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The Wood Processors & Manufacturers Association (WPMA) represents those invested in the manufacture of products from NZ's sustainably managed and renewable forests. Much of the manufacturing occurs using 'bio-energy' derived from process residues. The products themselves are environmentally beneficial stores of carbon for the duration of their existence, in some cases with an assumed half-life of 30+ years.

Climate Change and the transition to a circular, low emission economy can be enabled and facilitated by local manufacturing of wood and paper products. The reasonable probability is that in the absence of a domestic wood processing capacity NZ's aspiration of a net-zero emissions would require the import of wood and paper-based products from countries with a less environmentally benign domestic energy profile. By contrast, retention and expansion of NZ's domestic wood processing industry capacity secures regional employment and NZ's capacity to minimise waste through recycling. It provides the infrastructure and skills from which other, and capacity and innovation can grow including into novel products such as biochar and bio-based hydrocarbons and fuels.

WPMA is a member of the Manufacturers Alliance, an organisation representing companies with a shared passion for the future of manufacturing in New Zealand. In the post COVID market recovery / characterised by significant disruption of international supply chains and rapid escalation in freight costs, we see our major trading partners prioritising local manufacturing to improve national resilience, maintain / create new employment and ensure sustainable economic growth. WPMA reiterates the position of the MA in this regard.

Meeting the net-zero challenge

Transition pathway

1. Do you agree that the emissions reduction plan should be guided by a set of principles? If so, are the five principles set out above, the correct ones? Please explain why or why not.

The WPMA agrees that the plan should be guided by a set of principles. The current principles fail to acknowledge the role that business plays in New Zealand's economy, seeming premised on the assumption that 'business' is discretionary as compared to the other components of a functioning society. Many regional communities will be significantly adversely affected from the continued loss of local manufacturing. More broadly, the loss of 'business' equates to a loss of environmental management capacity and, in some instances an increase in GHG emissions, for example where the loss of metal and other recycling results in increased landfilling and greater finite resource extraction.

The report acknowledges (p13) that *"we all have a role to play"* and you specifically note the role the private sector has in enabling climate action.

Private sector leadership and action is vital for Aotearoa to successfully achieve our low- emissions future. Its many levers – from investment and its power to influence and inform, through to climate change reporting and risk management, and the innovation and agility it can offer – will be required to help achieve this change and influence our shared ambition.

The guiding principles for the transition are silent on how government will work with the private sector. Given private sector leadership and action are vital we recommend this be addressed explicitly by adding a further principle to

Work collaboratively with the private sector in implementing jointly developed strategies to give effect to the plan.

2. How can we enable further private sector action to reduce emissions and help achieve a productive, sustainable and inclusive economy? In particular, what key barriers could we remove to support decarbonisation?

Government is encouraged to take a principled approach including that the environmental cost of goods and services will be more explicitly reflected in the prices paid by New Zealand and overseas consumer.

Government needs to explicitly state how it will work collaboratively with each of the sectors and the agreed or ideal objectives of that collaboration. The Advanced Manufacturing Industry Transformation plan, developed in partnership with sector stakeholders is a possible mechanism enabling the articulation of measurable objectives and the steps / investment needed to achieve them.

Climate Change has the potential to be significantly more destructive economically than COVID if we fail to act quickly. International agreements on climate change and other environmental issues are an acknowledgement of the need for Government to ensure the price of goods and services better reflects their environmental cost. For this to happen the Government needs to resource economy-wide planning including providing a framework of clear domestic regulation and border adjustment that ensures broad engagement and equitable pricing. This mechanism must ensure imports and exports are regulated equitably.

Working collaboratively provides the opportunity for New Zealand to provide certainty and stability for business to confidently invest in the future to

- Access low emission technologies
- Incentivise proactive investment enabling rapid uptake of technologies which lift productivity within prescribed emissions reduction limits. Accelerated depreciation and low or no interest loans targeting specific outcomes are obvious examples. Border Adjustment Mechanisms are recommended in order to avoid potentially costly investment in emissions reduction being rendered redundant by the importation of the same or similar production from jurisdictions without emissions reduction obligations. Ironically, the cost to New Zealand of not incentivising industry is that to meet New Zealand's NDC commitments the Government will buy offshore credits that provide no impetus to innovation and investment by New Zealand business and no benefit to the communities they support.

3. In addition to the actions already committed to and the proposed actions in this document, what further measures could be used to help close the gap?

Future transition is plagued with uncertainty. The role of government is to minimise the uncertainty associated with 'public interest' investment including by developing policy frameworks / strategies in partnership with business. The clear objective must be to deliver investment certainty including access to affordable renewable energy, supportive investment

settings and supportive trade and regulatory settings that enable the transition to a circular, low emission manufacturing sector.

New Zealand allowing imported emissions-intensive goods and services as the default response would bring into question the logic and ethics of Government's emissions reduction commitment. There is no environmental benefit and high domestic social and economic cost from policies and regulation that displaced the emissions from domestic production offshore through under-priced imports. This is the principle we assume adopted with respect to the favourable differential treatment of NZ's agricultural sector as compared to other parts of the economy.

4. How can the emissions reduction plan promote nature-based solutions that are good for both climate and biodiversity?

Ensure that the GHG and other costs of production are internalised in the price of goods and services such that consumer pricing reflects the true environmental as well as all other costs.

Introduce an equivalent cost of emissions on NZ's agricultural sector as on other parts of the economy, as compared to the continued indirect cross subsidy of that part of the economy by taxpayers including manufacturers.

Invest significantly more in research development and invest in the commercialisation and accelerated uptake of those technologies and solutions.

5. Are there any other views you wish to share in relation to the Transition Pathway?

The absence of an agreed definition of the subjective phrase "nature-based solutions" raises critical questions regarding the Government's assumption as to future direction. Solar cells require metals and manufacturing capacity and or retention of NZ's import / export capacity. Whether solar cells are 'nature based' is likely a matter of perspective. Plastics has a vital role, for example in maintaining the freshness of produce prior to consumption and without which additional GHG-intensive production of 'natural' products could be required. Recycling of all materials including 'natural' ones like paper require transport and process energy over and above the minimum cost of collection and landfilling.

In advancing the concept of the "circular economy", the government needs to embrace scientific, societal and economic complexity. It needs to move beyond simplistic assumptions as to 'nature based' and by implication 'unnatural' solutions.

The transition to 'circular needs to recognise the value of materials that can be repurposed, reused and recycled. That change in focus includes the greater reuse and repurposing of products and materials (rather than landfill) at the end of their first life, in recognition of the true environmental and other costs being embodied in the goods and services used by individuals and businesses. There are numerous exemplars (eg below) where restoration has retained products in service and indirectly limited emissions. A sustainable net-zero emissions economy will arise where individuals and businesses make the optimal decision in their circumstance while facing the full environmental cost of that choice. Government's 'market lead' evolution of a zero waste and net zero emissions economy requires that the 'market' be allowed to operate. That 'market' must include an equitable price 'at the border' if NZ's manufacturers, communities, and society is to survive.

Helping sectors adapt

6. Which actions to reduce emissions can also best improve our ability to adapt to the effects of climate change?

The imposition of differential GHG costs to select parts of the economy the Government represents higher than justified costs on other sectors including manufacturing. It implies delaying the innovation and adoption of new methods on those operating from a favoured position, with environmental costs carried by other parts of the NZ economy.

By working collaboratively with key sectors, government will catalyse the opportunities which manufacturing industry has available. Clear direction as to the extent of regulatory obligation is needed to provide investment certainty for businesses including importing businesses. This is of particular importance where long-lived investments and change in established investment including early depreciation is required to accelerate NZ's transition away from fossil fuels.

What gets measured, gets managed.

Specifically for construction, MBIE needs to take a lead on developing a standardised and moderated approach to how life cycle analysis data is used in the construction sector. In absence of a transparent robust system then actors will continue to presume considerations which best present their material or service. Inadvertently this leads to ill-informed short-term decisions which reinforce a take, make waste economy rather than incentivising a circular economy. Government's selective and siloed approach to environmental and trade policy risks locking in a higher than desired emissions profile for the country or stranding assets and investment as and when international markets including environment-related border protections come into force.

7. Which actions to reduce emissions could increase future risks and impacts of climate change, and therefore need to be avoided?

Differential treatment of different sources of emissions will continue to distort investment. The favourable treatment of agricultural emissions will distort land use in favour of such emitting activity and away from forestry.

NZ officials' unwillingness to address trade distorted in favour of log rather than processed wood products exports, will reduce NZ's investment in low-emissions manufacturing of wood products and or a local supply of wood-based biofuel. The focus of NZ trade policy should be to maximise the opportunity for New Zealand Inc and to incentivise the investment in the low-emissions economy required by future generations of New Zealanders confronting a GHG-constrained global market.

Working with our Tiriti partners

8. The Climate Change Commission has recommended that the Government and iwi/Māori partner on a series of national plans and strategies to decarbonise our economy. Which, if any, of the strategies listed are a particular priority for your whānau, hapū or iwi and why is this?

The WPMA does not presume to speak for iwi / Maori. Our assumption is that Government's work with Tiriti partners is predicated on the assumption that at the broadest level, both the obligations and benefits of effective climate change policy for iwi /Maori will be the same as for others in society. On that basis we suggest the current strategy of differential treatment of the emissions from land use could have a differentially negative impact on iwi / Maori. Historic difficulty associated with capital intensive investment in multiple-ownership Maori land has resulted in a significant area of NZ's pre-1990 forest land being in Maori ownership. The imposition of differential regulation and climate-justified constraint on development of that land has impeded its value, both as a lease -rental proposition for growing trees and a constraint on diversified investment. Removing the regulatory distortion arising from the imposition of an emissions liability on pre-1990 forest land would help redress this imbalance as would the

imposition of an equitable proportion of the liability for ruminant methane emissions to those responsible for them.

9. What actions should a Māori-led transition strategy prioritise? What impact do you think these actions will have for Māori generally or for our emission reduction targets? What impact will these actions have for you?

Maori interest and involvement in forest land ownership and management suggests they would be in a good position to benefit financially and in a broader employment and societal sense, from investment in regional wood processing and manufacturing. The net-zero emissions economy envisaged for 2050 will logically require some if not many of NZ's goods and services to be provided from bio-based feedstocks including wood. The capital intensive and long-lived nature of such investments suggest they are most likely to occur in partnership with or by those invested in forests and land used to grow commercial forests. Ownership of the regional value chain by iwi / Maori could assist with whanau and hapu based investment. Equitable regulation of pre-1990 forest land could extend that investment and diversification opportunity as and when it presented, for example the selective replacement of areas of forest land with solar and wind generation capacity.

10. What would help your whanau, community, Māori collective or business to participate in the development of the strategy?
11. What information would your Māori collective, community or business like to capture in an emissions profile? Could this information support emissions reductions at a whanau level?
12. Reflecting on the Commission's recommendation for a mechanism that would build strong Te Tiriti partnerships, what existing models of partnership are you aware of that have resulted in good outcomes for Māori? Why were they effective?

Making an equitable transition

Equitable Transitions Strategy

The Commission recommends developing an Equitable Transitions Strategy that addresses the following objectives: partnership with iwi/Māori, proactive transition planning, strengthening the responsiveness of the education system, supporting workers in transition, and minimising unequal impacts in all new policies.

13. Do you agree with the objectives for an Equitable Transitions Strategy as set out by the Climate Change Commission? What additional objectives should be included?

WPMA suggests it is hard to disagree with the objectives but draws the Ministry for the Environment attention to the pejorative language used in the document, for example

We will work with industry and communities to minimise the cost of the transition for firms and lower income households helping emissions-intensive businesses ... working with businesses

Genuine collaboration and partnership is needed to engage effectively in meeting the challenge of climate change. Genuine collaboration is required to avoid any risk of a presumption by those in Government that they have the same understanding of and exposure to investment risk as other parts of NZ society.

14. What additional measures are needed to give effect to the objectives noted by the Climate Change Commission and any other objectives that you think should be included in an Equitable Transitions Strategy?

Meeting the challenge and achieving an equitable transition will require significant additional resourcing across key government agencies.

This is not business as usual and requires first and foremost an agreed definition of 'equitable transition', ideally developed on a bi-partisan political basis. Imposing costs on those goods and services whose price is influenced by the cost of fossil fuels will impact all parts of society. That impact will be socially regressive to the extent that those unable to invest in low emissions technology and lifestyles will have no other choice than to pay, directly or indirectly. NZ's export-dependent economy is equally susceptible to disruption as and when other countries act to shield their domestic producers and manufacturers from imports exempt the internalised cost of embodied emissions.

NZ has to date avoided confronting the true cost of its GHG reduction commitments by arguably inequitable allocation of the liabilities. Some emissions liabilities have been displaced temporally, by way of 'offset' carbon forestry. That situation cannot continue. There is a risk that if and when the EU and other nations impose CBAM's on imports they could act to discount or disregard 'offsets' from some jurisdictions. In the event that NZ 'offset credits' are recognised the future value of the emissions liability associated with offset forestry will be reflected in the price of eligible land, meaning offsets cease to be the least cost abatement option. .

G Genuine consultation on the costs to NZ of the emissions price needed to achieve a net zero economy is required. Calculation and funding of the costs required to avoid inequitable outcomes on those adversely affected stakeholders is similarly essential.

The Commission suggests that the Equitable Transitions Strategy should be co-designed alongside iwi/Māori, local government, regional economic development agencies, businesses, workers, unions, the disability community and community groups.

15. What models and approaches should be used in developing an Equitable Transitions Strategy to ensure that it incorporates and effectively responds to the perspectives and priorities of different groups?

A bi-partisan political commitment to measurable medium- and long-term goals is required to enable those adversely affected to make the necessary change, secure in the knowledge that their regulatory obligation won't change for a defined period. This may need to include an agreement as to the accepted definition of 'inequitable' outcomes and from that those sectors expected to face greater and lesser per-unit adjustment cost. WPMA suggests sector by sector collaboration based on genuine collaborative principles, that determines the measurable and specific minimum actions required by that sector and by when.

Other actions

16. How can Government further support households (particularly low-income households) to reduce their emissions footprint?

Household income is a legitimate but separate consideration to an acceptable household emissions budget. Determination of NZ's emissions reduction strategy will generate 'winners and losers'. Addressing the unacceptable social consequence of NZ's emissions reduction strategy may fall in another area of fiscal responsibility such as social welfare. Mixing objectives within the determination of New Zealand's emission reduction programme risks policy confusion.

Ameliorating the impacts of climate strategy changes, where the extent or rate of change results in genuine hardship is a 'secondary' consideration. It can only be addressed after the emissions reduction strategy has been determined, through tax or social welfare changes and the use of EU style Border Adjustment Mechanisms. To address the issue of emissions reduction in any other way will inequitably distort investment and or waste capital, for example through delayed changes in NZ's dairy sector management.

17. How can Government further support workers at threat of displacement to develop new skills and find good jobs with minimal disruption?

Investment in the 'new' economy and industry can occur provided Government sets clear long term and bipartisan investment direction in legislation. Include in long term climate strategy investment a clear commitment to an economy based on the costs of emissions being reflected in the costs of goods and services, including where goods and services are imported. This is why working collaboratively with business and local communities is so important. A net-zero emissions economy is clearly not the economy NZ has today but needs to be built from what currently exists. On a sector-by-sector basis government needs to partner with businesses, member organisations and host communities and, in the final analysis, be clear as to where and when changes are required.

18. What additional resources, tools and information are needed to support community transition planning?

Greater political courage and greater consistency as to the change in direction(s) required than has been shown to date.

19. How could the uptake of low-emissions business models and production methods be best encouraged?

Government providing investment certainty for business, iwi and community across key policy areas to ensure parties have confidence to invest time and resources in their entities to transition. Lack of leadership and ongoing policy uncertainty will create investment uncertainty.

20. Is there anything else you wish to share in relation to making an equitable transition?

Government needs to think and work to harness the passion and innovation of New Zealanders to make the long-term changes required to the means of production and in the communities' expectations as to the cost and availability of goods, services and asset values.

COVID19 response has required NZer's including politicians to trust science and evidence-led decision making.

Robust science and working together collaboratively need to be the hallmarks of how government works with stakeholders to address the challenge.

Aligning systems and tools

Government accountability and coordination

21. In addition to the Climate Change Commission monitoring and reporting on progress, what other measures are needed to ensure government is held accountable?

Government needs to establish clear benchmarks in legislation including the presumed consequence where benchmarks are missed. It is not possible to bind the legislative actions of future Governments meaning the visibility associated with having to overtly change legislation is the only sanction available. New Zealanders need plans and roadmaps. We all need to be held accountable – business, community and households and the political representatives of all those groups.

22. How can new ways of working together like mission-oriented innovation help meet our ambitious goals for a fair and inclusive society and a productive, sustainable and climate-resilient economy?

The question assumes there is a common understanding of the term ‘a fair and inclusive society’. Our contention is that there is no consensus as to the meaning of that phrase, a situation that will become increasingly apparent as the intergenerationally questionable opportunity for low-cost offsetting is exhausted. The favourable treatment of ruminant methane as compared with the costs and obligations applied to other emitting sectors can be seen as unfair and economically distortionary.

Effective ways of working together in pursuit of common goals will become apparent only once ‘common goal(s)’ have been agreed. As the heading on page 34 says – “Working in new ways” - business is acknowledged as a partner along with iwi / Maori. Business in particular is familiar with mission orientated strategic planning and developing the basket of strategies to achieve the mission.

Is there anything else you wish to share in relation to government accountability and coordination?

Businesses and most other sectors of NZ society are more accountable to their core constituencies for their actions and inactions than politicians are to New Zealanders including future generations. The political time frame of 3 years is an inadequate incentive when it comes to the effective management of as significant an intergenerational issue as climate change. It is essential that Parliament show genuine leadership through bipartisan commitment to a meaningful and long term (15 years+) emissions reduction strategy. 15+ years represents a more realistic investment horizon for most low-emissions investments including afforestation and capital-intensive wood processing.

Funding and financing

23. What are the main barriers or gaps that affect the flow of private capital into low-emissions investment in Aotearoa?

NZ’s export dependent economy is conditional on the country’s international trade arrangements and agreements that are increasingly out of step with the reality of a climate / environment constrained world. NZ’s achievement of its own GHG-related goals coupled with continued access to high value and progressive markets internationally requires that we revise our border requirements to avoid economic and emissions leakage. European and other markets with domestic emissions reduction commitments are increasingly adopting measures ‘at the border’ to foster investment in their low-emissions economies. NZ needs to consider EU “Border Adjustment Mechanisms” as a means of fostering investment that would otherwise fail in the face of ‘environmentally subsidised’ imports.

Government needs to review where its research priorities and other support funding goes and cease funding inaction or initiatives which impact negatively on New Zealand’s emissions. It needs to ensure the incentives are in place that result in the uptake of the findings of tax-payer funded emissions-reducing research. Specifically, it is uncertain what would incentivise the adoption of emissions-reducing research findings if that required represented no or negative returns on investment to the individual.

24. What constraints have Māori and Māori collectives experienced in accessing finance for climate change response activities?

25. What else should the Government prioritise in directing public and private finance into low-emissions investment and activity?

Government should prioritise policy development including selective use of incentives to achieve transition to a low-emissions economy including:

- Energy policy enabling investment in long lived and capital-intensive low emissions technologies and employment in NZ, rather than displacing emissions and the investment / employment opportunity offshore through purchase of carbon credits.
- Immigration policy favouring the critical skills required for a low-emissions economy, recognising they will be in short supply globally
- A policy of public investment and expenditure that accelerates the uptake of lower emission and more productive technologies and lower emissions-intensity land management.
- Trade policy ensuring local manufacturing competes on an even playing field with imports from countries with a lesser focus on emissions and other environment impacting manufacture.
- Trade policy reflecting the border controls and consumer preferences in high value international export markets, including for low-emissions and 'environmentally responsible' goods and services.
- Procurement policy which achieves the public interest by supporting New Zealand businesses, communities and consumers on the journey to a zero emissions economy by 2050.

26. Is there anything else you wish to share in relation to funding and financing?

To succeed we will need considerable resource devoted to the identification and pilot testing of low emissions processes, products and services, including the identification or creation of viable markets for them.

The Government cannot rely on goodwill and volunteerism in a trade- exposed market, with the economic and social changes required to achieve net-zero by 2050 being as significant as they are. The "Voluntary Agreements" negotiated between business and the Government were possible because of a commitment by Government to respect those proactive investments if and when intervention was required. In the final analysis that commitment was not honoured, making the likelihood of significant progress on any basis other than clear statute unlikely.

It is infinitely preferable for New Zealand to fund local business, iwi / Maori and local communities to solve this complex challenge for the NZ economy than to assume other countries will accrue our costs. Notwithstanding any questions as to the integrity of some internationally recognised 'opinion leaders' positioning, there is no question that undue reliance on offshore carbon markets will attract criticism of NZ's position and therefore traded goods. Developing skills and capability in New Zealand provides resilience for the country and avoids the perception of extraterritorial displacement of New Zealanders environmental costs to other, perhaps less fortunate countries.

Emissions pricing

27. Do you have sufficient information on future emissions price paths to inform your investment decisions?

Certainly not. Indications only, and those are predicated on an assumption that future Government's here and internationally will act in a consistent and environmentally responsible manner. There is no clarity on the current and future pricing of imported emissions in products

similar to those made in New Zealand. Nor can there be, as evidenced by the outcomes of COP 26 continuing a pattern of unsubstantiated aspiration rather than agreed action.

Emissions pricing needs to address consumption.

Trade policy needs to expressly address the risk of imported embodied emissions as a barrier to investment here. Carbon border adjustment instruments of the sort being promulgated by the EU in support of that trading block taking proactive action on climate change are critical to future investment in local manufacturing.

Failure to address 'emissions exposure' at the border with more certainty than is provided by EITE arrangements will result in local production (which bears the emission cost) being uncompetitive with imports from nations without meaningful and equivalent emission abatement cost. The risk is of manufactured imports enjoying an indirect subsidy, arguably in a manner similar to that employed by NZ in 'protecting' its agricultural products exports. The result of both is distorted investment and slower progress to genuine net zero emissions economic activity and investment in New Zealand.

28. What emissions price are you factoring into your investment decisions?

The assumption is of a 'higher' price, based on the public statements of NZ and international politicians. There is no more certain basis that can be factored into investment decisions, with history showing political aspiration can be a poor indicator of the actual outcomes over time. The lack of certainty re pricing of consumption emissions undermines future investment confidence. The unseen 'price' being paid in NZ is stagnating investment (including reinvestment) and the risk that at some point otherwise competitive investment in NZ manufacturing, the employment associated with it and the innovation opportunities arising from retained skills are all lost. Perhaps less visibly but of no less concern is the progressive loss of resilience arising from loss of diversity of investment within the NZ economy, the cost of which has recently become apparent as a result of COVID and COVID-related transport disruption.

29. Do you agree the treatment of forestry in the New Zealand Emissions Trading Scheme (NZ ETS) should not result in a delay, or reduction of effort, in reducing gross emissions in other sectors of the economy?

NZ's reliance on ETS credits in forestry is displacing the cost of today's emissions onto future generations, at the very least in terms of lost diversity of land use ETS Forestry credits represent the loss of land use flexibility without first incurring the cost of 'past' emissions. In the absence of a dramatic change in technology or global lifestyles the reasonable assumption is that the 'future' price of emissions will be significantly higher than the 'value' achieved by today's forest owners. Some 'opinion leaders' have characterised this as an "emit now, pay later" approach and a constraint on the structural reforms NZ has committed to internationally.

Forestry ETS credits are predicated on there being a long-term solution that permanently displaces the need for fossil fuel from the NZ economy. The slowing of the 'market price' of emissions being incorporated in goods and services as a result of reliance on forestry credits acts to discourage the innovation and investment NZ needs to achieve its goal of net-zero emissions. Substantial afforestation was occurring prior to the ETS in forestry interventions, driven in part by the removal of agricultural subsidies leading to land prices more reflective of the worth of the production capable from them. Subsidies have indirectly been reintroduced to agriculture as a result of the decision to displace the cost of agricultural emissions onto other parts of the economy. That and the sovereign risk associated with ETS forest credit interventions have had the predicted effect of increasing the cost of forest land and therefore afforestation and probably slowed the pace and extent to which afforestation would have otherwise occurred.

30. What are your views on the options presented above to constrain forestry inside the NZ ETS? What does the Government need to consider when assessing options? What unintended consequences do we need to consider ensuring we do not unnecessarily restrict forest planting?

Answered in part above. A significant constrain on forest planting is the differential regulatory treatment of emissions from other land use choices including ruminant methane, diffuse NO_x and diffuse excess nitrate loss to waterways. Effects-based regulation of land use would see the costs of non-forestry land use choice increase and therefore the comparative ROI from forestry versus alternative uses of an area of land increase.

31. Are there any other views you wish to share in relation to emissions pricing?

The compliance and regulatory cost per unit of emissions reduction of the ETS far exceeds the cost of a carbon tax applied to fossil fuel and, logically, on a per head of ruminant stock. That per-unit cost is only likely to increase as and when the EU and other of NZ trading partners requires NZ exporters to translate the domestic costs of emissions reduction into terms compliant with the EU CBAM.

Planning

32. In addition to resource management reform, what changes should we prioritise to ensure our planning system enables emissions reductions across sectors? This could include partnerships, emissions impact quantification for planning decisions, improving data and evidence, expectations for crown entities, enabling local government to make decisions to reduce emissions.

We would caution government not to focus on carbon in isolation of other of Government's and NZ's priorities. Climate policy developed in isolation is likely less effective and potentially counter-productive. Climate change is reported to be increasing the severity of some natural events which poses unique threats to our built environment. So too is durability, seismic resistance and resistance to fire. An effective long-term solution needs to take account of many factors over and above absolute emissions.

Performance to Building Code clauses will be critical for our future, resilient built environment. This should be a focus of activity, avoiding (and ideally outlawing) the adoption of different and varied GHG-related building requirements at the local and regional level. The Building Act enables environmental factors including climate change to be reflected in the Building Codes. Those codes can be varied depending on regional differences, for example with respect to insulation levels. Amend the codes to better reflect climate change but do not add cost and confusion by allowing Councils to send guess or duplicate duly developed and promulgated codes under the Building Act. Do not recognise or give credence to proponents of alternative and highly publicised green standards, recognising that to the extent they offer advantage it makes sense any requirements be incorporated in building codes to maximise the emissions reduction benefit nationally. To the extent they are not justified they are a dead-weight cost and impediment to other of Government's goals including the provision of affordable housing.

33. What more do we need to do to promote urban intensification, support low-emissions land uses and concentrate intensification around public transport and walkable neighbourhoods?

Introduce a tax on emissions from fossil fuels at a level that reflects the significance attributed that environmental externality. The result will better enable the market to operate, in the form of a greater emphasis on low emissions options in consumers choices of goods and services.

34. Are there any other views you wish to share in relation to planning?

How we measure impacts is critical.

Currently our focus is on lessening impacts to consumers in the take, make, waste society, ostensibly by presuming to shift the cost to producers in the form of “extended producer responsibility” obligations. EPR is a misnomer in NZ’s market and open economy, with the costs passed on in full where possible in order to maintain profitability. The alternative outcome is for NZ production, employment and emissions displaced locally but continuing and even increasing on a per unit of production basis offshore, by way of imported goods.

Transitioning to a circular focus will see housing and transport inextricably linked and measured accordingly. The emissions cost of greenfield subdivisions could become apparent through overt emissions pricing and other regulation. That in turn might drive the market to the re-intensification of existing urban environments, valuing the building / infrastructure we already have and reusing / repurposing for future use. Alternatively, it may not, particularly where the disproportionate upfront cost of retrofitting infrastructure into an existing community (including RMA consenting costs) outweighs the longer-term price advantage to the homeowner of lower GHG / transport and other costs.

Regional development including retaining regional manufacturing capacity has the ‘emissions reduction’ advantage of retaining value and occupancy in existing regional communities. The reduced internal migration in pursuit of employment in NZ’s larger centres and offshore should be recognised as of GHG advantage if it reduces the need for additional investment in housing and infrastructure and the early depreciation of fixed horizontal assets already invested in by those regional communities.

Research, science and innovation

35. What are the big challenges, particularly around technology, that a mission-based approach could help solve?

NZ is likely best to focus its R&D on maintaining a watching brief on the outcomes of climate-related research internationally and adapting and applying it in NZ. The fundamental problem of climate change is one of basic economics rather than dramatic technological shifts. The latter would of course be welcome but are more likely to occur offshore given the substantial research effort such economies can sustain.

NZ’s research opportunity lies in its smaller population density and good growing conditions. Research can and should be focused on adapting what are often well-developed bio-based technologies for NZ’s needs and feedstocks.

36. How can the research, science and innovation system better support sectors such as energy, waste or hard-to-abate industries?

Government needs to develop a robust and transparent scorecard regarding its research funding priorities. This needs to prioritise transition to low emission circular economy and cease funding technologies / sectors which reinforce the *take make waste* linear model. This can and should include consideration of technologies aimed at extracting value from under-valued and wasted materials including the millions of tonnes of waste landfilled annually. Much of this waste (reportedly 81%) is bio-based, suggesting its use to produce electrical and liquid fuels offers real GHG reduction opportunities in internal transport. That opportunity could be at comparatively low cost to NZ if the current and levied cost of landfilling is recognised as a dead-weight cost to the economy now.

Given the scale of the climate change challenge and short time available to address that challenge we would propose a broader range of incentives being open to all parties and not just through formal (and restrictive channels) like Callaghan Innovation.

The Government could usefully recognise that manufacturing in NZ's export-focused and open market economy will be greatly influenced by the requirements of the markets with which we currently and want to trade.

37. What opportunities are there in areas where Aotearoa has a unique global advantage in low-emissions abatement?

New Zealand has a comparatively low population density and abundant existing hydro and under-developed wind renewable energy capacity. That coupled with the NZ's geographic isolation could be seen as another opportunity to reduce the GHG cost of internal travel and transport through a focus on electrification of rail and road freight, the latter providing "last mile" connectivity.

A net zero emissions economy by 2050 will be configured significantly differently compared to NZ's current settings and likely comparatively unique in world terms. The Manufacturers Alliance represents the NZ-focused capacity and expertise that will be required to identify and adapt low-emissions solutions being researched internationally for NZ conditions and priorities.

More specifically, NZ has supplies of iron sand, along with significant future potential capacity for renewable energy generation. Steel is an infinitely recyclable material, with an estimated 85% of all steel products being recycled at end of life¹. Similar and related views can be taken of other NZ manufacturing, recognising that where it has established in NZ and been maintained over decades to unconstrained import competition it is both competitive and desired in a NZ economic setting.

In a similar way, NZ has an established forest, wood processing and paper recycling sector. It and NZ's agricultural industry are predicted on the country's comparative advantage of good growing conditions.

The fact that NZ's economy is geared to converting sunlight and water into food for export rather than into bioenergy, bioplastic or reductive metals processing reflects the past / current priorities and values. There is no reason to assume that NZ's net-zero emissions future will be the same, meaning NZ's 'unique opportunities' are likely ultimately dependent on the political and societal pressure placed on emissions reduction. Any reconfiguration of manufacturing in NZ to reduce emissions is in the final analysis dependent on the Government's willingness to impose the cost of associated environmental externalities onto those using goods and services. The "unique opportunities' are likely dictated by political and social acceptance of the socially regressive nature of environmental protections.

38. How can Aotearoa grow frontier firms to have an impact on the global green economy? Are there additional requirements needed to ensure the growth of Māori frontier firms? How can we best support and learn from mātauranga Māori in the science and innovation systems, to lower emissions?

Government needs to provide the stable policy settings enabling business to confidently invest secure in the knowledge that the social and economic costs of those policies will not result in a change in legislative (including tax) liability. Stable policy settings need to include:

¹ <https://www.worldsteel.org/media-centre/blog/2018/steel-surprising-recycling-champion.html>

- Energy policy
- Trade policy
- Investment policy
- Immigration policy, and
- Ensuring government procurement then reinforces the opportunity for local business.

39. What are the opportunities for innovation that could generate the greatest reduction in emissions? What emissions reduction could we expect from these innovations, and how could we quantify it?

As discussed above, NZ's solid waste is reported to consist of approximately 80% organic content. Diverting large volumes of waste from landfill for use as a fuel has the potential to benefit NZ's net GHG emissions by:

(i) reducing the transport emissions from its separate collection and sorting, (ii) eliminating organic / putrescible waste from landfill and therefore any associated methane emissions, generating electricity for the increasing demand on national grid as more of NZ's transport electrifies.

40. Are there any other views you wish to share in relation to research, science and innovation?

Energy from waste is well established in other developed economies. Government funded R&D could examine the applicability of EfW to NZ, recognising that the regulatory and perceptual / community hurdles to its adoption will likely require Government support or intervention if they are to be overcome.

Behaviour change

41. What information, tools or forums would encourage you to take greater action on climate change?

NZ's total economy and population are small on a world scale. Multiple fora and exhaustive regulatory processes impede innovation and, in some instances, impede even frank and informed discussion.

WPMA suggest the amalgamation of information and tools into fewer if not a single collaborative forum, whereby Government, industry and other affected stakeholders can assess and resolve policy and direction. Ideally, such national direction will encompass and therefore eliminate the need for further and localised debate as and when specific projects are advanced.

Supporting exemplars is critical to demonstrate what can be achieved and to normalising low emission behaviours. Rewarding early adopters (like support for low emission vehicles) is critical, including providing protection from unreasonable rates of obsolescence because of short term changes in policy direction and regulatory cost.

Critical is governments leadership with its own buildings and transport fleet.

42. What messages and/or sources of information would you trust to inform you on the need and benefits of reducing your individual and/or your businesses emissions?

Third party verified information of a standard commensurate with the requirements of the Fair-Trading Act is critical to inform decision making. Consumer demand for and support of environmentally preferable goods and services is dependent on consumers (including businesses, investors and government agencies) having confidence that the intangible

environmental value claimed for a product or service is substantial. Verification of environmental claims is good practice and is a clear legal requirement under the Fair-Trading Act 1986.

Life cycle analysis, environmental product declarations, environmental labels could all benefit from being third party verified. The subjective nature of environmental and bio-circular economy claims can limit their usefulness as measures able to be judged impartially by consumers without independent validation. Quantification of Government's expectation and understanding in regulation and law, as to good practice and in the exercising of its own considerable purchasing power within the economy would greatly assist in this regard.

These initiatives are expensive and to increase uptake government could consider partnership funding to accelerate data collection / verification.

43. Are there other views you wish to share in relation to behaviour change?

Moving Aotearoa to a circular economy

44. Recognising our strengths, challenges, and opportunities, what do you think our circular economy could look like in 2030, 2040, and 2050, and what do we need to do to get there?

Logic and economic requires that the **outputs and outcomes** representing the 'circular economy' looks the same in 2030 as in other decades or is at least predicated on progress to a single agreed outcome. It is not helpful for those required or wanting to make circular investments for Government to suggest that circular outcomes are not clearly understood and subject to change over time.

The reality is that a step change to the circular and low emissions economy requires progressive investment. This will not happen or will happen more slowly in the absence of clear articulation of 'the end game', ideally supported by clarification of statutory obligation from voluntary expectation.

45. How would you define the bioeconomy and what should be in scope of a bioeconomy agenda? What opportunities do you see in the bioeconomy for Aotearoa?

Environmental management and sustainable outcomes are ultimately a Government and community construct. Industry and business are subsets of society rather than separate from it. WPMA members ability to do more than is required of all other parties including competitors is very limited. Consumers (including Government, other businesses and households' willingness to pay for intangible environmental attributes appears similarly limited in the absence of regulatory obligation.

The Government has defined the bio-circular economy as net zero GHG emissions by 2050. If that is no longer adequate and or needs to be better defined it is for Government to do. Please note that in an export focused and market economy the influence of the NZ Government can and will be overshadowed by the requirements of other nations to which we expect / hope to trade with and where those requirements exceed NZ's statutory minimums.

46. What should a circular economy strategy for Aotearoa include? Do you agree the bioeconomy should be included within a circular economy strategy?

As above ... it is a component of the circular challenge, along with the technosphere and human behaviour and they need to be worked on together.

47. What are your views of the potential proposals we have outlined? What work could we progress or start immediately on a circular economy and/or bioeconomy before drawing up a comprehensive strategy?

The proposals as currently articulated are insufficient to create transition and fail to build off the significant investment that MfE have made in New Zealand's Circular Economy with the Ellen MacArthur Foundation.

48. What do you see as the main barriers to taking a circular approach, or expanding the bioeconomy in Aotearoa?

Its complex and New Zealand needs to understand international best practice, adopt what is appropriate for New Zealand. We don't have time to re-invent the wheel, we need to adapt what has been learnt elsewhere.

Environmental management and sustainable outcomes are ultimately a Government and community construct. Industry's ability to do more than is required of all parties including competitors and or consumers are willing to pay for is limited. The Government has defined the bio-circular economy as net zero GHG emissions by 2050. If that is no longer adequate and or needs to be better defined it is for Government to do. Please note that in an export focused and market economy the influence of the NZ Government can and will be overshadowed by the requirements of other nations, where those requirements exceed NZ's statutory minimums.

49. The Commission notes the need for cross-sector regulations and investments that would help us move to a more circular economy. Which regulations and investments should we prioritise (and why)?

Investment in low emission technologies is critical. It needs to be accompanied by stable and supportive policies across trade, energy, immigration / skills reinforced by government procurement.

Environmental management and sustainable outcomes are ultimately a Government and community construct. Industry's ability to do more than is required of all parties including competitors and or consumers are willing to pay for is limited. The Government has defined the bio-circular economy as net zero GHG emissions by 2050. If that is no longer adequate and or needs to be better defined it is for Government to do. Please note that in an export focused and market economy the influence of the NZ Government can and will be overshadowed by the requirements of other nations, where those requirements exceed NZ's statutory minimums.

50. Are there any other views you wish to share in relation to a circular economy and/or bioeconomy?

Environmental management and sustainable outcomes are ultimately a Government and community construct. Industry's ability to do more than is required of all parties including competitors and or consumers are willing to pay for is limited. The Government has defined the bio-circular economy as net zero GHG emissions by 2050. If that is no longer adequate and or needs to be better defined it is for Government to do. Please note that in an export focused and market economy the influence of the NZ Government can and will be overshadowed by the requirements of other nations, where those requirements exceed NZ's statutory minimums.

Transitioning key sectors

Transport

We are proposing **four new transport targets** in the emissions reduction plan and are seeking your feedback.

51. Do you support the target to reduce vehicle kilometres travelled by cars and light vehicles by 20 per cent by 2035 through providing better travel options, particularly in our largest cities, and associated actions?

Any aspiration is supported by the significance of the problem of anthropogenic climate change and the fact that past measures have resulted in increased emissions from this sector. What is not clear is why past policy and actions have failed to reverse years of increasing emissions and what specific and additional measures Government intends to take to achieve meaningful reductions.

Mode shift plans and incentives need to be creative to support manufacturing workforce.

For example, it is extremely unlikely that shift workers across South Auckland (and in other manufacturing centres) will be able to walk, cycle or access public transport for work. It is also unlikely that in early budget periods that low / middle income shift workers will be able to afford to purchase EV's. Clarification of Government's apparently conflicted aspirations of reduced transport emissions and an equitable and just transition is recommended.

52. Do you support the target to make 30 per cent of the light vehicle fleet zero-emissions vehicles by 2035, and the associated actions?

Government needs to be developing solutions that are equitable – particularly for workforces outside CBD's – e.g. manufacturing, logistics and construction. Investment in regional economic growth and existing regional centres offers a lower cost way of enabling reduced per capita GHG emissions, by reducing the need for long commute times and investment in the public infrastructure needed to accommodate expansion in some urban centres.

53. Do you support the target to reduce emissions from freight transport by 25 per cent by 2035, and the associated actions?

Our understanding is the technology is currently available. Government's useful role will be to provide stable (15 years +) policy settings to provide investment certainty for business to invest in what can be long-lived infrastructure and to justify the early depreciation of productive assets already invested in.

54. Do you support the target to reduce the emissions intensity of transport fuel by 15 per cent by 2035, and the associated actions?

As per 54.

55. The Climate Change Commission has recommended setting a time limit on light vehicles with internal combustion engines entering, being manufactured, or assembled in Aotearoa as early as 2030. Do you support this change, and if so, when and how do you think it should take effect?

As an aspiration and signalled well in advance it is supported in principle. To progress beyond aspiration the Government needs to provide regulatory certainty for the investment required and to ensure alignment with other Government objectives. Does the early depreciation of one asset and investment in another result in lower GHG emissions when calculated over the whole of the life cycle? How can investment in alternative forms of road transport be aligned to them complement rather than conflict with other policy options such as electrification of rail freight and greater access to public transport? –Ensure that policies are designed to reduce inequities rather than increase them.

56. Are there any other views you wish to share in relation to transport?

Energy and industry

Energy strategy

57. In your view, what are the key priorities, challenges and opportunities that an energy strategy must address to enable a successful and equitable transition of the energy system?

Government needs to work quickly with stakeholders to develop and commit to a long term (15+ years) energy strategy which will enable successful and fair transition. Assumptions by Government that businesses will exit to accelerate transition are naïve, demonstrably contradictory of past actions of Government including SOE's and will result in increase in net national emissions (e.g. NZ Aluminium Smelter and Methanex).

Successive governments have failed to develop robust strategy to enable energy transition.

- As a result, New Zealand is currently reliant on burning upwards of 1.5 million tonnes of imported coal p.a. to meet winter peak demand. Climate change has added to uncertainty of rainfall / hydro capacity and will continue to do so. New Zealand is highly likely to continue to be burning coal as a result, at least until alternative renewable generation comes on stream. The nature of NZ's electricity market suggests new generation will be invested in only after the cost of and emissions from coal become prohibitive or politically untenable.
- Scarcity, resulting from lack of new generation has impacted significantly on local manufacturing, creating more future uncertainty for business. A result is reduced likelihood of investment in emissions-reducing investment such as paper and metals recycling that also provide employment, circular and 'reduced waste' benefits to the NZ economy.
- Current proposals to phase out reliable high value process heat without first ensuring alternatives are available at a price that is commercially viable in an open and trade-exposed economy adds to uncertainty for business and undermines profitability.

Energy uncertainty is unnecessary and unacceptable in light of the risks highlighted above. Government is the largest investor in New Zealand's generation and the majority controlling interest in much of it. Our submission is that it is essential that politicians and government show leadership in developing and implementing a comprehensive energy policy by which we mean one geared to the delivering the multiple outcomes required for a sustainable, circular and equitable society.

58. What areas require clear signalling to set a pathway for transition?

Reliable renewable energy capacity, measured in terms of assured supply at commercially competitive prices after taking into account the lack of any trade protection available to NZ manufacturing and the predictable diurnal and seasonal demand made of supply capacity as electricity displaces fossil fuels in private and freight transport.

Commercially competitive high heat source for manufacturing, whether because of increased supply of renewable energy or countervailing measures redressing the imbalance in cost competition with nations exporting manufactures produced with the benefit of environmental subsidies including the absence of a cost on emissions

Fair and affordable energy for householders, industry and transport including though the removal or rebate of the indirect cost of emissions transferred through selective regulatory obligation from NZ's ruminant agriculture to the rest of the economy

Setting targets for the energy system

59. What level of ambition would you like to see Government adopt, as we consider the Commission's proposal for a renewable energy target?

NZ has the technology and capability to achieve almost any proscribed renewable energy target. What is lacking is the current capacity and scale and the future investment certainty to justify significant and lower-returning investment. In short NZ lacks the policy settings and political leadership to be certain that any level of ambition beyond the modest would be achievable if recommended.

Phasing out fossil gas while maintaining consumer wellbeing and security of supply

60. What are your views on the outcomes, scope, measures to manage distributional impacts, timeframes and approach that should be considered to develop a plan for managing the phase out of fossil gas?

Don't phase out natural gas until there is sufficient supply of electricity and hydrogen available at commercially competitive pricing. Pre-emptive phase out of natural gas appears unlikely to assist NZ in meeting its short and medium term GHG reduction targets, given the apparent and understandable political and fiscal pressure to maintain security of supply of electricity using imported and local coal.

Renewable energy is one of New Zealand's potential sources of competitive advantage, which could deliver high quality of life for all New Zealanders and low-cost energy for industry. One only needs to look at the significant gap between generation costs from hydro plants and cost to consumer to recognise that margins are exorbitant and the old "gentailer" model has failed to deliver affordable supply or proactive investment in substantial low emissions generation. The fact that Government itself has identified the need to respond to the dry year risk by actively intervening in the market (Lake Onslow) supports the contention that the current 'market' model is delivering less than 'sustainable' outcomes. WPMA suggest that an electricity supply based on constrained transmission between distant generation and demand does not lead to adequate commercial competitive tender. In the same way that local control and interests has led to issues in the management of water, Government needs to view electrical energy at least as an essential public service as much or more than a discretionary choice prone to nodal monopoly pricing which, if left as is will impede in electricity-dependent investments in emissions reduction.

Decarbonising the industry sector

61. How can work under way to decarbonise the industrial sector be brought together, and how would this make it easier to meet emissions budgets and ensure an equitable transition?

The absence of sound policy under pinned by robust strategy will perpetuate the delayed investment in the circular and low emissions NZ has committed to internationally and which is likely to be an increasing expectation of NZ's high value export markets. We have the technology to do this. What is needed is leadership and investment certainty for business and homeowners.

62. Are there any issues, challenges and opportunities for decarbonising the industrial sector that the Government should consider, that are not covered by existing work or the Commission's recommendations?

NZ needs to update its understanding and application of the "public interest", as that concept is understood and applied by MFAT and MBIE in negotiating and interpreting NZ's international trade obligations. As a minimum, NZ needs to ensure that NZ and any counterparties to trade agreements to which we are signatory have and apply the same interpretation to requirements and protections related to NZ's public interest.

Addressing current data gaps on New Zealand's energy use and associated emissions through an Energy and Emissions Reporting scheme

63. In your view, should the definition of a large energy user for the purposes of the proposed Energy and Emissions Reporting scheme include commercial and transport companies that meet a specified threshold?

Logic and economics suggest there is no reason to distinguish "large" emitters from small in any industry. To do so is to introduce the very real potential for regulatory distortion that discourages investment and perpetuates higher-than-needed emissions. WPMA sees no reason to distinguish "large" transport users given the externality in question relates to fuel use. A carbon / emissions price applied without fear or favour is low or no additional cost to administer and avoids the need for arbitrary intervention based on 'size'.

64. We have identified a proposed threshold of 1 kt CO₂e for large stationary energy users including commercial entities. In your view, is this proposed threshold reasonable and aligned with the Government's intention to meet emissions budgets and ensure an equitable transition?

65. Logic and economics suggest there is no reason to distinguish "large" emitters from small in any industry. To do so is to introduce the very real potential for regulatory distortion that discourages investment and perpetuates higher-than-needed emissions.

66. WPMA sees no reason for any distortion of "large" transport users given the externality in question relates to fuel use. A carbon / emissions price applied without fear or favour is low or no additional cost to administer and avoids the need for arbitrary intervention based on 'size'.

In your view, what is an appropriate threshold for other large energy users such as transport companies? Logic and economics suggest there is no reason to distinguish "large" emitters from small in any industry. To do so is to introduce the very real potential for regulatory distortion that discourages investment and perpetuates higher-than-needed emissions. WPMA sees no reason for any distortion of "large" transport users given the externality in question relates to fuel use. A carbon / emissions price applied without fear or favour is low or no additional cost to administer and avoids the need for arbitrary intervention based on 'size'.

67. Are there other issues, challenges or opportunities arising from including commercial and transport companies in the definition of large energy users for the purposes of the proposed Energy and Emissions Reporting scheme that the Government should consider? Supporting evidence on fleet size and characteristics is welcomed. Logic and economics suggest there is no reason to distinguish “large” emitters from small in any industry. To do so is to introduce the very real potential for regulatory distortion that discourages investment and perpetuates higher-than-needed emissions. Manufacturers Alliance sees no reason for any distortion of “large” transport users given the externality in question relates to fuel use. A carbon / emissions price applied without fear or favour is low or no additional cost to administer and avoids the need for arbitrary intervention based on ‘size’.

Supporting development and use of low-emissions fuels

68. What level of support could or should Government provide for development of low-emissions fuels, including bioenergy and hydrogen resources, to support decarbonisation of industrial heat, electricity and transport?

Partner with key stakeholders to understand demand and supply options as well as the eventual cost and therefore demand for the product in an open and unsubsidised trading economy. For example, bio-energy from plantation pine. While the concept is superficially attractive, the wood fibre feedstock needed for its production is unlikely to be available given the gaps in trade policy (which enable 50% of harvested logs to be exported) and cyclical nature of historic plantings / current stock.

A reality that needs to be confronted is that in a future global economy dependent on bio-based or low emissions feedstocks, much of NZ’s production whether plant or animal, will accrue a value based on its ability to supply energy to an energy-dependent world. NZ’s production of biofuel from tallow was displaced by a higher value for the feedstock in foreign markets. A global price on carbon suggests NZ cannot expect to avoid the true cost of emissions if our commitment to GHG reductions is genuine and precludes access to goods and services with high or hidden embodied emissions costs.

Government selection and subsidisation of bioenergy production will have consequences for other direct and indirect market participants. The diversion of wood processing to fuel production will lead to shortage of wood and higher cost for construction and paper packaging. It could have the unintended consequence of fostering increased construction using emissions-intensive alternative building materials or increased imports of products such as recycled and food-quality paper packaging currently manufactured in NZ.

69. Are there any other views you wish to share in relation to energy?

Building and construction

70. The Commission recommended the Government improve the energy efficiency of buildings by introducing mandatory participation in energy performance programmes for existing commercial and public buildings. What are your views on this?

If the energy performance and GHG intensity of construction is of more importance to Government than affordability and availability, those characteristics should be recognised in NZ’s building codes. It is important that dead weight cost and regulatory delay is avoided by researching and specifying such requirements only once nationally. National prescription of

such requirements avoids the cost and uncertainty of local councils determining and applying such measures where that resulted in duplication of effort and potential confusion as to what regulation applies.

71. What could the Government do to help the building and construction sector reduce emissions from other sectors, such as energy, industry, transport and waste?

Government is a significant consumer of NZ's construction capacity. Government can and should, as a purchaser of such goods and services, stimulate demand and provide cost efficiencies through the scale and consistency of the purchasing decisions made by central and local government agencies.

Emissions-related design expectations should apply to all resource use and be verified with real operational data. Emissions from construction not restricted to energy usage and dwellings and offices. Water supply, wastewater and stormwater (all of which also have energy embodied in them) are examples, as are construction applied to transport infrastructure.

72. The Building for Climate Change programme proposes capping the total emissions from buildings. The caps are anticipated to reduce demand for fossil fuels over time, while allowing flexibility and time for the possibility of low-emissions alternatives. Subsequently, the Commission recommended the Government set a date to end the expansion of fossil gas pipeline infrastructure (recommendation 20.8a). What are your views on setting a date to end new fossil gas connections in all buildings (for example, by 2025) and for eliminating fossil gas in all buildings (for example, by 2050)? How could Government best support people, communities and businesses to reduce demand for fossil fuels in buildings?

Comments made above in relation to construction apply.

What is the rationale for limiting the Build for Climate Change Programme to energy? Climate Change is significantly impacting water availability and quality as much as it impacts energy. We recommend setting out to address both in a consistent manner.

73. The Government is developing options for reducing fossil fuel use in industry, as outlined in the Energy and industry section. What are your views on the best way to address the use of fossil fuels (for example, coal, fossil gas and LPG) in boilers used for space and water heating in commercial buildings?

Government intervention in energy use and fuel choice on a selective basis may offer political advantage but risks undermining the climate-related justifications for it, including through fuel and mode switching. A carbon / emissions tax will fairly price the environmental externality at minimal dead-weight compliance cost and enable energy users to make the appropriate choices and investments for their particular situation.

74. Do you believe that the Government's policies and proposed actions to reduce building-related emissions will adversely affect any particular people or groups? If so, what actions or policies could help reduce any adverse impacts?

Continued high energy prices will impact upon health and well-being of low-income families and older residents. The differential treatment of ruminant methane and other agricultural externalities could be unsustainable and unreasonable subsidies and expose NZ's exports to the risk of non-tariff restriction in climate-sensitive markets. Differential regulation acts to distort investment and risks unintended consequences including loss of regional employment, loss of

manufacturing resilience and diversity in the national economy. That in turn poses a risk of reduced knowledge and expertise needed for NZ's economy to diversify and innovate.

75. How could the Government ensure the needs and aspirations of Māori and iwi are effectively recognised, understood and considered within the Building for Climate Change programme?

By ensuring consistent building standards by way of the Building Act.

76. Do you support the proposed behaviour change activity focusing on two key groups: consumers and industry (including building product producers and building sector tradespeople)? What should the Government take into account when seeking to raise awareness of low-emissions buildings in these groups?

No, for reasons discussed above in relation to the need for climate-related policy to clearly and consistently target emissions to ensure unintended consequences, distorting investment and unnecessary compliance costs.

77. Are there any key areas in the building and construction sector where you think that a contestable fund could help drive low-emissions innovation and encourage, or amplify, emissions reduction opportunities? Examples could include building design, product innovation, building methodologies or other?

Low emissions innovation cannot be addressed in isolation – it is part of the transition to a circular economy.

A contestable fund for transitioning Building and Construction to low emission circular economy could result in lower emission outcomes. It could equally impede or distort investment from the least-cost means of achieving a given level of national emissions reduction. The fact that ruminates methane is subject to a lesser set of obligations imposed over a longer time frame is a case in point to the extent that that cross subsidy represents an inequitable imposition of cost on some other part of the NZ economy and on individuals less able to afford that cost.

78. The Ministry of Business, Innovation and Employment (MBIE) is considering a range of initiatives and incentives to reduce construction waste and increase reuse, repurposing and recycling of materials. Are there any options not specified in this document that you believe should be considered?

Government's proposed waste strategy identifies 81% of NZ's solid waste is organic in origin. This waste could be repurposed at minimal cost for use in thermal heat and electricity production, reducing the volume disposed of to landfill to its ash content and avoiding the potential for landfill methane emissions. Sorted and subject to other investment, it could serve as the feedstock for a domestic supply of liquid transport fuels and or higher value hydrocarbons.

79. What should the Government take into account in exploring how to encourage low-emissions buildings and retrofits (including reducing embodied emissions), such as through financial and other incentives?

Government should restrict itself to updating the building codes to reflect any outcomes it seeks in construction.

80. What should the Government take into account in seeking to coordinate and support workforce transformation, to ensure the sector has the right workforce at the right time?

Collaborative partnership with industry to understand current and future needs for a net-zero emissions economy. Government could then foster agreed outcomes using the purchasing power and scale of central and local Government.

81. Our future vision for Aotearoa includes a place where all New Zealanders have a warm, dry, safe and durable home to live in. How can we ensure that all New Zealanders benefit from improved thermal performance standards for our buildings?

Fine to have the Vision – where is the strategy and pathways to achieve that vision?

Building for Climate Change discussion documents were published late 2020. Had MBIE adopted a partnership approach – *how are we going to achieve this together?* the sector may have been significantly further advanced than it currently is.

New Zealand needs new collaborative, co-designed approach to the development of policies and the strategies to deliver on that policy.

82. Are there any other views you wish to share on the role of the building and construction sector in the first emissions reduction plan?

Agriculture

83. How could the Government better support and target farm advisory and extension services to support farmers and growers to reduce their emissions?
- a. How could the Government support the specific needs of Māori-collective landowners?
84. What could the Government do to encourage uptake of on-farm mitigation practices, ahead of implementing a pricing mechanism for agricultural emissions?
85. What research and development on mitigations should Government and the sector be supporting?
86. How could the Government help industry and Māori agribusinesses show their environmental credentials for low-emissions food and fibre products to international customers?
87. How could the Government help reduce barriers to changing land use to lower emissions farming systems and products? What tools and information would be most useful to support decision-making on land use?
88. Are there any other views you wish to share in relation to agriculture?

The differential treatment of agricultural emissions and the indirect imposition of that cost onto the rest of the economy is likely an unsustainable subsidy and an impediment to investment in the lower-emissions economy possible from the greater use of forest and wood products. Continued favourable treatment of agriculture could attract countervailing non-tariff barriers from NZ's trading partners. The fact of favourable regulatory treatment of agriculture as compared to the rest of the economy will serve to disincentivise the adoption of emissions reducing technology and management from the agriculture sector itself, unless it confers other substantial cost advantage or direct subsidy from Government.

Waste

89. The Commission's recommended emissions reduction target for the waste sector significantly increased in its final advice. Do you support the target to reduce waste biogenic methane emissions by 40 per cent by 2035?

Comments made above in relation to waste apply. There is no justification for a differential focus on landfill gas methane other than that that exists already, through the long-standing management of such emissions as a condition of Resource Consent and landfill design.

NZ's solid waste is substantially organic suggesting its diversion from landfill for use as a fuel in the generation of electricity and industrial heat should be considered a matter of priority.

90. Do you support more funding for education and behaviour change initiatives to help households, communities and businesses reduce their organic waste (for example, food, cardboard, timber)?
91. What other policies would support households, communities and businesses to manage the impacts of higher waste disposal costs?
92. Would you support a proposal to ban the disposal of food, green and paper waste at landfills for all households and businesses by 1 January 2030, if there were alternative ways to recycle this waste instead?
93. Would you support a proposal to ban all organic materials going to landfills that are unsuitable for capturing methane gas?
94. Do you support a potential requirement to install landfill gas (LFG) capture systems at landfill sites that are suitable?
95. Would you support a more standardised approach to collection systems for households and businesses, which prioritises separating recyclables such as fibre (paper and cardboard) and food and garden waste?
96. Do you think transfer stations should be required to separate and recycle materials, rather than sending them to landfill?
97. Do you think that the proposals outlined in this document should also extend to farm dumps?
98. Do you have any alternative ideas on how we can manage emissions from farm dumps, and waste production on farms?
99. What other options could significantly reduce landfill waste emissions across Aotearoa?

F-gases

100. Do you think it would be possible to phase down the bulk import of hydrofluorocarbons (HFCs) more quickly than under the existing Kigali Amendment timetable, or not?
101. One proposal is to extend the import phase down to finished products containing high-global warming potential HFCs. What impact would this have on you or your business?
102. What are your views on restricting the import or sale of finished products that contain high-global warming potential HFCs, where alternatives are available?
103. What are your views on utilising lower global warming potential refrigerants in servicing existing equipment?
104. Do you have any thoughts on alternatives to HFC refrigerants Aotearoa should utilise (eg, hydrofluoroolefins or natural refrigerants)?

105. Can you suggest ways to reduce refrigerant emissions, in combination with other aspects of heating and cooling design, such as energy efficiency and building design?

Forestry

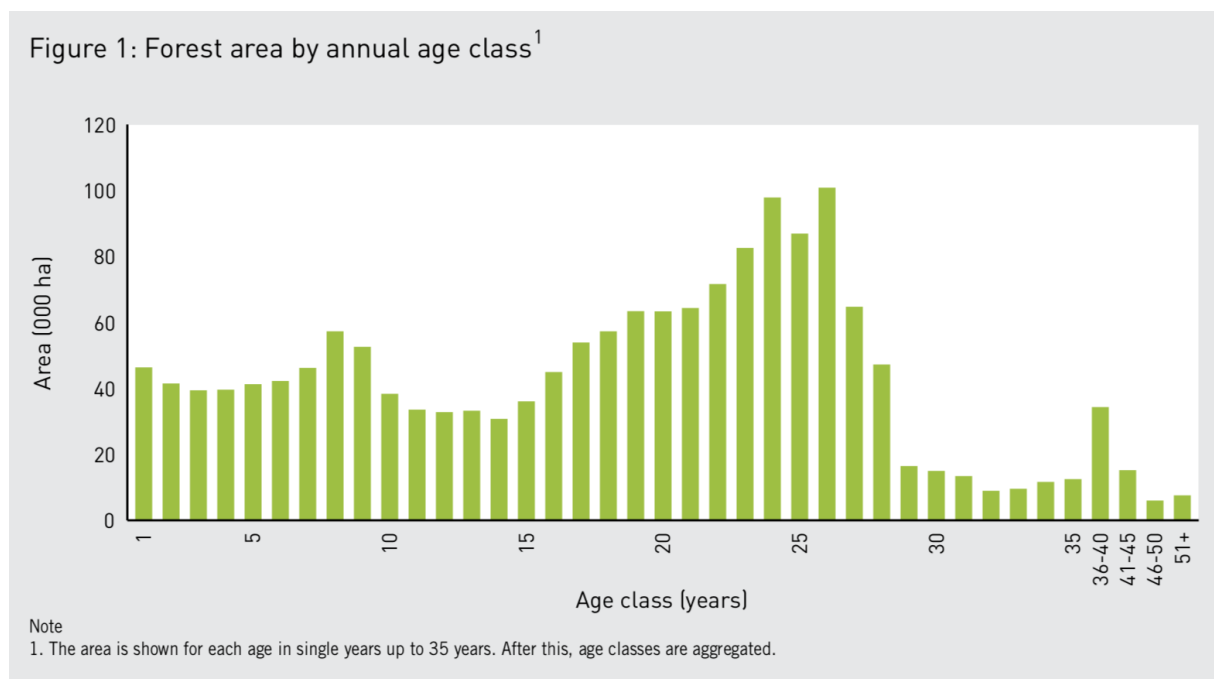
106. Do you think we should look to forestry to provide a buffer in case other sectors of the economy under-deliver reductions, or to increase the ambition of our future international commitments?

Government intervention in forestry by way of an arbitrary distinction between pre and post 1990 forests has served to impede afforestation and perpetuate artificial land pricing. Forestry offers a long-term solution to NZ as a low emissions economy but not through reliance on carbon forestry.

There is no climate -related justification for favouring the planting of native or other species. Wood processors are invested in the processing of all parts of the harvest from *P. radiata*, leading maximised returns from that species. A consequence of the efficient processing is greater climate-related benefit per unit of harvest, as compared to some other species.

Government may have an interest in alternative forest species for reasons and outcomes unrelated to climate change. If that is the case those other interests need to be disclosed and mandated in policies other than Government's climate change strategy, for example in the context of the proposed NPS on biodiversity. The risk of confused objectives leading to poorer overall outcomes is elaborated on above and applies in respect of the sorts of forests NZ landowners are encouraged to plant.

Government Value. We would draw Ministry for Environment's attention to current exotic pine plantation stocks illustrated in Figure 1 below².



- New Zealand's Building & Construction sector is currently experiencing a severe shortage of timber.

² <https://www.canopy.govt.nz/assets/content-blocks/downloads/43540-NEFD-2020-12-18-14-10.pdf>

- It is estimated that New Zealand current exotic harvest is 40,000 hectares annually.³
- It is estimated that 50% of what is harvested is exported in log form to China.⁴

In the absence of robust trade, investment, energy policy we ask as to whether New Zealand will have a viable timber processing sector in the future.

Faced with the challenges of climate change it appears counter-productive to focus on plantation forestry of exotic species which reduce New Zealand's biodiversity and increase risk of forest fire in climate challenged New Zealand.

Why not incentivise planting of native timbers such as totara?

107. What do you think the Government could do to support new employment and enable employment transitions in rural communities affected by land-use change into forestry?
108. What's needed to make it more economically viable to establish and maintain native forest through planting or regeneration on private land?
109. What kinds of forests and forestry systems, for example long-rotation alternative exotic species, continuous canopy harvest, exotic to native transition, should the Government encourage and why?
- a. Do you think limits are needed, for example, on different permanent exotic forest systems, and their location or management? Why or why not?
 - b. What policies are needed to seize the opportunities associated with forestry while managing any negative impacts?
110. If we used more wood and wood residues from our forests to replace high emitting products and energy sources, would you support more afforestation? Why or why not?
- See comments above.
111. What role do you think should be played by:
- a. central and local governments in influencing the location and scale of afforestation through policies such as the resource management system, ETS and investment?
 - b. the private sector in influencing the location and scale of afforestation?
- Please provide reasons for your answer.
- See comments above.
112. Pests are a risk to carbon sequestration and storage in new, regenerating and existing forest. How could the Government support pest control/management?
113. From an iwi/Māori perspective, which issues and potential policies are a priority and why, and is anything critical missing?
114. Are there any other views you wish to share in relation to forestry?
- This section on forestry duplicates a number of the questions posed in relation to other sections. Your attention is drawn to those answers.

³ <https://www.stuff.co.nz/national/politics/126038965/millions-of-cubic-metres-of-logs-leave-our-shores-every-year--all-while-we-remain-desperately-short-of-timber>

⁴ <https://interactives.stuff.co.nz/2021/08/trade-off-china-nz-exports/>