Low Emissions Economy Inquiry

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Introductory comments

1. Thank you for the opportunity to submit on the Low-Emissions Economy - Issues Paper.

2. If appropriate, the New Zealand Institute of Forestry wishes to be heard in support of its submission.

About the Submitter

3. The New Zealand Institute of Forestry (NZIF) was founded in 1927. It has 750 members who are individual professionals in forestry in New Zealand. The NZIF's objects are to advance the profession of forestry in New Zealand and to be an independent advocate for forestry.

4. The NZIF is committed to serving the practice of forestry and the wider community through education, accountability and its code of ethics and performance standards. It fulfils a quality assurance role, setting the benchmark for professionalism and the quality of advice and practice by which members and others in the profession are measured.

5. NZIF members are concerned with the professional management of all forests, plantation and natural, conservation, protection and commercial. They can be found in forestry companies, consulting businesses, research institutes, educational facilities, government departments and providers of specialist services. The members' qualifications and areas of expertise reflect the diversity of disciplines involved in managing a modern forest resource from traditional forestry degrees through science, economics, law, micro- biology, hydrology, engineering and resource management. The NZIF operates the scheme that controls the registration and conduct of forestry professionals, including consultants who provide forestry advice to the public.

General Comments

6. NZIF acknowledge the efforts and expertise of all those involved in the preparation of the paper and support those parts of the paper not commented on more specifically below.

Submission

Key Messages:

- The Emissions Trading Scheme does not and cannot incentivise afforestation.

- Stagnant and declining rates of afforestation reduce on the option of greater emphasis on bio-based and carbon-storing products within the GHG emissions constrained economy of the future.

- The imposition of GHG costs of agriculture onto the rest of the economy is counterproductive if the objective is to transition New Zealand's economy to low GHG emissions. Adoption of the "two baskets" approach would further perpetuate and extend this regulatory distortion.

- Some protection of Emissions Intensive Trade Exposed sectors (including agriculture) pending the global pricing of emissions is justified but needs to be structured to avoid undermining emissions price signals between products competing within the internal New Zealand market.

Forestry, Afforestation and Land use

The forestry and wood processing sector (F&WP) is a logical part of the low-emissions economy of the future. F&WP represent the photosynthetic extraction of CO_2 from the air for storage in wood products or use as biofuel in a climatically neutral cycle. Wood used in construction is stored for decades to New Zealand's direct environmental and fiscal benefit, the latter via international recognition of the value of harvested wood products.

Much of the process heat utilised by the wood processing sector is and crucially always has been biofuel in the form of processing residue. Where not used as fuel directly, wood products biodegrade at the end of their natural life into CO_2, in some instances via a 'landfill gas' phase where it is used to displace other fuels before climate-neutralising combustion to CO_2.

Notwithstanding forests climate-related advantages, or perhaps because of them, New Zealand's climate change policy has served to disadvantage the F&WP sector over several decades.

Of particular note in this regard were the decisions to:

- expropriate with little or no compensation the opportunity value in land planted in forests before 1990. The decision to expropriate was made after the sale of the Crown's freehold interest in pre-1990 forests at values calculated on the 'highest & best use' (HBU) which at the time was conversion to non-forestry uses. The 'sovereign risk' premium attached to investments in afforestation since the introduction of the Climate Change Response Act has discouraged significant afforestation, notwithstanding the intention behind the inclusion of forestry in the Emissions Trading Scheme (ETS) is to increasethe national forest estate.

- including forestry in the ETS has had the effect of greatly increasing the dead-weight administrative cost of investments in forestry, as landowners act to secure the HBU-based opportunity value of their land. Those foresters who have participated actively in the ETS have done so where the intention to afforest was justified for unrelated reasons, augmented by the pre-2014 opportunity of a windfall gain through arbitrage using lower cost units.

- increase the cost and complexity of forest and forest land transactions. Prudent land-related investment now requires consideration of the arbitrary dates and third party interests from past carbon trading. The consequence has been an increase in the already illiquid nature of forestry investments and a substantial dead-weight regulatory cost and commitment by Government.

The practical effect of the ETS as it applies to forestry (if it does anything at all) will be to increase the value of bare land where the forestry use approximates the HBU land valuation. In a rising carbon market, the ETS value of forestry is available to the land owner in the form of a tax and compliance – cost free increase in capital value. The logical decision will be to retain the land in its

bare state or, if being planted for unrelated reasons, to secure and hold the carbon credits as a means of avoiding their regulatory expropriation.

Compounding the fundamental problem inherent in the forestry ETS scheme, the Government has separately intervened in the market using the "Afforestation Grant Scheme" (AGS). This scheme (as was outlined in detail in a submission by NZIF at the time the scheme was last reviewed) could be considered as holding up the value of land rather than assisting forestry.

The continued exclusion of agriculture from the ETS is directly contrary to the "all sectors, all gasses" justification offered at the time the ETS was first conceived. Separate to the distortion in land price created by this subsidy, the absence of any liability for GHG emissions from agriculture removes all incentive for that sector to adopt the findings of research funded by the taxpayer into methods of agricultural GHG emission reduction.

Emissions Intensive Trade Exposed EITE

NZIF accepts the premise Emissions Intensive Trade Exposed (EITE) exporters should be shielded from anti-competitive outputs from countries with no or low cost on GHG emissions. EITE protections are understood to be consistent with long standing provisions in WTO's anti-dumping and countervailing duties provisions. There is no benefit to New Zealand's economy or the climate from displacing New Zealand's emissions to another country or by substituting domestic production for imports.

Notwithstanding the justification of EITE protection above, such protection has had the (presumably) unintended effect of discouraging New Zealand's domestic economic transition to a lower level of emissions dependence. The decision to base EITE protection on 1990 emissions levels has had the effect of grandfathering high emitters the right to pollute at lower cost than those sectors who had lower net emissions from the start.

Wood processors have traditionally used the residues of wood processing to generate process heat. The legitimate recognition of wood residues as biofuel has had the unintended consequence of 'grand parenting' the sawmilling sector at a lower level of protection than steel, concrete and other energy-intensive building materials with which wood competes.

Energy intensive sectors have presumably been able to decrease their own cost and indirectly increase the comparative cost of producing wood products by purchasing wood-based biofuels at a rate subsidised by the sale of carbon credits acquired on the basis of EITE status. This effect and its implications for New Zealand's economic transition to a low-emissions economy should be examined by the Productivity Commission.

Climate change policy should lead to a market-driven decrease in the relative price of low embodied-GHG building products and a higher market price for energy intensive building materials. The result should be an increase in the 'carbon storage' potential of New Zealand's building stock. The allocation of the "Harvested Wood Products" carbon value to the wood processing sector may be one means for addressing the environmentally perverse consequences of EITE allocations based on historic investment patterns and fossil fuel prices that do not reflect their environmental cost.

Two Baskets Approach

NZIF is opposed to the use of a "two baskets" approach as symptomatic of the selective and arguably politically expedient approach to climate change policy in New Zealand to date. We consider this proposal akin to the poor policy analysis in past decades whereby the GHG cost of agriculture to the economy has been imposed on taxpayers rather than emitters.

Our understanding is that the CO2e calculation provided for all the target GHG's effectively standardises them. This includes a weighting being given for the differential life of each gas in the atmosphere. If it doesn't already, recalculation of the warming potential of each gas into a standardised CO2e ranking should enable the country to identify and target the most economically optimal reductions in priority order. There is no justification and likely environmentally perverse outcomes from a "two baskets" approach where that amounts to continuation of the subsidy enjoyed by agriculture. We therefore suggest the Productivity Commission oppose the concept of the "two baskets" treatment of GHG emissions on the basis that it:

- is inappropriate for Government departments to presume optimal economic investment and market demand.
- imposes the climate and other environmental costs of the agricultural sector onto taxpayers, distorts patterns of investment and imposes a higher-than-optimal cost of New Zealand's proposed reductions onto other sectors, measured as a cost to the economy as a whole.
- will perpetuate the lack of incentive (at even the 90% rebated EITE level) on agriculture to adopt emissions reductions, even where Government-funded research identifies such opportunities.
- reduces the incentive on agriculture to adopt emissions-reducing behaviours thereby making other Government expenditure into agricultural emissions reduction ineffective.

Question 1: How can the Commission add the most value in this inquiry?
Clear articulation of the objectives of New Zealand climate policy and rigorous analysis of whatever solutions are recommended. The Productivity Commission should set out the full cost of existing climate-related policy and whether GHG reductions are mutually exclusive of New Zealand's other social and economic goals, based on a realistic assessment of current and future technology.

Question 2: Chapter 3 of this issues paper mostly looks at ways to reduce emissions directly at their source. What other approaches would help identify opportunities to effectively reduce emissions?

Amend the EITE to remove the *domestic* subsidy it offers high embodied emissions building materials, relative to locally sourced wood product. The objective should be a comparative price between wood and other materials that reflects the carbon-storing benefits of the former and the GHG-emissions of the latter. Additionally, or alternatively, a 'wood-first' bias could be mandated reflecting the need to give greater emphasis to such products in the emissions-constrained economy of the future. Allocation of the fiscal benefit of HWP carbon to the use of wood in construction (rather than forest growing) should be explored.

Question 3: To what extent is it technically and economically feasible to reliably measure biological emissions at a farm level?

The measurement of such gasses at farm level is irrelevant. New Zealand has a precisely defined obligation associated with such emissions which needs to be translated via regulation to an incentive to reduce emissions at the farm level. If the cost (a proxy for difficulty) makes on-farm measurement prohibitive then imposing the obligation at some other level, be that on input (fertiliser, imported feed and fuel) or output (milk, meat and fibre) processing should be considered.

Question 4: What are the main opportunities and barriers to reducing emissions in agriculture?

See the detailed comments above with respect to afforestation, deforestation and land use.

The assumption that land use choices reflect the fully internalised costs of production and associated emissions needs to be examined. The differential regulation of land uses based on a regulatory presumption in favour of agriculture or that forestry is a "sunset sector" should be examined. NZIF contend that investors have reflected the unconscious and conscious bias against forestry with the consequence that afforestation rates since before the 2008 Climate Change Response Act are to all intent and purposes zero. The lack of afforestation has foreclosed on the opportunity for investment in wood processing and the displacement of climate – damaging goods and services with climate – neutral forest products.

Reducing the subsidies available to agriculture in the form of grand parented water pollution rights under RMA, Government support for irrigation, "Afforestation Grant Scheme" recompense for land uses causing erosion and the imposition of the costs of agricultural emissions onto the rest of the economy represent opportunities to reduce GHG emissions in both direct and net terms.

Question 5: What are the issues for government to consider in encouraging alternative low-emissions land uses?

As for Question 4.

Question 6: What are the main barriers to sequestering carbon in forests in New Zealand?

As for Question 4.

Question 7: What policies, including adjustments to the New Zealand Emissions Trading Scheme, will encourage more sequestering of carbon in forests?

As for Question 4.

Question 11: What are the main opportunities and barriers to reducing emissions from the use of fossil fuels to generate energy in manufacturing?

Our assumption is this question refers to emissions in New Zealand. The Productivity Commission could usefully explore the economic impact of differential regulation against the use of established reserves of fossil fuel. Logic suggests that reduced demand for oil, coal and gas will reduce the capital value of known reserves but not the use, at least until the cost of production and delivery is lower than non-fossil alternatives. At an extreme, the imposition of a high cost on New Zealand coal use will result in it being exported and an increase in imports of products with high embodied GHG cost.

As noted in relation to Question 2, EITE protection aimed at exporting the displacement of energy intensive activity offshore has had the perverse effect of reducing the advantage low embodied GHG products such as wood should have enjoyed domestically. The ETS has acted (unintentionally?) to penalise those domestic processors including wood processors who traditionally utilise biofuel and were therefore ineligible for EITE protection.

Question 12: What changes will be required to New Zealand's regulatory, institutional and infrastructural arrangements for the electricity market, to facilitate greater reliance on renewable sources of energy across the economy?

Adopt a standard electricity transmission price nationwide in recognition of the country's past and continued investment in that infrastructure. Require Transpower to operate "at cost" in the national interest and remove the consequential subsidy available to large electricity-dependent industry (including aluminium and irrigated agriculture) where reducing that demand reflects the least-cost investment in alternative generation.

Question 14: Apart from the regulation and operation of the electricity market, what are the main opportunities and barriers to reducing emissions in electricity generation?

Organic waste including but not limited to wood waste in landfill is a biofuel with the added benefit that the costs of collection and management are already incurred for other reasons.

Question 16: What policies and initiatives would best promote the design and use of buildings that produce low greenhouse gas emissions?

New Zealand's Building Act provides for New Zealand building codes reflective of environmental good practice. A review of the New Zealand Building Code to ensure the correct balance between energy conservation and the other mandatory requirements expected of that regulation should be considered. In particular, a review of the building code to give specific consideration to insulation levels applied in new and renovated buildings.

Consideration of the benefits of wood and wood-related products in any review of the building code is similarly encouraged. Wood is a naturally insulating material capable of being dimensioned to provide the depth needed for instillation of additional insulating materials. It is a low-embodied energy building material and a store of GHG for the life of the building. Wood waste in landfill is either a continuation of its carbon storage or a source of bio-based landfill gas.

Question 17: What are the main opportunities and barriers to reducing emissions in waste?

Answer as for Question 14. Requirements for the control of emissions from municipal landfill have been in place for decades and are a direct obligation under the RMA. Such emissions are now extensively utilised as an energy source, effectively reducing landfills climate impact to zero where the waste is organic in origin. This is particularly the case where landfill gas from organic sources is used to displace fossil based electricity generation.

GHG emissions from waste are currently subject to an impost under prevailing ETS requirements in addition to the full cost of landfill (including gas management) being recovered from the waste generator via the commercial gate charge and subject to an additional solid waste levy under separate legislation. Landfill users (all New Zealanders) appear to be paying 3X for the GHG costs from that sector.

Question 19: What type of direct regulation would best help New Zealand transition to a low-emissions economy?

A tax on the carbon content of fossil fuel would directly reflect the environmental externality of that choice of fuel. It could be collected and administered at low or no additional cost by Government. The economic impost of such a tax could be altered by reducing other taxes in the economy such that the full price effect would fall on products and services in direct proportion to their climate-related environmental impact.

Question 20: Acknowledging the current review, what changes to the New Zealand Emissions Trading Scheme are needed if it is to play an important part of New Zealand's transition to a low-emissions future?

Comments made above in relation to agriculture and forestry apply. The ETS should be progressively replaced by a tax on the carbon content of fossil fuel.

Question 21: What type of market-based instruments would best help New Zealand transition to a low-emissions economy?

The answer to question 19 applies.

Question 22: What type of support for innovation and technology would best help New Zealand transition to a low-emissions economy?

The answer to question 19 applies.

Question 24: What type of alternative approaches (such as voluntary agreements or support for green infrastructure) would best help New Zealand transition to a low-emissions economy?

Voluntary agreements serve no purpose. In a market economy those measures able to be adopted voluntarily will be those where the 'return on investment' justifies the change regardless.

The administrative cost of formalising an 'agreement' with Government is a significant cost that will do little or nothing to encourage the investment unless it is more than fully compensated for by way of a subsidy. Previous efforts to encourage "voluntary agreements" were proposed and implemented on the basis that the reductions achieved would be compensated for in the event of a shift to direct regulation. In the event, that did not happen which was to the direct disadvantage of those who had entered into such agreements in good faith.

Question 26 What are the main uncertainties affecting New Zealand businesses and households in considering investments relevant to a low-emissions future? What policies and institutions would provide greater confidence for investors?

The complexity, cost and uncertainty of climate change policy makes commercial investment based on climate change problematic. Simplification of Government's approach by way of a carbon tax, preferably with bipartisan political support would alter the economics of climate-benefiting investment but may require a change in the projected depreciation rate of some existing investment.

Question 28: Is New Zealand's current statutory framework to deal with climate change adequate? What other types of legislation might be needed to effectively transition towards a low-emissions economy?

No. Refer question 19

Question 29: Does NZ need an independent body to oversee New Zealand's domestic and international climate change commitments?

Yes, notwithstanding the apparent disregard of the Parliamentary Commissioner for the Environment's recommendations with respect to climate change which suggests an independent agency may struggle for traction in the absence of a bipartisan approach to this area of policy.

Question 30: How can adaptability best be incorporated into the system supporting NZ's low-emissions transition?

Adoption of a comprehensive forest policy could seek to invigorate that sector. The result would be economic and environmental resilience to the extent that forests store carbon as they grow, protect watersheds from climatic extreme, displace GHG-intensive alternative uses of the same land and provide a GHG-benefiting wood resource for biofuel, building and other wood-based consumption.

Question 32: What should be the mix and relative importance of different policy approaches?

Direct pricing of the environmental externality of GHG emissions by way of a carbon tax on fossil fuel should be a priority.

Question 33: What are the main co-benefits of policies to support a low emissions transition in New Zealand?

Refer to Question 30.

Question 34: Who are the most important players in driving forward New Zealand's transition to a low-emissions economy?

Government is the part of society with the responsibility and ability to ensure the internalisation of the environmental externalities of goods and services.

Question 36: What are the essential components of an effective emissions-mitigation strategy for NZ that will also be economically and politically sustainable?

As for question 30, adoption of a comprehensive forest policy and leading to afforestation is justified on many grounds so will logically enjoy broader political and community support than any climate-only initiative.

Question 37: Should NZ adopt the two baskets approach?

No. Refer to comments in the main body of the submission above.

Question 38: How should the issue of emissions leakage influence New Zealand's strategy in transitioning to a low emissions economy?

Retention of EITE protection and offering such protection to agriculture if and when it is introduced to the scheme or some other form of border protection such that those making costly investments in emissions reduction are not disadvantaged in domestic or export markets.

Question 40: What does your long-term vision for a low emissions economy look like?

As for question 30, adoption of a comprehensive forest policy leading to afforestation is justified on many grounds and must eventually form part of a climate-constrained economy and a climate-challenged environment.

Yours sincerely,

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