system productivity (e.g., carpooling and rideshare), and the uptake of low-emissions public transport. This should leverage digital opportunities, e.g., intelligent transport systems (including safe rideshare apps) that enable better trip management.
- The strategy must be informed by a good understanding of drivers of demand for mobility choices in the New Zealand context. This would then inform the nature of incentives that would be required, for example, to increase vehicle occupancy and incentivise shared mobility.
- The strategy must provide clarity on the timelines over which lower-carbon and affordable transport options are introduced.

- It should clarify the possible technical solutions and incentives necessary to change the nature of vehicle ownership.
- It needs to include an infrastructure plan, so that businesses can plan for the transition; this is especially crucial where delivery times are important.

The strategy needs to be cohesive across modes of travel. For example, e-bikes have many advantages over battery electric vehicles (BEVs), such as less wear on roads, improving activity rates (reducing obesity), and have far fewer embodied emissions. They can also help address the last-mile issue. Despite these advantages, however, they are not allowed to be taken on public transport. Such barriers need to be removed if behaviour is to change.

Lastly, the strategy must also consider adaptation requirements. Some infrastructure links might become unusable due to climate change.

We would welcome the opportunity to work with the Government in developing this strategy.

Road pricing system

The Commission's recommendation for evaluating other non-ETS pricing mechanisms is placed under Necessary Action Three for electric vehicle (EV) uptake, however we think this is misplaced as it should concern all road travel.

We generally support improving the pricing system for transport, so that costs associated with vehicle use are internalised (e.g., congestion / parking charge). By providing a more direct pricing signal of the real costs of mobility choices, such a system would create stronger incentives to support low-carbon user choices. A congestion charge, for example, would encourage desired behaviours, fewer cars on the road, more people per car, more EVs on the road), reduce transport-related emissions and bring the cost of EVs down. It would also provide a mechanism for allowing investment into public transport infrastructure, innovation into cleaner fuels, and improvements to existing assets.

One issue that needs to be recognised is that, as fossil-fuelled vehicles start exiting the fleet, new sources of funding for capital investments in road infrastructure will need to be secured given the current dependence on payments from fossil-fuelled vehicle use (e.g., Road User Charge (RUC), fuel excise tax). Therefore, we **recommend** that a nation-wide road pricing system needs to be accelerated to future-proof the Government's road infrastructure funding source.

Accelerate Electric Vehicle uptake

As we noted earlier, Electric Vehicles (EVs) are an important part of the broad range of solutions that will be required in decarbonising New Zealand's transport sector. SBC and CLC members are keen to work in partnership with government to develop collaborative pathways that have broad sectoral and political support. For this reason, we **ask** the Commission's final advice recommend Government re-establish a government/business working group to take this work forward, learning from the lessons of the previous failed attempts. This group should work to ensure policies have cross-party support.

As noted in our 2020 briefing to the incoming Government, we support an ambitious roadmap to accelerate the transformation of the transport asset make-up. We therefore support, in principle, the restriction of ICE light vehicles entering, being manufactured, or assembled in New Zealand. We **recommend** that the Commission link the timing of this ban to observed developments in the fleet composition, e.g., when a certain threshold of non-ICE vehicle uptake has been reached. Otherwise,

setting a specific deadline now for the ban could become unworkable given the risk in BEV supply has not been assessed.

Battery Electric Vehicle (BEV) supply

We welcome the proposed targets for EV uptake; however, we would like to see how the Commission has considered the risk that its assumptions on EV uptake do not bear out. There is a real risk to achieving the required EV supply given New Zealand's limited bargaining power for the latest BEV technology. We **ask** that the Commission's advice recommends the Government investigate options to minimise this risk. To this end, we support the recommendation for bulk procurement of BEVs to reduce supply risks, e.g., through corporate buyer's club or other mechanisms such as strategic partnerships with other countries for EV supply. SBC and CLC would welcome the opportunity to be part of this effort.

Charging infrastructure

We broadly support the recommendation for developing a charging infrastructure plan but identify some areas where it could be strengthened:

- The infrastructure needs keep pace with the significant switch from internal combustion engine vehicles (ICE) to BEV. There is urgency to such a plan given the decisions that are already being made with respect to urban planning.
- We **recommend** the introduction of a co-investment subsidy for EV charging infrastructure to incentivise investment of fossil fuel industry capex into electric and divert it from inappropriate investment in potentially stranded fossil fuel assets.
- We expect smart EV charging to play a critical role in electrifying transport affordably in the future, not just for EV owners but for all users of the electricity system. We **recommend** that the Commission highlight the value of smart EV charging and smart EV integration within the wider electricity system. We think this aspect needs greater recognition as the gains from such behavioural changes on the demand side could offer some buffer in the transition plan.

Short-term impacts on some businesses

We **recommend** that the Commission consider possible short-term impacts on businesses as they transform their fleet to lower-carbon assets. Within the light vehicle category, different uses lend themselves differently to electrification. For express package delivery for example, there is concern that charging times can cause significant productivity losses. Industry consolidation and improved charging infrastructure over the longer term will resolve this issue.

Corporate fleets will play a major role in the move to electrifying light vehicles. Removing current barriers will help smooth the pathway to electrification of corporate fleets. That includes reducing, removing or changing the methodology for calculating the fringe benefit tax for the corporate battery BEV fleet and employee EV charging.

Total cost of ownership

We **recommend** that further evidence is gathered on the true cost of BEV ownership, the affordability impact, and customer preferences and charging behaviour to inform the integrated charging plan. This is essential to determining distributional impacts, and the nature of the targeted support that will be required to ensure a just transition.

We support the introduction of incentive schemes to reduce the upfront cost of BEVs. Such schemes should adjust prices of new vehicles to reflect their emissions contribution to encourage significant changes in consumer behaviour - a demand-side response. The size and nature of new vehicles entering the national fleet is not simply a supply-side issue. They reflect the preferences of consumers, reinforcing the need for measures to ensure meaningful, system-wide behaviour change, as outlined in our response to Necessary Action 16 under 3.4.

Complementary measures

As well as encouraging uptake of BEVs, we **recommend** that the Commission's advice considers complementary measures aimed at getting older vehicles off the road. This should recommend exploration of the following potential measures:

- Retrofitting old vehicles with electric drivetrains. Such measures have been gaining momentum internationally, notably France. We think there is a role for the Government to support NZ innovation in this space to enable the production of electric-conversion kits for existing cars. We make a similar point on heavy trucks further below.
- The further scrappage of older vehicles include more stringent requirements for warrants of fitness and higher costs for annual licensing for such vehicles. However, we also recognise that there are significant social issues to address in exiting older vehicles from the fleet, and that the cost of scrappage and of upgrading to a newer vehicle will be prohibitive for many low-income households. We **recommend** that the Commission consider whether cash incentives could be provided for scrappage, or for low-income households to trade older vehicles and purchase more fuel-efficient cars.

Other complementary measures include recognising the value of solutions such as hybrid vehicles and blended biofuels in reducing emissions until zero carbon options become more affordable.

Low-carbon fuels

We support the recommendation for a biofuel strategy, which we think needs to consider wider impacts on the New Zealand economy such as location and regional development, infrastructure investments, and job creation. This strategy needs to be consistent with the bioeconomy roadmap, recognising other uses of biomass feedstock in the economy, and the trade-offs amongst supply-chain investment decisions that will need to be made. The issue of biofuel supply is particularly relevant for aviation, where alternative options to decarbonise are not available. For heavy freight, as well as biofuels, we **recommend** that the Commission's final advice more strongly recognises other options for decarbonisation, as discussed below.

In addition, we would support a moratorium or some other limitation on any new fossil fuel stations to be constructed if this would significantly reduce emissions. There is a real risk of stranded assets in a relatively short timeframe, and this will assist in no small part, to educating the general population on the realities of our climate transition.

Heavy trucks

Although the advice on vehicle electrification focuses on the light vehicle fleet, we think there is an opportunity to also decarbonise the heavy transport fleet. SBC's Freight Group, a group of nine companies representing the freight industry, carried out a study on the possibilities for this sector in

2020. The Commission staff were briefed on this work during the consultation period. SBC's Freight Group found:

- By 2030, 28 per cent of net emissions reductions can be achieved through options that are readily available. These include improved vehicle efficiencies, telemetrics, BEV, freight flow optimisation, and mode shift.
- These opportunities can be harnessed through improved collaboration across the HV supply chains, a better understanding of customer demand drivers, and government support to bring some of the required changes forward (e.g., BEV infrastructure, coastal shipping and rail infrastructure).
- The remainder of emissions will require an increasing uptake of biofuels or hydrogen, especially from 2030. Now is the time to act to remove barriers for those technologies so the scale of transformation is feasible. These barriers include high capital cost for hydrogen vehicles, and failures in the biofuels market.

There is also an opportunity for the domestic refurbishment of high-emitting trucks. New trucks enter New Zealand as a cab and chassis and have their freight bodies fitted locally. This has created a local expertise in truck assembly that could be used to convert diesel trucks. This would also help address low-carbon vehicle supply challenges. We are aware of the barriers to such refurbishment on a scale, particularly the reluctance of truck manufacturers to provide warranties, and therefore support the focus to be on newer existing diesel trucks that do not have deteriorated running gear.

We **recommend** that the Commission's advice recognise the work done in the heavy freight area by the companies themselves and the prospects for emissions savings in this sub-sector along with other parts of our submission, such as, the bioeconomy, and the use of electricity as a low-emissions fuel. As well as the technologies available today, the work by SBC's Freight Group highlights the importance of future technologies (e.g., advanced biofuels and hydrogen) in de-carbonising heavy freight, and we would like this to come through more strongly in Commission's advice. We **recommend** that the Government work with existing industry groups to build on their recommendations for decarbonisation.

Lastly, we **recommend** that the Commission's advice recommends a review of restrictions/requirements (e.g., length restrictions) on the type of heavy vehicles that can be bought into New Zealand. These restrictions are a barrier to low-carbon heavy vehicle uptake. A change to allow longer vehicles could incentivise low-emissions heavy-freight vehicles into New Zealand faster.

Rail and shipping

We support the recommendation to establish an investment strategy and clear targets to increase the share of rail and coastal shipping. For rail, this should be done as part of the New Zealand Rail Plan that is being drafted. The work by SBC's Freight Group found that mode shift is a key pillar for optimising the freight system, however, additional investments are required to integrate road, rail, and coastal shipping into a cohesive transport system.

We **recommend** that the Commission's final advice recommends developing a New Zealand National Freight Strategy in partnership with business that addresses the need and plans for long-term infrastructure investments to support the decarbonisation of heavy freight. A concerted, coordinated approach at the Central Government level is required rather than a piecemeal local or regional plan.

Aviation

We think there is potential for more production of Sustainable Aviation Fuel (SAF) in New Zealand than the Commission has planned for. SAF is the key aviation decarbonisation technology immediately available. For long-haul air travel, SAF is the only current option for decarbonisation. As is outlined in the separate submission of SBC and CLC member Air New Zealand, the SAF Consortium[2] has established that there is a viable pathway for standing up a SAF industry in New Zealand that would have broad-reaching benefits, including by creating skilled jobs benefiting regional New Zealand. However, further research is required to identify the most viable pathway for making SAF a commercial reality.

Alongside the implementation of the recommendations in Necessary Action 4, we **recommend** that a detailed feasibility study is undertaken to assess the benefits to New Zealand and most the viable pathways for standing up a local SAF industry.

To recognise the criticality of the public-private cooperation and coordination that is required to make SAF a reality in New Zealand, we **recommend** that the Commission include a fifth recommendation under Necessary Action 4 covering the establishment of an aviation-specific, public-private governance channel. As it has in other countries, such a body established here would help to identify the requisite policies and investment settings for making SAF a reality.

3.3.3 Consultation question 15: Heat, industry and power

We generally support the package of recommendations and actions for the heat, industry, and power sectors. However, there are a few areas where we recommend further consideration.

Energy Strategy Development

One of the most significant necessary actions that the Commission has identified in its advice to Government is the development of a "long-term national energy strategy that provides clear objectives and a predictable pathway away from fossil fuels and towards low emissions fuels, and the infrastructure to support delivery". As this strategy is central to New Zealand's low carbon future, we **recommend** that the Commission provide greater specificity about what needs to be included within the energy strategy to help the Government to act more decisively. In particular, we **ask** that the Commission **recommend** draft terms of reference for the development of the strategy.

The current approach to central government energy policy lacks a whole-of-system approach, which the new energy strategy should provide. We note that the state of evolution, the possibilities and the expectations on each of electricity, natural gas, bioenergy, hydrogen and demand-side response are different yet interrelated. Elsewhere in this submission we highlight the potential for biogas and biofuels to play a critical role where electrification is difficult and hydrogen is not yet ready to be deployed.

The Commission could strengthen this part of its advice: in addition to a renewable energy target, a comprehensive energy strategy with scenario modelling could test the plausibility of combinations and permutations of energy use in the pathway to a low emission energy and transport system.[3] It could demonstrate the option value of pursuing multiple energy solutions simultaneously. We **recommend**

[2] The SAF Consortium includes Z Energy, Air NZ, Scion, LanzaTech and LanzaJet.

[3] By scenario modelling we are referring to the explorative type of work the Business Energy Council (BEC) did in its BEC2060 project. See: www.bec2060.org.nz

that this strategy is coordinated between relevant businesses within the energy sector. An all-of-energy strategy with an all-of-energy renewable target would provide a vision for the energy system to match the decarbonisation goal.

We **recommend** that the following forms part of the long-term energy strategy:

- Amendments to existing policy architecture to allow an accelerated transition, including de-restricting Electricity Distribution Business' (EDB)'s current ties to the Commerce Commission's price pathway methodology to allow additional investment for electrification.
- The interplay of varying fuel types (electricity, biomass, natural gas, biogas, hydrogen) through the transition.
- Assessing the place of demand management especially in electricity and incorporating the place of energy efficiency and new technology to better manage both supply-side and demand-side energy consumption.
- Clarifying the place of New Zealand's Energy Certificate System, and the effect of its carbon footprint on the wider electricity sector.

We also **recommend** that the Commission provides guidance on who should 'own' the energy strategy and the electricity-specific strategy, and by when the strategy should be drafted. Absent a dedicated Ministry of Energy, this strategy will demand close institutional coordination across government. We propose that this strategy is owned by the Minister of Energy and Resources and that there is a commitment made to have this ready for public consultation in 2022.

Process heat retrofits

We have concerns around the availability of resources to undertake the level of work required to decarbonise New Zealand's industry. Meeting the Commission's 2037 recommended pathway is a substantial undertaking, given each large-scale decarbonisation project will be unique and complex across industries. Sequencing such a transition will need to take into consideration the availability of skilled experts to design and implement new systems, capacity to supply new equipment, reliability and affordability of alternative fuel options, and appropriate consenting and regulatory approvals.

We **recommend** that the Commission is clearer and stronger in its messaging that this is a significant area for quick, lasting, decarbonisation, and this should be a key area for current Government investment.

The indications from the first round of GIDI funding are that there are many projects with a long-term carbon price of less than $15/t, significantly less than offsetting, which indicates that this is a sensible investment that should be increased.

Embodied emissions

We **recommend** that specific recommendations are made to address embodied emissions. While there is discussion around embodied emissions throughout the report, no specific recommendations are made to address them.

There are four key reasons why we think embodied emissions should be considered at this stage within the Commission's recommendations.

i. Where buildings demand lower carbon concrete, steel, aluminium and aggregate, it will help change the manufacture and sourcing of products and reduce industrial heat emissions.

ii. Where manufacturing building materials are saying that they need demand, in order to invest.

iii. The Building for Climate Change programme (MBIE's programme to amend the building code) is discussing measuring and reducing embodied carbon and it would be useful to align with this thinking.

iv. The 2019 Thinkstep report[4], which showed that even without substitution of materials (e.g. wood instead of concrete or steel) the emissions from materials currently used, can be reduced substantially (19 per cent by 2025 in buildings). Including substitution and having another five years, clearly enables far further reductions.

We also **recommend** that the Commission considers the ability to change the carbon conversation from a production perspective to a consumption one. Setting targets for embodied emissions within, as a starting point, buildings will drive differing consumption behaviours.

We further **recommend** that the Commission breaks down industrial heat so that embodied carbon is visible. It should also include a goal of a 40 per cent reduction in embodied carbon of buildings by 2030. This aligns with the World Green Building Council's target.

Building energy performance

Building energy efficiency in buildings, particularly new builds, is an area that we believe New Zealand needs to go further and faster on. The Commission currently states that new buildings should aim to be 35 per cent more energy efficient by 2035. In our opinion, this target is neither ambitious nor consistent with current domestic policies or the international call for building energy efficiency standards, for example:

- The Building for Climate Change programme is setting out a likely target of a 30 per cent reduction by 2024.
- Thousands of homes and hundreds of buildings are already being built to a standard reflecting 35 per cent more energy efficiency using NZGBC tools right now.
- The United Nations has called for near zero energy, zero emissions buildings to become the construction standard globally within the next decade.

Therefore, we **recommend** that the Commission amends their energy efficiency for new builds target to 30 per cent more energy efficient by 2024, 60 per cent more energy efficient by 2027, and near zero energy by 2030.

Reports prepared for the Energy Efficiency and Conservation Authority (EECA) identify energy efficiency as the most cost-effective way to decarbonise New Zealand's energy grid. A report by the International Energy Agency similarly identifies energy efficient new builds and renovations as the least-cost ways to reduce emissions, with negative lifetime costs thanks to the savings on energy. Energy efficiency can displace fossil fuels used in buildings and, by reducing electricity demand, can allow the retirement of fossil fuel generation and/or free up electricity generation to power the electrification of the transport fleet at less cost than new renewable generation, thereby helping reduce transport emissions.

[4] https://www.nzgbc.org.nz/Attachment?Action=Download&Attachment_id=2453

We also note that decarbonising buildings could be supported by our proposed bioeconomy through adding green molecules to the existing gas network. For example, the expected carbon reduction from buildings could be achieved through a target of 20 per cent reduction of gas in 2030 supplied to this market segment as low-carbon gases. This would achieve the outcome sought by requiring appliance replacements to be electric or biomass, without stranding existing gas network assets and household plumbing systems.

Energy efficiency first

We note that the Commission has indicated that industry needs to both fuel-switch and perform more efficiently. Therefore, we **recommend** that the Commission is clearer in its recommendations regarding energy efficiency.

While the draft advice has provided some targets for improvement in building energy efficiency, beyond transitioning away from using gas in buildings, no energy efficiency or other emissions reduction policies specific to buildings are proposed.

Energy efficiency should be the first priority for every energy initiative identified in the draft advice. This is not the case at present. In New Zealand, the conversation around energy demand and reducing carbon often focuses on building more renewable energy generation sources. If we use less energy, we will have less need to develop new energy generation. Using a process heat example, if we spend a period of time reducing the demand for process heat at a dairy processing site by adopting heat recovery, technology changes, and process electrification, when it comes to fuel switching the process heating plant, we might be able to convert a 10MW coal boiler to a 5MW electrode boiler.

We also see that a significant opportunity to reduce emissions and improve energy equity is to develop a far-reaching energy equity programme across all New Zealand homes and buildings. This would cut household bills, most notably amongst those struggling to adequately heat their homes in winter, business operating costs, and provide thousands of local jobs in every area of the country with homes and buildings. An inclusive and well-planned climate transition must have this energy equity plan at its heart.

To accelerate and maximise the opportunities for energy efficiency in our homes and buildings, we **recommend** that the Commission's advice include a range of initiatives as part of a comprehensive energy equity programme. The following are tried and tested in New Zealand and/or overseas and can be implemented relatively quickly:

- The Warmer Kiwi Homes programme should be applied on a wider scale, noting health co-benefits.
- Introduce energy labels for homes.
- Introduce energy labels for commercial office buildings.

3.3.4 Consultation question 16: Agriculture

With the right policies and investment, agriculture presents a key opportunity for New Zealand to be ambitious and world leading. We broadly support the Commission's package of recommendations and actions for the agriculture sector but there are a few areas where we **recommend** further consideration.

Support of accelerated and secured R & D investment

We support the Commission's call for accelerated and secured investment channels for research and development (R&D) to meet our 2030 and 2050 biogenic methane targets. We think this recommendation needs to be strengthened and made more specific.

Livestock emissions present New Zealand's greatest challenge and our greatest opportunity. Unique amongst OECD members, nearly half of New Zealand's emissions come from the agricultural sector. This provides us with a platform to demonstrate international leadership through innovation, tackle our emissions curve, and maintain a thriving primary sector.

The 2018 Report of the Biological Emissions Reference Group (BERG) noted that "If successfully commercialised, methane-reducing technologies … have the potential to significantly reduce biological emissions from agriculture."

In the report the New Zealand Agricultural Greenhouse Gas Research Centre (NZAGRC) and a group of subject-matter experts reported they had "medium-high confidence" that by 2050:

- a methane vaccine will be available. This has the "potential to deliver a 30 percent reduction in biogenic methane"; and
- that a "methane inhibitor for grazing systems" will be available to deliver a "10 to 30 percent" reduction in biogenic methane.

These are potentially huge gains and, as we noted in our *Briefing to Incoming Government on Climate Action Priorities* in October 2020, there is an opportunity here for New Zealand to significantly increase its investment into applied science, working in partnership with other leaders in applied agricultural research, to accelerate this work so that we can move the dial on biogenic methane and nitrogen emissions.

We need to look to the lessons we have learned over the past 12 months in terms of our response to the COVID-19 pandemic to remind ourselves of what bold effort looks like. In the case of COVID-19, we used a range of bold policy instruments and international partnerships to manage the pandemic and to ensure we had access to leading vaccines. We can do the same in the case of the other crisis of our time – climate change.

Positive progress is being made by the New Zealand Agricultural Greenhouse Gas Research Centre (NZAGRC), Pastoral Greenhouse Gas Research Consortium (PGGRC), and Global Research Alliance (GRA). This work must be accelerated significantly to provide an option for meaningfully addressing livestock emissions while continuing to increase productivity, as a complement to the existing He Waka Eke Noa partnership (which is aimed at supporting farmers to measure, manage and reduce on-farm emissions).

To be effective, we are of the view that this investment needs to be increased by an order of magnitude, not just in the form of increased funding but also strengthened strategic leadership, from central government in particular, in partnership with international leaders in biogenic methane and nitrogen reduction technology.

Specifically, SBC and CLC call for:

- Enhanced leadership from central government to support this work as a key component of the Emissions Reduction Plan. This should involve a dedicated cross-agency effort.
- Partnership between the private sector and government to:

- Leverage the funding needed – expected to be in the hundreds rather than tens of millions – to significantly accelerate research efforts. This funding would ideally be a mix of (mainly) offshore private investment, with supporting finance from New Zealand government and industry. Note that this could potentially be (partially) funded through hypothecation of ETS revenue, as suggested in our 2020 paper.
- Strengthen and leverage international private partnerships, complementing the public partnerships through the Global Research Alliance, to access international scientific expertise and attract the private investment that will be required to ensure New Zealand has world-leading access to new technology and testing.
- Develop enhanced commercialisation pathways to accelerate delivery of a methane vaccine and other methane reducing technologies to New Zealand and international markets.

Need for a cooperative, flexible and market-responsive approach

We note that the Commission's advice is that the emissions budgets and reductions pathway identified for the agricultural sector contain the adoption of currently available practices and technologies, however the task to achieve the scale and rate of adoption for these practices will be challenging to achieve. This increases the importance of He Waka Eke Noa, as this partnership plays a critical role in supporting the behaviour change required across the agricultural sector. He Waka Eke Noa can recommend the most appropriate suite of policies and practices that will drive behaviour change in a way that incentivises and rewards efficiently-produced, relatively low-emissions primary exports.

It will be important that the policies and support that are applied to the primary sector seek to encourage efficient and optimised diverse farming systems. The budgeted productivity increases that are required to achieve a stable agricultural production output, whilst reducing emissions, will require investment in support through the He Waka Eke Noa partnership.

Given the uncertainties about the effectiveness of mitigation technologies in the primary sector, it will be important that regular reviews take place to ensure climate change policy is flexible and refined to take account of the changing scientific and economic evidence, as well as technology and innovation developments. This flexibility needs to translate into policies that allow those in the primary sector to identify and pursue the most cost-effective mitigation methods as they become technically and commercially viable.

Those policy settings should also provide land use flexibility for landowners. For example, more support for water storage and irrigation would provide benefits now (security for irrigation and/or frost protection, resilience against seasonal changes and improved water quality), as well as into the future (building climate resilience and enhancing future land use optionality).

Voluntary Offsets

Many primary sector firms are engaged in exporting and marketing in multiple countries. To achieve carbon neutrality, these firms can use voluntary offsets. This involves buying and cancelling emissions units, for example New Zealand Units (NZUs). The Commission states that a credible carbon neutral claim must see a voluntary offset contribute extra emission reductions/removals on top of BAU activities, like the ETS. They must also avoid double claiming reductions. The Commission believes that there

needs to be an adjustment against targets when an NZU is cancelled, or the NZ ETS will negate the benefit.

We support the Commission's position and agree that the Government should better define effective voluntary mitigation options and clarify the types of claims that can be made about them. This should be a priority as it affects the perception of the value of many of New Zealand's primary sector exports.

We have identified a list of steps that we **recommend** that the Commission should consider in its advice to Government:

i. A mechanism that allows for voluntary purchase and cancellation of New Zealand carbon credits under the Paris rules (equivalent to the Kyoto workflow), e.g., via the ETS.

ii. A mechanism that allows for the creation of new categories or classes of carbon credits to be used by the voluntary participants, e.g.:

    - Soil carbon
    - Blue carbon
    - Carbon removal or avoidance projects

iii. A mechanism to manage the accounting implications of voluntary participation, i.e., to adjust for voluntary action to manage the 'waterbed' effect whereby the NDC would otherwise adjust to compensate for the voluntary action, e.g.:

    - Corrective adjustments; or
    - An allocation of units (from the National Inventory being reported against the NDC) for issuing to voluntary carbon credit project developers

iv. Inclusion in the Ministry for the Environment's guidance that as voluntary participants, we will be allowed to use international carbon credits without Corrective Adjustments (until such time as the international rules around Corrective Adjustments have been established).

We also **recommend** that the Commission acknowledges that the suggestions set out above would address the following challenges:

- Recognising voluntary participants for channelling funding into a wider range of projects (particularly in NZ) that have additional climate and environmental benefits.
- Demonstrating how voluntary participants' offsets are additional (i.e., would not have happened without the voluntary action).
- Demonstrating how voluntary participants' ETS offsets are not being double claimed (by the Government within the NDC reporting).
- Demonstrating how the issued units' voluntary participants that fund international credit projects claim are not being double-claimed by the host country.
- Demonstrating how voluntary participants' NZ project-based removals are not being double-counted (by other players in the voluntary space, such as within the supply chain).

Importance of food safety

We agree with the Commission's emphasis on ensuring that regulations allow new technologies to be brought to market as quickly as possible while ensuring that other risks, for example, those to food safety, are properly addressed.

3.3.5 Consultation question 17: Forestry

We are broadly supportive of the package of recommendations and actions for the forestry sector.

Exotic afforestation

We agree with the Commission that pine forests have an important role to play in achieving the 2050 target. They can continue to provide one of the most cost-effective ways to capture carbon over coming decades, allowing other cost-effective technologies and methods enough time to be developed and made available. Examples of these technologies and methods could include methane inhibitors, as discussed in the Agriculture section above, and lower emissions sheep and beef genetics, particularly the use of genomics as well as a wide variety of other possibilities.

Exotic afforestation may not deliver many of the co-benefits that indigenous forests do, and focus should remain with permanent forests. However, the continued use of cost-effective exotic afforestation, in line with the current trajectory, provides crucial option value in our country's efforts to tackle climate change. Given the uncertainties inherent in other mitigation options, which are arguably at least comparable to the risks of loss of carbon from exotic and native forests, it could be prudent to allow the ETS price signal to drive investment in this area. This price signal will naturally adjust as new emissions-reducing technologies and methods emerge. As the Commission suggests, other factors will need to be considered, such as employment and equity outcomes.

Native afforestation

We agree with the Commission that the level of native afforestation it suggests is likely to be difficult to achieve without some sort of extra incentives. The ETS provides little incentive for landowners to use native afforestation to capture carbon. However, higher ETS prices would accentuate the additional value that landowners can get from exotic afforestation due to their significantly higher efficiency in capturing carbon compared to native afforestation.

We **recommend** that the holistic approach proposed by the Commission should encourage native plantings. Besides the ETS, incentives for native afforestation could be justified based on other benefits, including ecosystem benefits such as improved biodiversity and water quality, where these benefits are likely to outweigh the costs.

Wetlands

We support the Commission's view that more carbon could be captured by wetlands and that this should be better accounted for. The potential here warrants more effort to measure how much carbon is/could be effectively captured as well as how this should be accounted for in global efforts to counter climate change.

3.3.6 Consultation question 18: Waste

In general, we support the recommendations and actions for the waste sector but there are a few areas that we **recommend** that further consideration is given, including:

- Care needs to be taken so waste levy changes do not move organic material down the landfill classes. Increasing fees at Class 1 landfills higher than Class 2 (and subsequent) is likely to move

organic waste down the class chain into landfills that have less comprehensive gas capture systems. This would be a net loss for the country.

- Lack of waste data is a key issue. While some companies are already undertaking this analysis themselves, the wider business sector would benefit from a comprehensive study undertaken in partnership with business to understand what waste is available where, in what quantities. This will be an important input into the bioeconomy.
- Lack of, and variability of, infrastructure is a key issue. Standards should be enhanced to ensure that there is consistency around the country in regard to waste disposal availability and methods.

A key consideration of the waste sector is understanding how it fits into the bioeconomy and what should be occurring with what waste, where, in order to provide the least cost solution for New Zealand overall. Items to consider include:

- Where are different types of waste coming from?
- Are there thermal/electrical loads around high waste areas?
- Where should compost be prioritised over other organic disposal methods?
- Where should anaerobic digestion be prioritised over other organic disposal methods?
- Can AD/pyrolysis be utilised to provide inputs into energy systems, including:
    - North Island Natural Gas network?
    - Local energy hubs for large industries?
    - Liquid fuel consumption market, including petrol, diesel and LPG?

The bioeconomy

We also believe that the bioeconomy has a vital role to play in an integrated energy system especially in New Zealand's transition to a low gross emissions economy. The exact role it would play depends on progress in electrification, the shift to 100 per cent renewable electricity, the state of the gas market, progress with hydrogen, availability of inputs (e.g., feedstock), and how much demand side participation emerges. All of this will impact how competitive biofuels are relative to other sources. We can see the sector is not mature, but we have two points to make to the Commission:

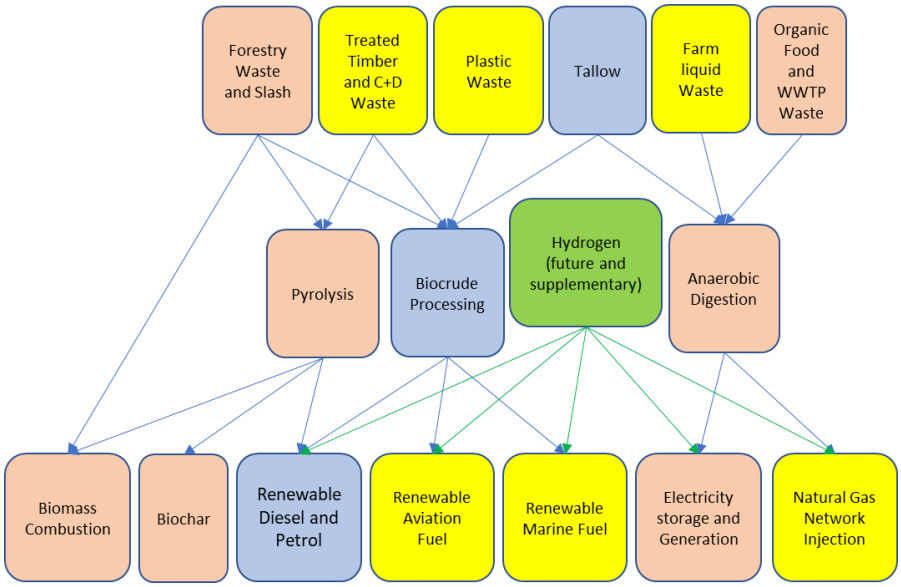
i. Biofuels and biogas can play an important role; and
ii. It is not going to develop to its full potential without cooperation. Government has a role here.

The Commission has made references to the potential for biofuels as a transitional, and long-term, fossil fuel replacement for vehicles and aircraft. We believe that this is a key area where government and business leadership could have a large impact on carbon emissions reductions in the short to medium term.

We see the bioeconomy as a system. The diagram below outlines some of the key sectors and engagement points for interconnection between them. Parts of this bioeconomy are existing and are economic presently. The waste streams highlighted in orange (Forestry Waste and Slash, Organic Food and WWTP waste) are already used for renewable energy generation. The areas in blue (tallow, biocrude processing) represent the Z Biodiesel plant – which is operating though has significant room for growth.

The items in yellow are those that have the most potential to accelerate decarbonisation, and to derive the most value from waste streams.

Figure 1.



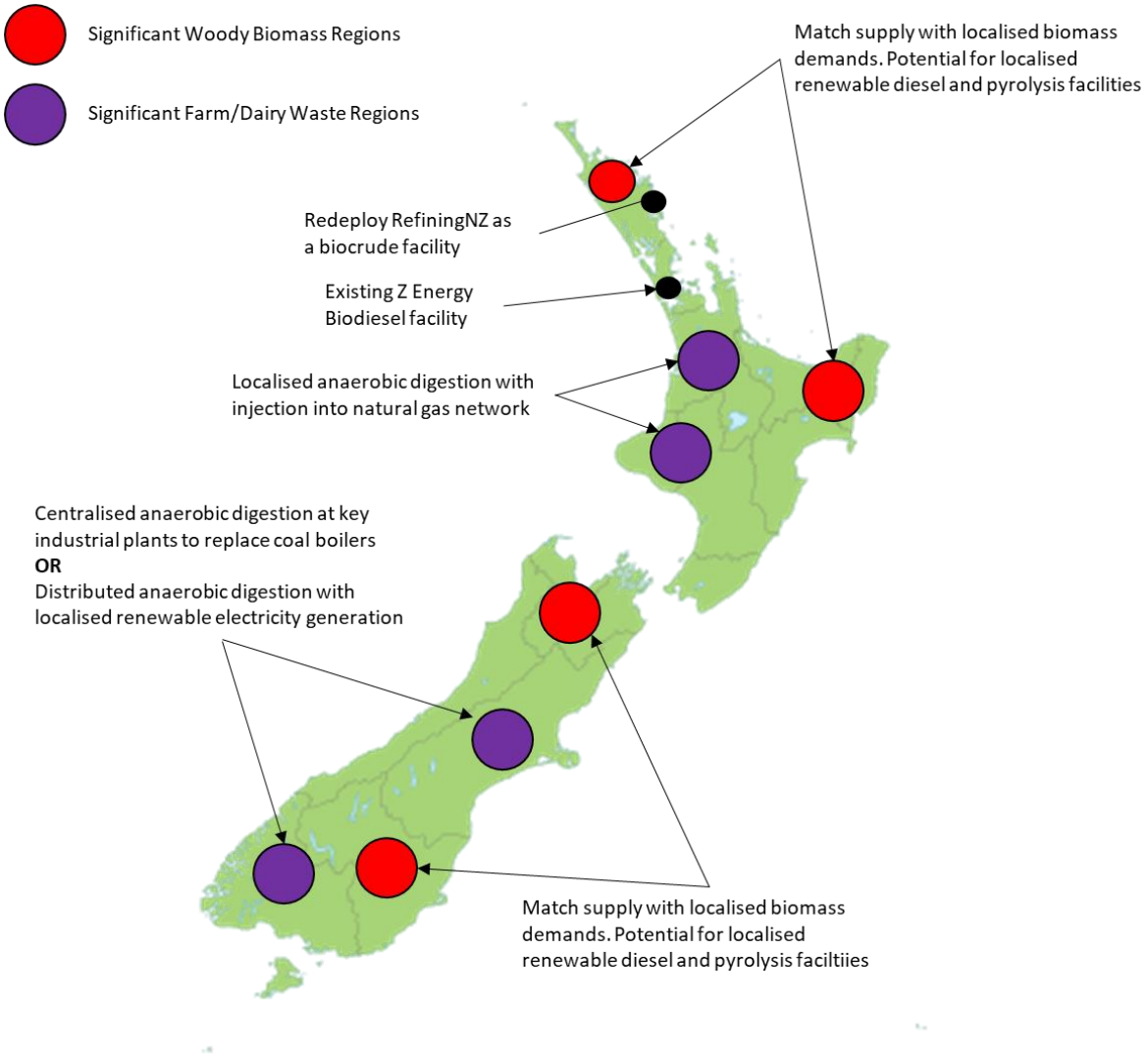
Advancing a bioeconomy will help us to decarbonise quickly and also presents the opportunity to introduce hydrogen across a range of end uses as a supplementary, and complementary, fuel source.

For example, the North Island natural gas network could provide gas that is a combination of natural gas, biogas, and hydrogen with ratios that change depending on the availability of each fuel type, and any excess could be converted into liquid fuels or electricity.

Hydrogen is a key part of the technology roadmap for electric aircraft and has potential to reduce carbon emissions through the production of a "drop-in" fuel. The bioeconomy can decarbonise heavy vehicle fleets, including construction equipment. Hydrogen and biofuels can be blended at varying ratios on-vehicle at building sites to reduce the carbon footprint of our construction sector, as well as the heavy trucks moving equipment to and from these sites. In other words, the bioeconomy offers *flexibility*.

Geographically, we envisage the bioeconomy will vary. In the North Island we foresee a strong connection with the existing natural gas network, which will allow fuel from waste/energy-dense areas to be transported at a relatively low cost. We also suggest that there is a role for RefiningNZ to play as a central biorefinery, noting that any decommissioning costs would need to be considered.

Figure 2.



In the South Island there is not a gas network however there are opportunities to consolidate investment in biofuels plants near existing industrial sites. Those sites are currently working through their own decarbonisation pathways. A coordinated approach will deliver stronger and better outcomes here.

3.4 Multi sector strategy (Consultation question 19)

In this section we provide some feedback on the Commission's multi-sector recommendations.

Necessary action 15: Integrate government policy-making across climate change and other domains

We agree with and support this recommendation.

Necessary action 16: Support behaviour change

We support this recommendation and do not think the advice goes far enough in recognising the challenge of getting the universal behaviour change the Commission's modelling assumes.

We would like to see the Commission focus on the information the public need to lead to behaviour change in every part of the economy. Price signals and policies will not change the hearts and minds of the entire population as much as is required to deliver the Commission's proposed pathway. There is also a risk that behaviour change during the transition lags the price signals and policy actions which may lead to a higher cost of the transition and a slower pace to meet the emission targets. EECA's Gen Less communications platform is a good example of a potential vehicle for this kind of messaging.

As we noted earlier, we **recommend** the Commission test the sensitivity of the pace of the emission reduction transition and the economic outcome (or ask Government to do so) before embarking on the policies and measures contained in the advice.

Necessary action 17: Require entities with large investments to disclose climate-related risks

The Commission proposes to recommend to Government to:

i. Implement the proposed mandatory financial disclosures regime and explore the creation of a similar regime that covers public entities at the national and local level.

ii. Evaluate the potential benefits of mandatory disclosure by financial institutions of the emissions enabled by loans over a specified threshold.

In section 2.1.5, we raise mobilising capital as one of SBC and CLC's high priorities for Government and seek support from the Commission for this. We endorse mandatory climate-related financial disclosures. The proposal as it stands would apply to publicly-listed companies and large insurers, banks, and investment managers. We support the Commission's proposal to recommend the creation of a similar regime that covers public entities at the national and local level.

We also support the delivery of a clear and comprehensive compliance standard to enable consistent and well-prepared disclosures. A staggered or ambiguous framework for reporting will mean compliance is made more difficult for many entities, particularly those that are early on in the process of understanding their climate exposure.

Time critical necessary action 6: Align investment for climate outcomes

We support the proposal to recommend investigating and developing plans to mobilise private sector finance for low emissions and climate-resilient investments. Further to our overarching observations in section 2.1.5, we commend the work of the Aotearoa Circle's Sustainable Finance Forum (SFF) in this

area. The SFF's Roadmap for Action, published in November 2020, outlined a clear plan to mobilise private sector finance to accelerate action across the corporate and financial sectors and realign investment to achieve climate outcomes.

We suggest the Commission expand its advice under Time-Critical Necessary Action 6 to reflect the role the Government and public sector can play in opening up access to green financial products and ensuring their integrity. To achieve this the Government should incorporate green investment criteria across all public sector investment vehicles, such as NZ Super, ACC, investment funds such as the Provincial Growth fund and the RBNZ's financial operations.

We also note that Government will publish on 31 March 2022 how the COVID-19 economic stimulus is helping to accelerate the climate transition. We agree that the Covid stimulus should be used to advance the climate transition and **recommend** this be factored into decisions being taken on the recovery now.

Whether the Commission is making recommendations on the application of the economic stimulus fund or in general bank lending we **recommend** it be more assertive about the role of mobilising capital to support reducing GHG emissions.

This approach is warranted because of market failures such as lack of information and high transaction costs holding up potential decarbonisation projects that governments can play a role in compensating for. The Green Investment Fund is an example of Government assisting in this case.

This idea is for Government to bridge the gap between activity that is GHG-emitting and equivalent activity that reduces GHG emissions by monetising the value of the emission reduction outcomes. The assistance could take several forms, and these would be project-specific.

Necessary action 18: Building a Māori emissions profile

We agree with and support this recommendation.

Time critical necessary action 7: Driving low emissions choices through the NZ ETS

The Commission proposes that Government strengthen market incentives to drive low emissions choices. SBC and CLC submit that the Commission should go further than this and urge Government to ensure the ETS is operating to its full potential so it is clear where non-price policy measures are necessary and will drive change.

We note that the Commission recommends increasing the cost containment reserve and auction reserve price triggers to reflect a pathway for the NZU price that is consistent with the recommended values for investment decision making. It continues:

> The Government also has choices around the extent to which it relies on the NZ ETS or other policies to make these emission reductions happen. The more that non-ETS policies are used, the more likely it is that the NZU price in the NZ ETS can be lower while still achieving the same overall amount of emission reductions. This might not reduce the overall cost of reducing emissions – it would just mean that the cost of achieving some reductions was less visible in the emissions price, because it was not contributing to price formation in the NZ ETS market.

We accept that the carbon price will have to rise significantly in order to change the incentives on emitting activity but note the need for a just and equitable transition to be planned for to support the impacts of the changing price of carbon.

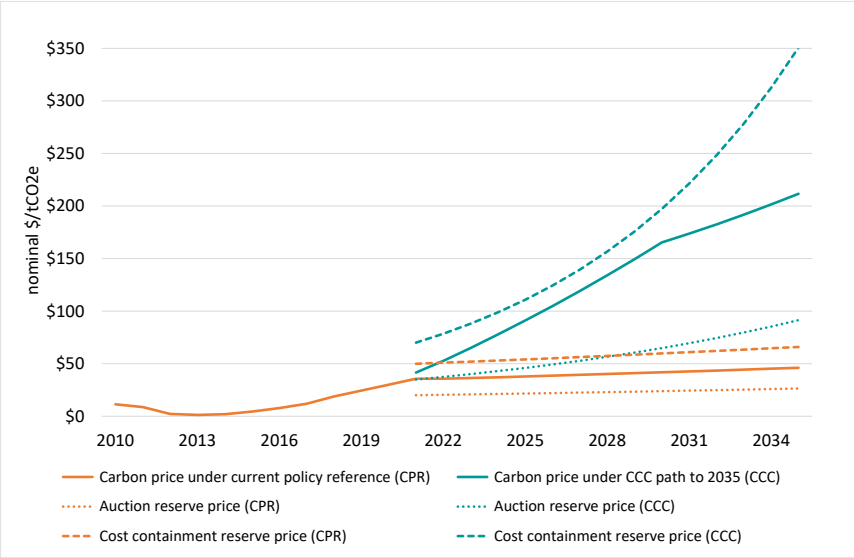
The chart below shows the current default auction reserve price and cost containment reserve price. This has been overlaid by the auction reserve price and cost containment reserve prices advocated by the Commission as follows:

i. Increase the cost containment reserve trigger price to $70 as soon as practical and then every year by at least 10% plus inflation.

ii. To maintain continuity with recent prices, immediately increase the auction reserve trigger price to $30 as soon as practical, followed by annual increases of 5% plus inflation per year.

The carbon price that reflects the investment signals is shown in bold compared with the carbon price currently used in the economic modelling.

Figure 2 Current and proposed reserve auction prices and cost containment reserve prices.



As we have previously noted, we support the need for price signals to be sufficiently strong to drive GHG emissions down. Our issue is with the degree to which non-price measures are resorted to in the advice, and the cost of transition resulting from prices rising faster than the economy's ability to respond. This is why we **recommend** complementary non-price measures sit alongside the ETS.

Necessary action 19 Continued ETS improvements

The Commission proposes to recommend to Government that, in the first budget period, the Government make progress on:

a. Developing options and implementing a plan for recycling some or all of the proceeds from NZ ETS unit auctions into emissions reductions, adaptation, equitable transitions and meeting international climate change obligations.
b. Undertaking a first principles review of industrial allocation policy.
c. Continuing to phase out industrial allocation.
d. Exploring alternative policy instruments that could address the risk of emissions leakage.
e. Providing more information to reduce uncertainty about adjustments to NZ ETS settings, particularly how it intends to manage unit volumes in light of the split-gas 2050 target.
f. Clarifying the role and avenues for voluntary mitigation in New Zealand.

SBC and CLC support all of these except for the default position of continuing to phase out industrial allocation. We refer to our observation that New Zealand could play a strong role in reducing global emissions by supporting low emission energy being used here by global manufacturers. Rather than focusing on carbon leakage we could be known as global carbon leaders.

3.5 Legislative requirements (Consultation question 20)

We generally support the recommendations in Chapter 7 but would like the advice to more strongly recognise that embodied emissions are important particularly to inform behavioural change.

3.6 Nationally Determined Contribution (NDC)

3.6.1 Is the NDC compatible with New Zealand contributing as a developed nation? (Consultation question 21)

We agree that New Zealand should play its part under the Paris Agreement and demonstrate leadership in line with our ambitions. We stand behind the Act and its purpose of contributing to efforts to limit warming to 1.5 degrees. We also agree with the Commission's assessment: climate change is a global problem and requires a global solution. New Zealand's contribution will ultimately not have a meaningful impact on the global emissions trajectory unless all other countries play their part too.

New Zealand's NDC vs domestic emissions budgets

New Zealand's current NDC represents the commitment we have made under the Paris Agreement to contribute to global efforts to combat climate change in the period 2021-2030. As the Commission's advice points out, our current NDC is set "at a more stringent level" than our domestic emissions targets. This means that our planned domestic abatement effort will be insufficient to meet our NDC. Our 2030 NDC, in its current or any future enhanced form, will therefore need to be met through a combination of domestic and offshore mitigation.

Any changes to our NDC will have real implications for New Zealand, affecting either the shape of the domestic transition, or the cost to be incurred by New Zealanders in purchasing offshore mitigation to bridge the gap between our own abatement efforts and the ambition set by the NDC. Offshore mitigation has benefits, as the Commission outlines, but those should be weighed against the investment that purchasing overseas carbon credits potentially diverts from New Zealand's domestic transition. We **recommend** the Commission emphasise in its advice:

- the difference between domestic emissions budgets and the NDC; and
- the potential economic impacts and trade-offs associated with meeting an increased NDC.

New Zealand's contribution to global efforts toward 1.5 degrees under the Paris Agreement

The Commission's analysis sets out the parameters of a 1.5 degree pathway, both globally and within New Zealand, including the underpinning science. This shows that efforts consistent with a 1.5 degree pathway could sit anywhere within a range.

How New Zealand decides to position itself within that range is tied to the purpose of the Act, interpretation of our commitments under the Paris Agreement (a matter of international law), and a range of other factors such as economic and social impacts and New Zealand's international reputation.

New Zealand can show leadership and pursue the "ambitious efforts" that the Paris Agreement requires of all countries in a variety of ways. This can take the form of targets we set, including through the NDC. It can also be demonstrated in the way we transition – that we do so in a way that allows our economy and people to thrive, through a well-planned, equitable transition, and use of innovative approaches to abatement.

These decisions are, as the Commission states, political in nature. They are also decisions that will have intergenerational impacts on our economy and New Zealand's mana internationally. We **ask** the Commission to revise its recommendation to reflect this and recommend to the Government that any revision to the NDC must be informed by a public conversation.

Focus on action that can be taken now and targets to be put in place for later

We have focused this submission, as we did with our 2020 paper, on action that can be taken in the near term to accelerate climate action and bring New Zealand more in line with its OECD peers. 2030 is just around the corner. In 2025 we will be expected to communicate a second, even further enhanced NDC under the Paris Agreement.

We **recommend** the Commission reflect these timeframes in its advice and urge the Government to prioritise action New Zealand can take now to reduce emissions to meet its existing targets and to focus on increasing its contribution to global efforts under future NDCs.

3.6.2 The form of the NDC (Consultation question 22)

We support the Commission's recommendations on the form of the NDC. We note that the Paris Agreement anticipates not just continued provision of climate finance to developing countries but also mobilising climate finance from a wide variety of sources (Article 9.3) to fulfil one of the Agreement's key goals of making finance flows consistent with a pathway towards low GHG emissions and climate-resilient development (Article 2.1(c)).

We **recommend** the Commission link this to the important steps New Zealand should take to integrate sustainable finance concepts to support the transition outlined in sections 2.1.5 and 3.4 (Time Critical Necessary Action 6).

Regarding metrics, we **recommend** the Commission reflect in its advice scientific discussion on the GHG contribution from methane as measured under GWP100 as well as alternative measures such as GWP*.

3.6.3 Planning for meeting the NDC (Consultation question 23)

We support the Commission's recommendations in this section. As the Commission identifies, New Zealand cannot meet our current NDC with domestic action alone. It is dependent on access to a significant proportion of emissions reductions from offshore mitigation markets that are not yet formally in place. This poses a risk to the achievability of our current and any increased future NDC. Given the role offshore mitigation is projected to play in meeting our NDC, we agree the Government should prioritise arrangements to enable access to markets for such mitigation.

We **recommend** that the Commission's recommendations in this section emphasise the need to:

- actively pursue as a matter of priority the establishment of international emissions reduction markets with strong environmental integrity

- develop and communicate a system for holding itself to high standards of environmental integrity in the offshore mitigation it applies to the NDC
- develop a strategy for ensuring that the purchase of international units does not undermine the NZ ETS price signal.

3.7 Biogenic methane

3.7.1 Findings (Consultation question 24)

We are taking a watching brief on the exact pathway for biological methane emissions reductions by 2100. However, we **recommend** that the Commission provide advice to the Government on a specific level of reductions required for biogenic methane by 2050. We further **recommend** that the Commission advise the Government to amend the Act to replace the 2050 biogenic methane range with this specific level.

Clarity on the 2050 target range will provide more certainty and enable a coordinated approach across the sector. The current structure of the budgets leading up to 2035 suggests that we are tracking to meet the lower threshold of the target range (24 per cent). If we were to meet the higher end of the target range (47 per cent), this would intensify the scale and speed at which reductions would be required.

Transparent direction will help signal the appropriate contribution and pace necessary for biogenic methane reductions under the split gas target approach. It should also take into consideration the uncertainty of available solutions to meet the target.

As outlined in section 3.3.4, we **recommend** that there is significantly greater investment into the development of technologies to reduce methane emissions. At present, there are several bottlenecks in effective research and testing, including access to specialist lab equipment, on farm feed systems, and expertise. This limited capacity, coupled with a piecemeal approach of competing start-ups/commercial companies, research bodies, and universities, challenge our capability to run effective farm trials.

As such, we **recommend** that an overarching strategy is developed that focuses on advancing research and development. This strategy is necessary to provide a long-term innovation plan and vision. This strategy will require collaboration across government and industry to facilitate appropriate investment and funding models that support innovation. There is a particular role for government in ensuring appropriate regulatory frameworks are conducive for onboarding, and scaling technology solutions will be critical for successful commercialisation. We must also ensure that solutions deemed viable are both affordable and accessible in order to support uptake.

About Sustainable Business Council

The Sustainable Business Council (SBC) is a CEO-led membership organisation with over 100 businesses from all sectors, ambitious for a sustainable New Zealand. Members represent more than $87 billion of collective turnover, 28 per cent of GDP, and nearly 160,000 full-time jobs. Our network gives members the ability to take large-scale collective action. SBC is part of the BusinessNZ network and is the New Zealand Global Network partner to the World Business Council for Sustainable Development. www.sbc.org.nz/about/our-members/sbc-members

About Climate Leaders Coalition

The Climate Leaders Coalition (CLC) was launched in July 2018 with 60 original signatories to promote business leadership and collective action on climate change. With now over 100 signatories, they account for almost 60 per cent of New Zealand's gross emissions, around $86 billion of collective turnover and employ almost 200,000 people. Signatory commitments include measuring and publicly reporting their greenhouse gas emissions, setting a public emissions reduction target, and working with suppliers to reduce their emissions. www.climateleaderscoalition.org.nz/who

About Sapere

Sapere is one of the largest expert consulting firms in Australasia, and a leader in the provision of independent economic, forensic accounting and public policy services. We provide independent expert testimony, strategic advisory services, data analytics and other advice to Australasia's private sector corporate clients, major law firms, government agencies, and regulatory bodies.

'Sapere' comes from Latin (to be wise) and the phrase 'sapere aude' (dare to be wise). The phrase is associated with German philosopher Immanuel Kant, who promoted the use of reason as a tool of thought; an approach that underpins all Sapere's practice groups.

We build and maintain effective relationships as demonstrated by the volume of repeat work. Many of our experts have held leadership and senior management positions and are experienced in navigating complex relationships in government, industry, and academic settings.

We adopt a collaborative approach to our work and routinely partner with specialist firms in other fields, such as social research, IT design and architecture, and survey design. This enables us to deliver a comprehensive product and to ensure value for money.

About DETA

DETA Consulting is your leading optimisation and project delivery partner. We analyse the impact of our solutions on the client's operation as a whole – we consider practicality, health and safety, business and environmental concerns. We ensure our analysis is "real" and that clients can make informed decisions about their projects. Together with our clients we deliver quality strategic results.

We were born out of energy efficiency but have grown and evolved to deliver services across the wider engineering optimisation and sustainability spectrum from process optimisation, to water and wastewater reduction, through to carbon footprinting. We also have a dedicated project delivery team with expertise to provide as much support as you require from business case through to completion, or to adding value where required through the addition of a skilled resource to strengthen an existing delivery team. Our team have a passion for improving performance.

DETA has won a range of industry awards for our industrial productivity and project delivery work. Our client ANZCO Foods was awarded the 2016 EECA Energy Management award, in large part due to the energy management programme that we have managed for them since 2012.

We are at the forefront of industrial energy technology having rolled out several New Zealand 'First-in-Country' projects in the refrigeration and energy generation space. These have led to two EECA Innovation Awards: in 2016 for the Hellers high temperature heat pump project, and in 2018 for the Hanmer Springs geothermal methane turbine generator project.

DETA are members of both the SBC and CLC and consult to many SBC and CLC members to decarbonise their operations.

Sustainable Business Council

wbcsd Global Network Partner

CLIMATE LEADERS COALITION

ON A MISSION TO REDUCE EMISSIONS IN NEW ZEALAND