

WPMA Submission to the NZ Climate Change Commission's 2021 Draft Advice for Consultation

26 March 2021

Thank you for the opportunity to submit on the Climate Change Commission's (CCC) *2021 Draft Advice for Consultation*.

ABOUT THE SUBMITTOR:

The Wood Processors and Manufacturers' Association (WPMA) represents the views and interests of New Zealand's wood processors and manufacturers including those making solid and reconstituted wood products as well as paper, paper packaging and recycled paper manufacturers.

WOOD IS GOOD FOR THE ENVIRONMENT:

The integrated forestry, wood products and paper sector is internationally recognised as 'sustainable'. The raw inputs to the sector are sunlight, rainfall, and carbon dioxide from the atmosphere. Forests have demonstrable environmental advantage over some other uses of land, improving water quality and with synergistic public benefits when associated with biodiversity, active recreation and other public-interest opportunities. Wood processing yields sustainable economic returns, high value regional employment and low embodied-carbon building products. The residues of solid wood processing provide the feedstock for renewable, recyclable, and biodegradable packaging essential for improved returns from other of NZ's primary sector exports. Wood processing residues are utilised as biofuel. Paper products do not accumulate in aquatic and marine ecosystems. In total, the integrated forestry and wood products sector is internationally recognised as 'circular'.

GENERAL:

WPMA fully agrees that significant change is required by many sectors of society if NZ is to come close to achieving its emission reduction commitments. As an established part of the bio-circular economy we welcome the CCC's encouragement of greater awareness of the environmental and 'climate' cost of goods and services by all consumers. For those in the forestry and wood products sector that may translate to more forests, more forest products, greater pricing of emissions leading to changes in building product choices and greater use of recyclable and biodegradable paper packaging.

While we do have some specific matters that we seek to draw to the Commission's attention, we would not like our specific feedback of parts of the CCC's draft to detract from our overall support of the way the authors have attempted to address the very complex and multifaceted issue that is climate change policy. We also very much appreciate the early opportunity to comment on the draft advice and would like this to be the standard *modus operandi* for CCC's future work.

WPMA understands that the task of the CCC is to put the NZ economy on track to net zero carbon emissions by 2050. As the government translates the targets set by the CCC into climate-friendly, economic policies we would urge a closer look at NZ wood processing as a sector that is the best working example of what a zero-carbon industry looks like when working at scale. NZ wood processors and manufacturers not only produce low embodied carbon products from renewable plantation forests, but they do this largely powered by their own biofuels.

This zero-carbon industry is processing wood in over 130 locations in all regions of NZ supporting 30,000 well-paid jobs directly and an estimated 10,000 in-direct jobs. Wood processing is shown by NZ Treasury to have some of the highest productivity statistics in NZ manufacturing. Increased use of wood products is an important worldwide trend. The World Resources Institute has estimated that the global demand for wood products will increase by 300% by 2030. Policy change must ensure that NZ wood processors and manufacturers are well positioned to meet demand in both domestic and export markets.

The WPMA has made it clear that growth of an industry delivering substantial public goods will not occur by simply allowing the sector to be exposed to global market forces. We have previously expressed concerns that our competitors overseas are not operating by international trade rules. WPMA observes much greater government intervention in NZ's competitor countries with support measures that are illegitimate under WTO and FTA rules. WPMA and the NZ Government have recently provided evidence for this, demonstrating that unfair competition is seriously undermining NZ's foremost zero-carbon sector (forestry and wood processing). WPMA has called for major policy change to reverse the impact on the sector that is seeing a trend in closures of wood processing plants across the country and a rate of deforestation amounting to 10,000 ha per year in recent times.

WPMA has demonstrated that NZ is being left behind as countries significantly invest in manufacturing. In 2020, around 200 countries introduced COVID-related economic support measures worth an estimated US\$ 12-17 trillion, representing 13-19% of global GDP. This translates into increasingly tough trading conditions for NZ's wood manufacturers. WPMA believes that governments are the architects of industrial success. We sincerely hope that the need for major policy change in Aotearoa to address climate change will also serve to break the economic policy paradigm paralysis that has existed in NZ for a generation. Developing and acting on a Zero-Carbon Industrial Strategy for NZ should be a major recommendation from the CCC to the government.

SPECIFIC ISSUES IN THE CCC's DRAFT ADVICE:

Principle 1: Align with the 2050 targets.

Meeting the 2030 and 2050 targets requires a long-term view of investments in manufacture and infrastructure development. Investors will need certainty and confidence in the policy direction that NZ is taking. Investors in the future zero carbon economy will also need a policy environment that encourages entrepreneurial activity. At present the government fails to appreciate its core function in helping creating competitive advantage for NZ companies that are not operating in the food and agricultural sector. This sector bias must be addressed so that the whole economy can take advantage of the commercial opportunities presented through tackling climate change.

Principle 2: Focus on decarbonising the economy.

20% of NZ's carbon emissions are in construction and buildings. We need to urgently employ building materials and technologies to reduce these. Sustainable forests converted into wood products sequester carbon for decades thereafter. The NZ wood industry is NZ's best working example operating at world scale of the future bioeconomy but is being actively undermined by

unfair competition. Government is central to reversing this and the justification for this is not just the economic importance of the sector but the fact that it is key to NZ's climate change response. We accept that forestry cannot be over-relied upon to reduce emissions and that the main target is reducing carbon emissions at source. That said, NZ will still be heavily reliant on forestry in the medium term and this important role must be recognised. Sequestering carbon in forestry buys NZ time to tackle gross emissions now. Over the long term, it is vital we do not allow the value-add part of sector that turns forest-sequestered carbon into long-life harvested wood products to be undermined by heavily distorted market conditions.

Principle 3: Create options.

WPMA believes that there is a need for the government to develop a zero-carbon industrial strategy to drive its policy response to the CCC advice. This should direct government to take the pro-active support that it affords the food and agriculture sector and apply in much more widely to the rest of the productive sectors with a mix of regulations and incentives to get the whole economy on track to zero-carbon.

Principle 4: Avoid unnecessary cost.

We need to support growth of "low-cost options". In other words, the government should target broad support measure at those existing, low carbon sectors that are already operating at scale. Government should look at how it can better assist entrepreneurs in the NZ wood sector and give them greater opportunity to grow their businesses and create jobs.

Principle 5: Transition in an equitable and inclusive way

Again, look to build on the NZ wood sector as a large part of the existing low-carbon economy that provides good manufacturing jobs. There are over 130 wood processing plants spread across NZ and they are in regions where communities are most vulnerable. We cannot afford to allow wood processing plants producing low carbon products in some of NZ most disadvantaged communities to be driven out of business by competitor countries not playing to WTO or FTA rules.

Principle 6: Increase resilience to climate impacts

Buildings and infrastructure face increasing risks and it is important that we focus on this. At the same time, the impact of COVID on international supply chains demonstrate the importance of reliance on our own natural resources – ie plantation forests to supply construction, packaging and sanitary products.

Principle 7: Leverage co-benefits

A thriving NZ wood processing sector yields more produces zero carbon products which can be used to build healthy homes and results in healthy people. Forestry provides ecosystem services that have been valued in their billions of dollars. Forestry and wood processing creates thousands of jobs across NZ.

PROPOSED EMISSIONS BUDGETS:

Cross-party support / coordinated effort across government / central and Local government working in partnership.

WPMA cannot emphasize enough the importance of coordinated effort in government. The CCC refers to government agencies operating in silos and we agree. The policy response required to address climate change and ensure the economic conditions necessary to grow zero-carbon manufacturing require political parties and government agencies working in close partnership. Climate change policy is intimately linked to trade, competition, tax, resource policies etc. WPMA

points out how these policies are interlinked and identifies specific policy interventions to enhance manufacturing in our 2020 report: *Manufacturing Matters* (available on the WPMA website).

THE PATH TO 2035:

Current policies do not put Aotearoa on the right track / different but important role for forestry.

CCC seems unclear that climate change affects all primary sectors not just plantation forestry. The advice suggests shifting the emphasis from exotic plantation forestry to expanding forests of native tree species. This advice strongly contradicts the recommendations for the expansion of plantation forestry already been identified by other government investigations. It is important to remember that native forestry is also prone to storms, droughts, pests, and pathogens. It is unclear why the CCC sees the need to change tack so dramatically now. Part of the consideration that does not feature strongly in the CCC advice is how plantation forestry is closely connected to the wood processing and bioenergy sector providing the mixture of public and private good outlined above. There is obviously a need to put “the right tree in the right place”, but WPMA would argue, in the main, for the same and important role for forestry and wood processing, only that this role is much better understood by government.

WHAT THE PATH TO 2035 LOOKS LIKE IN EACH SECTOR:

Transport

Chapter 6 Of the CCC’s Draft Advice discusses NZ’s transport-related emissions and reduction options. A substantial and increasing proportion of NZ’s transport emissions arise from heavy road transport, a proportion that may be expected to increase as measures proposed to revert more of the light transport to low emissions options including cycling and EV’s.

The observation is made in respect of rail that there is emissions reduction potential in transferring some of the freight currently transported by road to rail. That benefit could be compounded through decarbonising rail through further overhead electrification.

Page 110 of the draft advice is that: “Significant parts of the freight rail network have been facing a state of managed decline due to lack of long-term investment and inadequate planning and funding frameworks. The Draft New Zealand Rail Plan sets out a remedial investment programme and a new planning and funding framework to maintain freight rail but does not establish clear targets, or an investment strategy, to increase the share of rail.”

The reasons for the current state of NZ rail are not discussed. Nor is cost and GHG reduction opportunity of remedial investment including in additional overhead electrification. There is an assumption that transporting logs to a central hub for aggregation and forwarding to an export port represents optimised GHG emissions per unit of freight. This is likely to be a site-specific calculation. WPMA suggests a direct GHG benefit is not assured given the additional kilometres of road freight associated with central processing, as compared to direct delivery regional mills. There is greater probability of a combination of central processing and rail freight providing congestion reduction benefits on key road networks, but that benefit and the GHG benefits of domestic processing could be achieved through locating a transport hub, rail freight and wood processing in closer proximity.

Notwithstanding any Kiwirail policy of managed decline, WPMA understands that Kiwirail have invested in the greater use of freight rail for the movement of unprocessed logs from centralised transport hubs to ports for export. The indirect benefit of that investment (in the form of reduced emissions per unit of transport and reduced road costs and congestion) has presumably accrued to NZ? The more direct financial benefits (reportedly \$11 per tonne) have been captured by the log

export industry due to the decision by Kiwirail to price log rail freight using depreciated asset pricing. An alternative and arguably more commercial approach to log freight pricing could have been to benchmark freight charges against the customers' alternative transport option. On that basis the financial benefit associated with freighting logs by rail rather than truck, resulted in a higher return to Transrail from the assets employed.

WPMA suggests the movement of logs to port for raw commodity export represents an overall sub-optimal outcome for NZ for reasons including:

- The current differential pricing of logs versus other freight represents a state subsidy funding commodity log exports and an indirect tax (though fully costed and therefore higher rail freight charges) applied to domestic wood processors.
- The domestic processing of NZ's log harvest would ensure more of the residual by-products were retained for use in the expanded production of additional low-carbon goods and services.
- The eventual export of processed wood products would entail the movement (and GHG emissions) from a lower total volume of higher value goods representing an overall reduction in the per unit emissions of NZ's exports.
- Retention by Kiwirail of more of the direct financial benefit inherent in the differential between road and rail freight cost could provide capital able to be reinvested in the rail network including emission reduction through electrification.

WPMA's recommendation is that the SOE Minister request an investigation into log freight pricing and a better return on the assets employed in providing that service. To the extent that the value of accelerated depreciation of Kiwirail's assets is to continue it should be redirected to support of the domestic processing of NZ wood. The climate benefits of an expanded domestic wood processing sector are obvious. Any GHG advantage of log rail freight would be retained by pricing below the alternative transport cost but less favourably than at present. We also recommend the Draft New Zealand Rail Plan maximises climate, financial and social benefit of reinvestment in the rail network by targeting the location of log transport hubs, rail freight and wood processing in close proximity.

Buildings

Approximately 20% of NZ's emissions are due to buildings. Half of the emissions occur at the time of construction (embodied carbon) and the other half occur over the operational life of the building. The operational life component will be largely eliminated as NZ's energy becomes 100% renewable. There is a need, therefore, to focus on the construction component by working to reduce the use of carbon-intensive construction materials such as steel and concrete where at all possible.

Whilst the Commission's report makes little reference to the need to differentiate between the three main construction materials (timber, steel and concrete) the Building for Climate Change policy starting to emerge from MBIE must do. Making the shift to reduce the carbon emissions in construction can be done quickly and at relatively low cost as new, wood-based construction systems are being developed and employed internationally.

NZ can be carbon neutral by 2030 for embodied carbon by following international best-practice to tightening regulation on the allowable emissions per unit area of floor. Capitalising on the fact that carbon sequestration occurs whilst the forest is growing produces wood products used in construction that have a large carbon "negative" profile. The greater use of wood in a building also has the effect of offsetting the use of more carbon-intensive construction materials where their use is unavoidable (eg concrete in foundations). Greater use of wood in NZ, through new technologies and building systems, where it can be effectively used ie in "vertical" construction will also serve to

offset the continued and somewhat inevitable dependency on use of steel and concrete in “horizontal” construction (ie infrastructure such as roading, pipelines etc).

If the Building for Climate Change Programme is to contribute to the CCC’s target in the very near future it will need to put in place a carbon-regulatory system that is internationally aligned, recognises biogenic carbon in wood and focuses attention on the part of the building’s lifecycle where it can have the most positive climate-change impact ie in the manufacture of the main construction materials.

There is a concern amongst the rural community that permanent forestry (so-called carbon-forestry) creates very few jobs once planted and weakens the social fabric of these communities. On the other hand, rotational forest-growing coupled to a thriving domestic wood processing and manufacturing sector has the opposite effect. It creates well-paying and productive NZ jobs through silviculture, harvesting, transport, primary wood processing and secondary manufacture.

The Government’s Building for Climate Change Programme must bring about changes in the NZ Building Code which will create a real lift in demand wood products. This in turn will stimulate the need for rotational forest-growing where carbon captured by trees then moves on to be embodied into NZ’s building stock over the long term.

Forestry

The WPMA acknowledges and supports the principles behind the CCC’s strategy for leveraging afforestation to generally support the attainment of NZ’s climate change obligations. We acknowledge that the immediacy of gains achievable through fast growing plantations versus the long-term offsetting through indigenous forest management are a useful stop-gap for hard to mitigate and GHG-intensive industries. In our view the approach is broadly correct but with caveats.

WPMA supports the recognition that it is impossible for NZ or the planet to plant forests forever. The root cause of the developing crisis that is climate change must ultimately be addressed, reduced reliance on fossil carbon fuels. Afforestation provides a breathing space during which the real focus must be on reducing gross emissions at source.

Afforestation rates

WPMA notes that the CCC report anticipates an annual planting rate of 25 000ha/year until 2030, with a nominal target of 380,000 new hectares of exotic forest by 2035. WPMA has reservations in respect of the CCC’s projection of afforestation rates for plantations. It is noted, according to NEFD data (the official dataset for forest area and area change), that over the last decade, the area of plantation forests has been declining, and not taking over nor dominating the rural landscape. The total area has declined, largely due to conversion to pastoral farming. The data indicate we have some way to go before we see gross estate expansion replacing the losses. Even with the 1Billion Trees policy in place new afforestation comes nowhere near what is required. If we are unable to plant more native forests and achieve emissions’ reductions now, then we are going to need more exotic forest afforestation.

The CCC’s assumptions regarding exotic afforestation may be optimistic. There is political and public confusion as to what is occurring and a narrative developing to further restrict or control afforestation. We concur with the CCC’s advice, that care will be required to ensure that regulatory and other measures are tailored to foster investment in afforestation, rather than impose blockages.

Limits to afforestation

The CCC's reasons for advising a level of exotic plantation afforestation to facilitate shorter term urgent sequestration but not beyond 2035 is understood as reflecting the reality that NZ cannot afforest forever. WPMA agrees but suggests that as presented, risks being misunderstood.

- WPMA agrees that short, or long-term, ongoing afforestation must not be perceived as a low-cost alternative to actions targeting the eventual elimination of gross emissions.
- We accept that at some point afforestation with fast growing exotic plantations for the sole purposes of carbon sequestration will become untenable.
- However, it is not a longterm solution to climate change and may detract from emission reduction goals if permanent forestry forecloses on the option of sustained harvest of low / no emissions materials for use in the net-zero emissions economy required by 2050.

WPMA is particularly concerned that the CCC's advice correct rather than perpetuate public confusion over the role and desirability of plantation forestry in assisting NZ to meet its 2050 commitments and the role of forestry as an economic and socially beneficial undertaking.

Extensive native species planting is an admirable undertaking by those who choose to do it and interest and support is without doubt gaining momentum through the work of community groups and organisations such as Tane's Tree Trust. That said, wide scale active mixed species planting on difficult lands may be problematic, potentially costly and may carry with it some of the same social concerns attributed to plantation afforestation. We believe where active multi species native planting is to be encouraged it should focus on accessible and easier terrains but will need significant incentivisation in combination with direct regulation targeted at other concurrent environmental benefits.

It is also unclear what scale of downstream wood processing opportunities exist with native tree species. WPMA notes that the key determination of planting preference is and will be the commercial and societal outcomes sought. Government intervention in the form of subsidised land use change may assist but also risks the subsidies and positive regulatory inducements actually slowing land use change.

THE IMPACTS OF EMISSIONS BUDGETS ON NEW ZEALANDERS:

Fair and equitable transition

The CCC has addressed issues from the perspective of a terms of reference related to NZ's GHG reduction obligations. It is noted and applauded that there is a recognition that those changes to the NZ economy need to occur in a much wider policy framework including avoiding further disadvantage to those marginalised in society. There is explicit recognition of the need for solutions to be "equitable", notwithstanding the absence of a common understanding of that term. A similar expectation is included in other areas of Government policy including some Treaty of Waitangi settlements where there is a statutory presumption favouring land use change including more intensive use of land held in common by Maori Trusts.

Statutory Treaty settlements could give rise to an unresolved confusion when 'existing' land use forms part of the policy response to climate change response. A simple extrapolation of the obligation arising from "equitable" climate change regulation is that the "polluter pays". Adoption of land use-related climate change policy on any basis other than "polluter pays" inequitably and

inevitably disadvantages Maori and others engaged in less intensive land uses including forestry, particularly where land use change is contemplated as part of a statutory treaty settlement.

WPMA notes and supports the CCC's recognition that policy frameworks must work together to provide the correct signals to drive the behaviours sought. If necessary, this disincentivises those behaviours that work against what is effectively the national if not international good. We believe this is a message that must be powerfully conveyed as with the climate change legislation. In a similar way, review of the RMA and impending delivery of the NPS-Biodiversity and NPS/NES-FW needs to be based on clear hierarchies of priority, with consistent legislative elements talking to and enabling those priorities. If this objective is lost from sight regulatory confusion will continue as a material hinderance to the achievement of the climate response objectives.

As they affect forestry or afforestation intentions, current examples of the problem of regulatory inconsistency and inequity include:

- The Climate Change Response Act 2008 had the effect of imparting a retrospective liability to only pre-1990 land value in the form of a 'de-forestation' carbon tax.
- The decision to 'grandfather' no right to discharge diffuse-source nitrate to forests in the Taupo and other catchments.
- The risk of further regulatory action imposing cost and liability on 'existing' or future forests - an example being the proposed NPS for biodiversity placing the onus on 'maintaining' biodiversity within the plantations themselves. (This is compounded where the often-significant proportions of unplanted land that from the time of afforestation to the age of harvest revert to a native vegetation status, thus accruing a high level of legal protection and putting cost and uncertainty on the owners of commercial plantation estate.)

Past and current experience is for established forestry, (as a land use choice), to accrue a higher sovereign risk than alternative predominant land uses. This despite and possibly because of the undoubted public value in the form of ecosystem services derived from forests in the landscape. In a strictly commercial sense, the provision of these services, can and has, with the wrong settings, become a financial and management liability. The risk becomes that if the policy settings are misaligned, either afforestation intentions will not meet desired levels OR to achieve the targets, positive financial incentivisation at greater cost to the wider public may be required. (The latter strategy is potentially self-defeating if it resulted in spiralling land value.)

All these issues serve to illustrate the intertwined nature of regulation and economics. Economic and environmental outcomes will vary depending on extent to which regulation varies from fundamental principles of equity, fairness, "polluter pays" and taxation. We believe the CCC could provide some stronger guidance to government on the importance of addressing these tensions if the transitional journey to a net-zero emissions economy is to be achieved.

There is a sense in the CCC Advice that we will see a fair and equitable transition because we are inherently a "country of innovators and problem-solvers". WPMA warns that this an outdated and nationalistic view of ourselves. We are in fact no different to many other countries in terms of inventiveness. The main difference that the WPMA has observed in its recent report ("International Manufacturing Policy and Programme Responses to COVID-19") is that manufacturing industries in those countries are well supported through policies and to support investment and development.

CCC point to various government initiatives such as Fit for a Better World and the Industry Transformation Plans. All of these are predicated on a very significant shift to process more logs in NZ. This will not happen if international trade and competition rules are not observed by our

competitors and we remain “policy disadvantaged” in NZ. The NZ government is confused about its role in creating competitive advantage for industry and does not fully grasp that government actually sets the underlying conditions that leads to zero carbon manufacturing expansion and success.

ENERGY:

EITE (emissions intensive trade exposed) protection has been a feature of NZ’s emissions trading scheme (ETS) from its inception. There is an undeniable logic in EITE protections being available to emitters to avoid them succumbing to the commercial pressure of imports of the same or competing products from countries operating without a cost on emissions.

NZ wood processors and manufacturers compete with emissions-intensive imports including but not limited to wood and paper products. That competition can be expected to intensify if and when market demand for low-embodied energy products reduces the cost of GHG-derived energy in those countries with a surplus. The recent adoption of a series of “Green New Deal” policies in Europe are projected to increase protections afforded ‘low emissions’ industry in the EU and the imposition of countervailing protections at the EU border. China’s intention to displace emissions-intensive industry by 2060 is expected to intensify competition for low-emissions feedstock for its manufacturing sector and or subsidised outputs from those low-emissions sectors of its economy it needs to foster to achieve its stated emissions reduction goals.

Factors that can be expected to affect the viability of NZ wood processing long term is the increased availability of subsidises internationally to sectors at the vanguard of the low emissions and bio-circular economy. The perverse impact of subsidises can be seen in the closure of bio-diesel manufacture in NZ and the export of the tallow feedstock for bio-oil manufacture off-shore. A similar non-tariff impact is incentivising the growing reliance on off-shore processing of NZ’s raw-log harvest. Australia and other countries provide increasing levels of support for their paper and other recycling industries for understandable and legitimate waste minimisation and GHG reduction reasons. An unintended consequence of that strategy is a risk to those manufacturers of similar products in NZ due to Australian suppliers enjoying lower or more certain input costs and regulatory support.

The benefits of a domestic wood and paper products industry include enhanced returns to the NZ economy through adding value domestically to raw / commodity log exports. The direct domestic ‘added value’ of processed wood exports is complimented (in the context of the NZ economy as a whole) where the domestic manufacture and supply of paper-based packaging provides an essential “value added” component to many of NZ’s other major commodity exports. NZ’s domestic wood processing sector provides the infrastructure and technical capability needed if NZ’s economy is to genuinely pivot from its current path of increased per-capita emissions toward the net zero emissions, zero solid waste economy desired by the CCC and the Government.

Border adjustment taxes and or similar national measures are required if EITE protections are to be rescinded in the absence of a consistent and demonstrable global price for GHG emissions. WPMA understands that measures are permissible under established WTO TBT rules provided they are justified by reference to national interest policy and environmental regulation including measures to address climate change.

We recommend the CCC investigate whether NZ statutes provide sufficient scope for the creation of the more favourable regulatory environment required for NZ investment in domestic wood processing and the net-zero emissions economy more generally. Current statutes that may assist in

this regard include the Overseas Investment Act, the Climate Change Response Act, the Waste Minimisation Act, The Waikato Settlement Act and (perhaps more arguably) the Resource Management Act.

HEAT, INDUSTRY AND POWER:

The CCC report contains numerous references to the need to transition the country's energy supply from fossil to renewable resources. We support that emphasis and suggest NZ's wood processing and manufacturing sector provides a pre-existing model of the sorts of industry as well as the co-location of compatible industries that can minimise greenhouse gas emissions by maximising the cost effectiveness of biofuel use. In particular:

- Primary processing logs into solid wood that in and of themselves represent a long-lived store of atmospheric carbon. ("Harvested Wood Product" storage is internationally recognised as a mitigation option).
- Solid wood products manufacture generates residues that are a feedstock for products displace non-fossil materials including reconstituted panels and paper and paper packaging.
- Residues from primary and secondary processing unsuitable for the manufacture of goods are utilised for their bioenergy value, either directly in onsite process heat plants or into a form of solid biofuel attractive to others. NZ's sawmilling industry has traditionally utilised residues as boiler fuel for the kiln drying of sawn timber.

NZ's pulp and paper industry utilises both solid wood residues and liquefied wood processing biproducts for process heat and drying finished pulp and paper products. A facility such as the Kinleith P&P plant in the central North Island utilises renewable fuels for upwards of 85% of its energy requirements. Reconfigured it could be 100% renewable and or a net energy exporter, a common situation in P&P operations internationally. On average, 70% of the heat energy used by NZ sawmillers comes from the combustion of their own wood residues.

The majority of countries with substantial wood processing industries have recognised the use of residues for energy as having a positive benefit. In NZ the fundamental economics motivating bioenergy use in solid wood processing were ignored in allocating EITE protection to those energy-intensive manufacturers with which wood competes. The commercial advantage due low / no emissions manufacturers through the negative pricing of the environmental externality of GHG emissions from the manufacture of non-wood competing products was all but reversed. Energy intensive non-wood manufacturing has been able to benefit from EITE protection, including through the utilisation of that protection to install bio-energy capacity that has to be fully capitalised when installed by wood processors. The substitution of coal for wood residue by EITE and other processors risks creating a subsidised demand for wood residues which at some level will reduce the capacity to invest in unsubsidised manufacturing of traditional wood products.

The CCC has identified the climate benefits of NZ transitioning to bio-based liquid fuels in decarbonising land transport. Section 3.8.1 of the report references electricity as increasingly fuelling light transport and the need for 140 million litres per year of low emissions fuels by 2035. The assumed sources of bio-based liquid fuels are from conversion of hydrogen to synthetic fuels and other sources presumably including conversion from wood residue. The climate benefits of switching to liquid fuels from renewable and biobased sources is a matter of logic. What is less clear is the cost and economics. Page 61 of the CCC's advice is that NZ Aluminium will cease operations by 2026. Page 64 identifies the CCC's assumption that "biomass from forestry and wood processing residues are a low-cost fuel switching opportunity." The CCC also assume that "...fuel switching to biomass also occurs in some other energy-intensive industries such as pulp and paper production."

WPMA would recommend re-examination and ideally a de-targeting of the CCC's assumptions regarding bio-energy and bio-based liquid fuel to reflect that:

- The wood processing industry uses biofuels extensively now. The obvious opportunities to switch fuels may not be significant.
- The existing wood industry does place a demand on the electricity grid and is therefore commercially susceptible to elevated electricity pricing, whether as a result of continued support for an operation of NZ's Tiwai facility or because of an increased spot electricity price as a result of substantial and rapid uptake of EV's.
- The availability and competitive pricing of logs available to the domestic wood processing sector is not assured. Risks to the domestic processing sector include the demand for and prices able to be paid for unprocessed logs by some importing countries. A high domestic emissions price could drive the demand for wood fibre from EITE and other energy users with negative impacts on the profitability of NZ's unprotected and trade-exposed wood processing sector. The ETS as applied to forestry could contribute to reduced fibre availability and higher domestic fibre prices as more forests are managed for carbon storage alone. The higher costs of transport expected as a result of emission pricing of transport may make some existing forest estates unprofitable to harvest, compounded by minimal cost carbon-only forestry on remote landforms reducing the effective size of NZ's productive forest estate over time.
- Internationally, lower cost and lower investment risk investigation / development of bio-based liquid fuels industries build on existing pulp and paper infrastructure. Much of the investment and skilled workforce in a bio-oil from wood residue plant is common to Kraft pulp production. The lignin based "black liquor" extracted in paper pulp production is currently used as a liquid biofuel in the process. It can be further processed into liquid transport fuels and other bio-chemicals, accepting that such processing requires support or intervention to overcome the comparatively high cost of using bio-based feedstocks in place of traditional fossil hydrocarbons.
- The wood processing sector has traditionally included the collection and reprocessing of wastepaper and paper packaging because of the comparative ease and positive economics of traditional paper recycling. As such the paper-based aspects of the sector are "circular", a claim that is harder (but not impossible) to sustain for processed solid wood. Such products in modern municipal landfill can and do biodegrade generating landfill gas including methane. The collection and utilisation of such gas is recognised in the CCC's draft advise as environmentally beneficial, especially where the energy arising displaces fossil-based energy from the transport and electricity sectors. Investigation and investment in the segregation and utilisation of wood waste from the construction sector is an obvious change NZ could make in moving to a bio-circular and lower emissions economy.

WPMA suggest that the above bulleted considerations taken together support the active investigation of and investment in an 'energy island' approach to NZ's wood processing. Alignment of all parts the processing sector near a central processing area for forest harvest and perhaps in association with a bioenergy plant fuelled from residues and imported segregated wood and other combustible construction wastes. Would augment the benefit to NZ of traditional wood processing. It would provide a test bed and core investment in the manufacture of alternative bio-based fuels if that is to form part of the CCC's recommendation to Government.

CIRCULAR ECONOMY:

WPMA applauds the positive commentary in the CCC report addressing this as an important objective in facilitating GHG reductions and acknowledging the role of forestry in achieving this. We question whether the CCC could or should be providing stronger direction to Government to make this happen.

The production of solid construction timber, modern structural wood solutions for multi-storey construction, wood waste for industrial heat, chip for biodegradable and recyclable paper and packaging and tree components for bioplastics and extractives do not happen independently of each other. They all arise from an integrated stream of biomass arising from the outputs of harvested forest. There have been a number of research and scenario / strategic planning studies undertaken to try to provide the insight required to use these streams to best overall advantage. Success will ultimately have much to do with regional scales and coordination of investment, regulatory regimes, tax and incentives. In a country the size of NZ achieving initial scale and momentum to cross viability thresholds will require strong political leadership and an enabling regulatory environment. Our sense is that this message needs to be very strong.

A specific caution WPMA would offer in relation to the bio-economy relates to the use and management of slash and other “non-log” forestry outputs. Extensive research over many decades has demonstrated the increased risks of soil compaction, accelerated erosion and nutrient depletion associated with whole tree extraction. The protective function of re-establishment potential from retaining a physical slash barrier during and after harvest has been amply demonstrated, particularly where fire was used in silvicultural management. Modern mechanised harvest methods using low ground pressure tracked machinery is augmented where movement is across the top of a layer of slash.

WPMA accepts that the energetic cost / benefit of slash extraction is likely a function of the future cost of bioenergy and the availability of low / no-emissions cost extraction methods. Currently, the bioenergy recovered from slash does not justify the fuel and other costs associated with extraction in most situations.

WPMA is motivated to recommend against the collection of distributed slash for its biofuel value because of silvicultural concerns. We accept the superficially attractive visual appeal of a ‘clean’ site and the perception that slash in site is ‘wasteful’. That said, the biological reality requires the retention of essential nutrients and minerals as well as soil carbon for efficient re-establishment of forests. Much of the nutrient load is retained in the needles and branches.

RULES FOR MEASURING PROGRESS:

The CCC recognises the importance of accounting for Harvested Wood Products and the benefit of timber used in the built environment. WPMA understands that NZ already relies on HWP in its international carbon accounting. We have previously made the case that the fiscal savings made by Treasury via HWP accounting should be passed on to benefit the NZ wood processing and manufacturing companies in the form of tax breaks and to provide industry good. The fact that taking such action serves to support growth of leading industry in NZ’s future zero carbon economy further strengthens the argument.

THE GLOBAL 1.5°C GOAL AND THE NDC FOR NZ:

WPMA agrees with the conclusions and recommendations made in the report and that the NDC should be on the basis of all GHGs using the most recent IPCC global warming potentials.

WHAT SOCIAL, ECONOMIC AND DEMOGRAPHIC CHANGES MAY OCCUR?:

The final section of the Advice demonstrates that the CCC has a well-developed understanding of the potential for climate change to impact upon NZ's food and agriculture sector. By contrast, lack of commentary on any other sector and particularly the manufacturing sector confirms an asymmetry of knowledge. Whilst the FAO predicts a 70% increase in international demand for food by 2030 the comparable rise in demand for wood fibre is 300%. Such a dramatic increase in demand for one of NZ's main manufacturing exports (and one with low-embodied carbon) suggests that government be urged to devote far more effort in supporting the NZ forestry and wood sector as it competes on international markets to meet soaring demand for value-added wood products.

Jon Tanner
CEO, WPMA

Responses to the specific consultation requests.

	Report Consultation question	WPMA response
Q1	Do you support the principles we have used to guide our analysis? Is there anything we should change, and why?	WPMA supports the principles including the obligation to address gross emissions rather than rely afforestation (of any sort) to extinguish our short term commitments. We note that the repeated failure to address this problem has increased the urgency and magnitude by which responses must now be executed.
Q2	Do you support budget recommendation 1? Is there anything we should change, and why?	WPMA supports the budget. It sets a necessary trajectory that meets our commitments as a nation and provides a benchmark for management of the nation's emissions.
Q3	Do you support our proposed break down of emissions budgets between gross long-lived gases, biogenic methane and carbon removals from forestry? Is there anything we should change, and why?	WPMA supports the separation of long-lived and biogenic methane for the purposes of management. We also recognise the risks of leakage to overseas production and the risks of importation of high-embodied carbon products to NZ (WPMA calls for a border carbon adjustment tax).
Q4	Do you support budget recommendation 4? Is there anything we should change, and why?	WPMA does not accept budget recommendation 4 as an operating principle. We recognise that this may not be the cheapest option for emitters, however, we need to learn from the consequence of the recent past where the ready availability of cheap overseas units immobilised progress in NZ. Also exporting our mitigation undermines the process to create new options, industry and employment over the adjustment phase.
Q5	Do you support enabling recommendation 1? Is there anything we should change, and why?	WPMA regards the achievement of cross-party support as absolutely essential. Political partisanship has been material in undermining any useful progress in the past. It is critical that politicians unite in the interests of the country and future generations.
Q6	Do you support enabling recommendation 2? Is there	WPMA strongly supports the need for a disciplined and structured approach to managing for climate change across government. The response to climate change is a long-term

	anything we should change, and why?	journey and policy making/delivery must be transparent, accountable and above all enduring well beyond electoral cycles.
Q7	Do you support enabling recommendation 3? Is there anything we should change, and why?	Long-term partnership with Maori is already fundamentally enshrined in NZ law and will be important in particular in ensuring the matters of equitable treatment are managed.
Q8	Do you support enabling recommendation 4? Is there anything we should change, and why?	WPMA supports the intent but note our concern that to date the evidence has not provided optimism that such vitally important foundations will easily be achieved. We regularly see local government as disjointed, inconsistent, and driven by political constituencies rather than good science. It is not inconceivable that reform of local government will need to be incorporated into the alignment of the various pieces of legislation.
Q9	Do you support enabling recommendation 5? Is there anything we should change, and why?	WPMA recognises that we live in a democratic society and there must be opportunity for the public to contribute to the decisions that will affect the whole country into the foreseeable future. We totally endorse the need for new and more effective means of incorporating the views of people into the process
Q10	Do you support our approach to focus on decarbonising sources of long-lived gas emissions where possible? Is there anything we should change?	WPMA supports this strategy. Forestry can provide the much needed “breathing space” to sort out gross emissions at source. More regulatory support for timber-rich construction and greater use of wood-based packaging will also serve the nation well on its zero-carbon trajectory.
Q11	Do you support our approach to focus on growing new native forests to create a long-lived source of carbon removals? Is there anything we should change, and why?	Yes, but recognising the caveats discussed in the submission from the NZ Institute of Forestry who tackle this question in detail.
Q12	Do you support the overall path that we have proposed to meet the first three budgets? Is there anything we should change, and why?	Yes, but recognising that some of the assumptions made for example around the availability of woody biomass to provide bioenergy, the time/cost to convert boilers to use biomass etc are incorrect. CCC needs to put much greater effort into understanding the benefit of wood in replacing steel and concrete in construction. WPMA would like to

		point out that the NZ wood sector is not a major user of gas (Box3.1). Overall, it is important for the CCC to understand the nature of competition NZ log market and how overseas subsidies are undermining NZ to capture the full “carbon-benefits” of the forestry and wood processing sector.
Q13	Do you support the package of recommendations and actions we have proposed to increase the likelihood of an equitable, inclusive and well-planned climate transition? Is there anything we should change, and why?	WPMA would be more confident of these recommendations if the CCC demonstrated a greater understanding of the competitive environment in which we operate internationally. The CCC’s advice is predicated on the assumption that our competitors are operating according to WTO rules. They are not and this limits NZ’s ability to make the major changes being recommended in the CCC Advice.
Q14	Do you support the package of recommendations and actions for the transport sector? Is there anything we should change, and why?	See section on transport and sector bias in the main text of this submission.
Q15	Do you support the package of recommendations and actions for the heat, industry and power sectors? Is there anything we should change, and why?	See section on energy and concerns about EITE protection in the main text of this submission
Q16	Do you support the package of recommendations and actions for the agriculture sector? Is there anything we should change, and why?	Partly. WPMA believes in the principle of Polluter Pays. NZ agriculture needs to be fully brought into the ETS. The alternative technologies suggested are useful but what is going to stimulate their uptake?
Q17	Do you support the package of recommendations and actions for the forestry sector? Is there anything we should change, and why?	CCC need to check their assumptions here and not be driven by public and political opinion. We support the views expressed in submissions by the NZ Forest Owners Association and the NZ Institute of Forestry on this matter.
Q18	Do you support the package of recommendations and actions for the waste sector? Is there anything we should change, and why?	CCC could do more to highlight the potential for wood based packaging anticipating that supply chain worldwide will increasingly expect NZ’s exports to be packaged in a low-embodied carbon manner. We need to be ahead of the market here.

Q19	Do you support the package of recommendations and actions to create a multisector strategy? Is there anything we should change, and why?	WPMA urges the development of an Industrial Strategy for NZ where policies to support the growth of (green) manufacturing sectors better intersect with NZ trade and competition policies. Siloed agencies and policy making in isolation does not attract investment to NZ.
Q20	Do you agree with Budget recommendation 5? Is there anything we should change, any why?	The financial benefits emanating from accounting for Harvested Wood Products should accrue directly to the NZ wood processing sector to assist in the remediation of distorted prices in the NZ log market.
Q21	Do you support our assessment of the country's NDC? Do you support our NDC recommendation?	Yes
Q22	Do you support our recommendations on the form of the NDC?	Yes
Q23	Do you support our recommendations on reporting on and meeting the NDC? Is there anything we should change, and why	Yes
Q24	Do you support our assessment of the possible required reductions in biogenic methane emissions?	NZ needs to significantly lower its biogenic methane emissions. This will ultimately be driven by regulation. However, this will be much more rapidly driven by global market expectations. We should not therefore wait for regulation.