Supplementary submission

By

THE NEW ZEALAND INITIATIVE

to the Environment Committee

on

The Emission Reduction Plan

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1 INTRODUCTION AND CONTEXT

1.1 This supplementary submission in response to the Emissions Reduction Plan is made by The New Zealand Initiative (the **Initiative**), a Wellington-based think tank supported primarily by major New Zealand businesses. It should be read in conjunction with our initial submission of 27 June 2022.

1.2 Our initial submission contained an inadvertent inaccuracy. The Energy Efficiency & Conservation Authority, EECA, led us to believe that no evaluation had been undertaken of the additionality of GIDI-funded projects.

1.3 We consequently wrote: "A government's headline decarbonisation initiative, the GIDI Fund, has yet to be evaluated for cost effectiveness. In preparing this submission, I requested any evaluation or draft evaluation of GIDI-funded projects' additionality: effectively, whether the funds simply paid companies to do things that they were already going to be doing because of rising carbon prices. EECA informed me that, to the best of their knowledge, no such evaluation has yet been undertaken. It may be advisable to make those assessments before setting an Emission Reduction Plan that is based on programmes like GIDI."

1.4 We had repeatedly requested, via OIA, any advice received by EECA as to the additionality of its GIDI-funded projects. EECA repeatedly told us that no advice existed.

1.4.1 On 30 May, Chief Executive Andrew Caseley told us "EECA has determined that there are no pieces of advice within the scope of your request, as we have not commissioned or received any external advice on the additionality of projects funded through the GIDI Fund."

1.4.2 On 23 June, we asked EECA Acting Manager of Policy and Engagement, Daniel Barber, to confirm my understanding of their position. I said, "I am taking your response as indicating that, to the best of your knowledge, neither EECA, nor any third party (eg consultants), have conducted any desktop analysis of GIDI-funded projects, including their estimated impacts, additionality, etc, since the panel process that decided on successful applicants." Barber replied, "Yes it is correct that EECA has not commissioned or revisited any analysis of the estimated impacts of approved GIDI projects at this stage. I have consulted with the relevant EECA staff on preparing these responses."

1.5 Our submission was based on this advice, which we had taken to be truthful.

1.6 After the submission deadline, the response to a Written Parliamentary Question suggested that EECA had received advice about the additionality of GIDI projects. We requested copies of any reports, advice, or presentations provided by Simon Coates / Concept Consulting relating to GIDI.

1.7 On 11 August, EECA Chief Executive Andrew Caseley provided a presentation by Concept Consulting, dated 24 March 2022, titled "Evaluation of GIDI 1.0". It includes an extensive section titled "Additionality". The OIA release also included correspondence from Concept Consulting to Chief Executive Caseley, among others at EECA, throughout the period during which I had been making OIA requests for advice on additionality, which included discussion of additionality.

1.8 We asked Chief Executive Caseley whether EECA had been lying to me, deliberately and repeatedly, with intention of thwarting my ability to provide Select Committee with my best advice relating to the Emissions Reduction Plan. Chief Executive Caseley categorically denied that he and his Agency had been lying to me. He suggested that the advice from

Coates and Concept Consulting "was given and received as the author's opinion and was not intended to inform EECA's current thinking on additionality."

1.9 We had asked for any advice received evaluating GIDI additionality. The consultant's presentation, titled "Evaluation of GIDI 1.0", with an extensive section on additionality, and that consultant's emails to Chief Executive Caseley about additionality, were out of scope of my earlier requests because, according to EECA's Chief Executive, EECA had innocently considered it to be the consultant's opinion.

1.10 This supplementary submission addresses work by Concept Consulting and additionality of GIDI-funded projects.

2 ADDITIONALITY AND THE COVERED SECTOR

2.1 New Zealand's net greenhouse gas emissions, within the sector covered by the Emissions Trading Scheme, are determined by the number of carbon credits auctioned and allocated by the government. Some previously issued credits have been stockpiled for future use; government will issue more credits between now and 2050. From 2050, the government will cease issuing ETS credits at Net Zero.

2.2 The total number of outstanding credits, added to the number of credits that will be issued by the government between now and 2050, forms the cap on net emissions in the covered sector between now and 2050. Net emissions to 2050 may be lower than that cap if credits are held for use after 2050. Legal net emissions within the covered sector cannot exceed the number of outstanding credits plus the number of credits issued by the government.

2.3 It is difficult for regulations, additional taxes, or subsidies, to reduce net emissions within the covered sector. A regulation banning all coal boilers, for example, would mean owners of those plants would bid for fewer ETS credits at the next auction. The price of ETS credits would be lower and someone else would purchase the credits instead.

2.4 It is possible for the government to coordinate a reduction in the number of issued credits to match the quantum of emissions targeted by non-ETS measures. If it does so, it is the reduction in the number of issued credits that reduces net emissions, not the regulations, additional taxes, or subsidies. The government could reduce the number of credits issued, without the additional measures, and achieve the same quantum of reductions.

2.5 It is then difficult for measures targeting the covered sector to provide *additionality*: reductions in net emissions beyond those which would have occurred in the absence of those measures. Measures targeting the covered sector can change where net emission reductions happen, and the cost of net emission reductions, but they are unlikely to affect the quantum of net emissions.

2.6 The most plausible mechanism by which measures targeting the covered sector cause net emission reductions is either by changing the cost of net emissions reductions, or changing who bears the burden of net emission reductions. If public backlash would constrain government against moves that would result in increases in the ETS price, then measures targeting the covered sector that affect who bears the cost of emission reduction, or the actual cost of reducing emissions, could allow government to reduce the cap more quickly than would otherwise be politically feasible.

2.7 There is no evidence to date that the carbon prices have proved any constraint against reductions in the ETS cap, but it could happen over the next decade. If government views this as an important constraint, it should in first instance redistribute collected ETS revenues back to households as a carbon dividend. Doing so would maintain households' and businesses' incentives to reduce emissions, because emissions remain costly, but

adverse equity implications of high carbon prices would be averted. Canada's carbon dividend results in some 80% of households receiving more in dividend transfers than they pay in carbon taxes.

2.8 Measures affecting the covered sector, but targeting separate, real, and substantial market failures that make it excessively costly to abate emissions, can be eminently warranted if cost-effective. Such measures make it less costly overall to reduce net emissions and are consequently justifiable on two grounds. Reducing the cost of reducing net emissions means households and businesses have more resources available for achieving other purposes, and government can reduce ETS cap more quickly than it otherwise might.

2.9 Budget 2022 allocated an additional $650 million to the Government Investment in Decarbonising Industry fund, administered by EECA, over four years. Minister Woods described the original $69 million in funding as having been "a huge success having helped fund 53 major industrial decarbonisation projects… estimated to save 7.46 million tonnes of CO2, equivalent to taking 134,800 cars off the road."

2.10 Evaluation of the additionality of GIDI projects matters. Does GIDI funding result in investment in emission reduction projects that would not otherwise have happened, remembering that firms already have strong incentive to invest in emission reductions because of rising carbon prices? Do the projects bring about net emission reductions that would not otherwise have been possible? If so, how? Are the projects a cost-effective way of enabling the ETS cap to reduce more quickly? If the projects are not cost-effective, do they shift the burden of reducing emissions to sectors better able to bear those costs, and consequently enable the ETS cap to reduce more quickly?

2.11 These questions are why we had sought information from EECA on the additionality of GIDI projects.

3 ASSESSING GIDI ADDITIONALITY

3.1 Evaluation of the documents released by EECA suggest that GIDI projects do not reduce national net emissions. EECA's conception of additionality relates to whether a project would have been undertaken *as quickly* in the absence of funding, not whether net emission reductions then obtain.

3.2 Recall that cost-effective additionality of GIDI subsidies requires that emissions are mitigated relative to the counterfactual, that those emissions are mitigated at lower cost per tonne than going ETS prices, and that government is able to reduce the number of carbon credits issued because of the measure. If the cost of abatement is lower than the going ETS price, then companies already have strong incentive to pursue mitigation without subsidy; if the cost of abatement is higher than the going ETS price, government could do better by buying back and retiring outstanding ETS credits.

3.3 Comparison to ETS prices introduces something of a knife-edge. If a company's investment, proposed for subsidy, mitigates emissions at lower cost than current and expected ETS prices, why is the company not already doing it? If it mitigates emissions at higher cost than the current and expected ETS price, why is the government subsidising something that is not cost-effective? The subsidy has to help the company or industry overcome some other market failure to be cost-effective. And it has to consequently allow the government to reduce the number of issued ETS credits.

EVALUATION OF GIDI 1.0: DISCUSSION WITH EECA 24 MARCH 2022

3.4 Concept Consulting's presentation was developed to help improve the application process for future rounds of GIDI funding. The additionality of funded projects is first assessed at point of funding application; if a project is not considered likely to result in investments

that otherwise would not have taken place as quickly, the project will be less likely to be funded. Concept evaluated five applications for GIDI funding.

3.5 The presentation noted deficiencies in GIDI 1.0 that could and should be improved in future rounds, including insistence that every application use standard assumptions about future changes in fuel costs, in inflation, and in ETS prices. Applications used 2030 ETS prices that varied from $40/tonne to $140/tonne, and 2040 prices that varied from $40/tonne to $180/tonne. Gas prices in 2040 ranged from just over $10/GJ to over $20/GJ.

3.6 It is somewhat surprising that GIDI 1.0 allowed applicants to set their own assumptions on ETS prices, fuel prices, and inflation. Treasury's guidelines for cost-benefit assessment and its CBAx tool, for example, are set to provide a consistent approach. Projects should be assessed using the same ruler. If one project is funded, and another is not, because the projects made different assumptions about ETS prices and future inflation rates, the right decision will have been made only by chance. Worse, if applicants know that they can manipulate the process by setting assumptions painting a rosier picture of their project's suitability for funding, it would be foolish to expect that they would not do so.

3.7 The section on additionality says, "It appears that four of the five projects evaluated may not be additional." Concept considered that, on the applicants' assumptions, every proposed project would have paid itself off in less than four years, without a subsidy. And three of the four projects would pay themselves off within four years even if carbon were not priced. In other words, most of the projects Concept evaluated could and should have been undertaken by the companies on their own, even if the ETS price were zero.

3.8 Concept noted that, in some cases, small projects with high internal rates of return may not be undertaken without government support. They provided examples where resource constraints or financing constraints mean the project with an attractive-seeming internal rate of return may not make it to the top of a company's priority list.

3.8.1 As simple example (provided by us rather than by Concept, by way of illustration), a $10,000 project with a 200% internal rate of return might not be worthwhile if it sucks up a lot of internal administrative resources that are not appropriately costed in determining the rate of return. The real internal rate of return could be strongly negative if undertaking the $10,000 project meant diverting the attention of a project manager responsible for a $10,000,000 project with a 10% internal rate of return.

3.9 In other words, if a project seems to make sense but is sufficiently small that a company does not find it to be worth prioritising, government support for the project may be necessary. But if that is the case, it seems quite unlikely that the project can do much to affect national net emissions.

3.10 In other cases, debt constraints were considered as potential hindrance against taking up projects with a promising internal rate of return. If covenants on existing debt set hurdles on taking on further debt, then some projects might not be pursued.

3.11 But other alternatives might be available in such cases if the potential returns were substantial. A company might lease equipment rather than purchase it. Or it might seek an equity contribution from shareholders, if those shareholders could be convinced that the rate of return were high enough to warrant the investment. In general, should it be the role of government to provide grants to companies that have found themselves credit-constrained? If it is, might we expect more companies to find themselves to be credit-constrained?

3.12 In both cases, EECA subsidy might encourage a company to change its priority ordering of projects, perhaps bringing forward a low carbon project while pushing back another

project. There could be some reduction in that company's emissions over the period in which the investment is in place thanks to GIDI funding before the company would have made the investment on its own. In that case, any benefits of the funding should only be assessed over that short interval of time, rather than over the lifetime of the equipment. And any wider cost-benefit assessment would need to consider the costs of deferring the projects that were pushed back in the priority ordering.

3.13 Concept notes that GIDI 1.0 evaluation placed 20% weighting on economic stimulus driving domestic employment and 10% weighting on speed of spending. Neither makes any sense in assessing projects for carbon reduction but may be important for make-work projects. Make-work projects might be ill-advised when Reserve Bank views employment rates as unsustainably high.

3.14 Concept notes that GIDI 1.0 evaluation scoring placed 10% weighting on "level of innovation and co-benefits". Concept noted that demonstration benefits can be valuable, but "should potentially come with a requirement that information is shared with the wider industry."

3.15 EECA Chief Executive Andrew Caseley noted, in his defence of his agency's view that Concept's advice constituted author opinion, that assessing additionality is complex and requires information on a range of factors that might not have been available to Concept, including companies' "internal decision-making processes, their risk appetite, financial measures such as cost of capital, sector norms in decarbonisation decision-making etc."

3.16 Concept may not have had information on each of these in assessing the five applications, but its presentation and correspondence clearly suggested that it was thinking about these issues. Sector norms in decarbonisation would be a rather plausible reason for considering the benefits of demonstration projects. Concept had to point out to EECA that the value of demonstration projects is higher if the funded business has to share information with others that might benefit from it.

4 OVERALL ASSESSMENT

4.1 Additionality in reducing national net emissions requires that funded projects in the covered sector enable the government to tighten the ETS cap more quickly than it otherwise would have.

4.2 Materials released by EECA suggest a much looser standard has been set.

4.3 In GIDI 1.0, evaluation was far from rigorous, with different projects making different assumptions about carbon prices and fuel prices over the next two decades. Make-work priorities constituted some 30% of the assessment criteria.

4.4 Projects are considered additional if they bring forward investment that would have happened anyway, at the cost of other company projects that may be pushed back. A greenhouse might flip to a lower-emitting heating plant a few years before it otherwise would have replaced a boiler. It seems impossible that bringing forward the purchase of a piece of equipment by a small number of years has any substantial effect on reaching Net Zero by 2050. It would reduce that company's demand for ETS credits over that interval.

4.5 If the cap on net emissions were tightened more quickly, without the GIDI-funded projects, decarbonisation initiatives would take on a higher priority automatically as carbon prices increased.

4.6 It is possible that funding demonstration projects could reduce the costs for others in the sector to follow the pathway. Learning-by-doing is real. Building up experience and expertise in replacing boilers and the like can reduce costs for later-comers. But is this

something better encouraged by project-by-project funding through GIDI, seemingly without any requirement that that learning is shared with others in comparable circumstance? Or is it better developed by industrial consultancy firms specialising in low-carbon transitions, learning from each project that they facilitate, and building up expertise that can reduce transition costs for companies that they advise later on? There will always be a bleeding-edge of technology adoption, with first-movers bearing costs not incurred by later comers; they do not generally warrant national subsidy programmes costing hundreds of millions of dollars.

4.7 EECA's Chief Executive Andrew Caseley points to limitations in Concept Consulting's analysis. But even if Concept did not have access to all of the details that might have facilitated more thorough ex post project evaluation, it had access to the application materials provided by those companies that would have formed the basis for EECA assessments. Its discussion of additionality, both in its presentation to EECA and in its subsequent correspondence with EECA, point to substantial weaknesses in EECA's views on additionality.

4.8 Parliament should seriously reconsider subsidy programmes like GIDI. Returning ETS revenues to households through a carbon dividend may do more good than paying companies to undertake projects that they would have undertaken all on their own, if government just waited a couple of years.