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**To: Ministry for the Environment**

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## **Submission in response to: Proposed changes to New Zealand Emissions Trading Scheme regulations 2024**

**Engineers for Social Responsibility Inc.** (ESR) is an independent group of engineers who consider that being knowledgeable in the field of technology means that they also have a special obligation to the public at large in matters that relate to engineering, or that can be addressed using engineering approaches. Given the urgency of the issue, for some time now the organization has been particularly focused on how to respond to the climate crisis by reducing emissions and concentrations of greenhouse gases in the atmosphere.

The key authors of this report are members of ESR with strong experience and qualifications in engineering, and a broad knowledge in relation to global heating, what is causing it and how it can be addressed.

In this submission the primary points we cover are steps that can be taken to improve the way the ETS operates, so that it becomes a lot more effective and capable of meeting the urgent need to reduce our emissions. The possibility of replacing the current ETS with a simple carbon tax is also covered.

Two other key points we cover are first the need for greater clarity in our net emissions measurements, and second the strong case for introducing a citizen's dividend, funded from the revenue the Government receives from carbon charges, to compensate people for the rising costs of goods and services that will result from carbon charge increases.

Because we consider that the issues which need to be addressed are much broader than are covered in the questions presented in the Ministry for the Environment consultation documents, we have not attempted to specifically answer these questions directly, but rather have supplied information that we hope will allow appropriate steps to be taken to reduce our emissions much more strongly.

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### **Urgent action needed to reduce our emissions**

Global warming, caused by human-generated emissions into the atmosphere, is a critically serious problem that could lead to significant regions of the earth becoming uninhabitable or unable to supply food, sea level rise that could submerge large areas of land, including towns and cities, and the extinction of many species, both on land and in fresh water and oceans.

Currently the Emissions Trading Scheme (ETS), enacted in 2008, is the primary tool we have put in place in New Zealand to reduce our emissions, but so far we have not seen any significant emissions reductions. The 2022 figures show a slight decrease compared to a few previous years, but the available figures for 2023 show emissions increasing.

### **More rapid reductions needed to meet key reduction targets**

The Intergovernmental Panel on Climate Change (IPCC) in its April 2022 report says that to achieve the Paris Agreement goal of limiting global warming to 1.5°C with no or limited overshoot, by 2030 we need a reduction of 48% below 2019 levels for net CO<sub>2</sub> and 43% for net overall GHG emissions. The IPCC further suggests even stronger action - that we aim to at least halve our emissions over this period.

We are not currently on track to meet any of these reductions.

Our Nationally Determined Contribution (NDC) target, made under the 2015 Paris Agreement and updated in 2021 (NDC1), is for a 50% reduction of our net emission below our 2005 gross level by 2030. This inconsistent comparison of gross with net emissions was very likely made because, in our case, the net emissions are determined using the 'target accounting' approach, not the standard measure.

We are also not currently on track to meet the NDC target by reducing our own emissions. If we don't, then under the agreement we would be required to use offshore carbon mitigation – purchase of carbon credits from other countries to make up our short-fall. Based on our achievements so far in reducing our emissions, this could cost billions of dollars.

Apparently, we could opt out of the current agreement and hence eliminate the need to make such payments, in which case there would be no financial mitigation driving force for us to meet the agreement by reducing our own emissions. However, doing so would likely have serious repercussions for New Zealand's reputation and could affect access to important markets for our products.

### **Clarity needed in net emissions measurements**

We have recently moved to using the 'target accounting' approach for expressing our net emissions, which differs from the standard net measurement used by international bodies and by most other countries.

The determination of this 'target accounting' measure, and how it relates back to the standard net measure, does not seem to be clearly explained. However, based on information supplied by Geoff Bertram, co-author of an earlier book concerning the ETS, the target accounting figures for our net emissions are currently far higher than the standard figures for our net emissions.

According to the Ministry for the Environment, "the NDC1 is accompanied by information to facilitate clarity, transparency, and understanding that is requested from all countries under the Paris Agreement". Given that 'target accounting' is now being used by New Zealand to determine net emissions in the NDC, and the measure is not clearly explained, this does not actually seem to be correct.

**We need to revert to using the standard net measurement system, or else give the standard net result as well as the target accounting result, so that it is clear to everyone how our emissions reductions are comparing with internationally set targets.**

### **More stable and clear current and future carbon charges needed**

Emissions charges are given here as NZ\$ per tonne of CO<sub>2</sub>, or per tonne of CO<sub>2</sub>-equivalent when addressing emissions of all GHGs. The term units refers to emission units that can be traded under the NZ Emissions Trading Register, with one surrendered for each tonne of CO<sub>2</sub>-equivalent produced.

Under our ETS, units are auctioned off by the government, or by other entities holding units. The way this is currently arranged, the unit price moves around considerably. For example, it hit a high of \$88 on 16 Nov 2022, was recently down to \$45 on 25 May 2024, but is currently sitting at around \$56 (7 June 2024). This means that entities are not getting any clear signals of where carbon prices are going, which would allow them to plan ahead for emissions reductions.

**Steps need to be promptly taken to move to an ETS system that gives reasonably stable pricing during the current period, and also gives clear signals as to what pricing can be expected in coming periods.**

### **Number of ETS emissions units available needs to be reduced**

According to the Climate Change Commission, there are too many units available in the ETS to allow it to work effectively. This is one reason why auction prices for units frequently fall below the price levels planned by the Government to control emissions, and as a result Government revenue from unit sales is reduced. It is one of the key problems with the current ETS.

**We strongly agree with the CCC's recent advice that it is critical that the Government reduce the ETS unit volume limits as soon as possible and bring the settings back into alignment with the emissions reduction goals.**

**We further recommend that the Government buy back these units at the price originally paid for them, or if that is not workable, then at the unit price in the period before the buy-back starts.**

### **A simple carbon tax needs to be seriously considered**

A simple carbon tax, as was introduced in Sweden in 1991 to cover part of its emissions, would give much clearer price signals than our current ETS, and would also be much simpler and cheaper to operate. The Swedish tax now sits at the equivalent of around NZ\$203. Over the 1990 to 2021 period, Sweden's gross emissions fell by around 33%, while ours went in the wrong direction, increasing by around 19%.

**We need to seriously consider moving to a simple carbon tax system, rather than the complexities and lack of pricing clarity with our current ETS.**

### **Carbon pricing needs to start increasing to significantly higher levels**

As noted earlier, our price per unit under the ETS has recently been around \$56, and went as high as \$88 in November 2022.

Unit prices in the EU ETS have been as high as €100 (approx. NZ175) in early 2023, and are currently around €74 (approx. NZ\$130). The EU is facing the same IPCC reduction targets as we are, but its carbon charges are currently more than double what ours are.

There have been lots of figures published for the cost of the damage that emissions are causing, but one we can use as a strong guideline is the US Environmental Protection Agency figure of US\$190 / ton CO<sub>2</sub>, provided in December 2023. After converting US tons to metric tonnes and US\$ to NZ\$, this gives a damage cost of NZ\$336 / tonne CO<sub>2</sub>.

Our emissions charges are currently less than half of those in the EU and much less than the Swedish carbon tax. They are also only about 17% of the US EPA damage cost, which means that we are effectively providing emitters with major subsidies in relation to the damage their emissions are causing.

**To meet our emissions targets, and reduce the damage our emissions are causing, we need to promptly start raising our emissions charges to much higher levels, with charge rates for coming periods also made reasonably clear.**

### **Stronger steps needed to reduce the provision of free emissions units**

Some organisations that are involved in what are categorised as 'emissions intensive' or 'trade-exposed' (EITE) activities, receive a free allocation of emissions units. Our understanding is that these free units are just effectively new units that the Government creates, and hence the total number of units available is increased.

The Sustainability Council and others have argued that the allocation of free units to emitters is highly costly because the Government receives no revenue from them. The allocation of these free units is also removing the financial incentive a carbon charge would provide for the receiving organisations to reduce their emissions.

**We strongly recommend that stronger steps be taken to reduce the number of units freely allocated. An alternative would be to start charging for some or all of the**

**emissions from an entity currently receiving a free allocation, and instead provide Government financial support to the entity so that it can take steps to reduce its emissions.**

**In order to stop the increase in total units available that the provision of free units currently causes, we further recommend that the free units become units of a different category, which are just returned back by the receiving organisations as their emissions are made, and are not otherwise exchangeable or saleable on the carbon market.**

### **Stronger steps needed to reduce agricultural emissions**

Agricultural activities are currently responsible for around 48% of our total emissions. There are ways in which these emissions can be reduced, for example by moving to regenerative farming practices. Some government support is now being offered to farmers to reduce their emissions, but taking positive steps to reduce these emissions is still at an early stage.

New Zealand's first emissions reduction plan (May 2022) includes a set of key actions to support farmers and growers to lower agricultural emissions, while continuing to produce high-value, high-quality food and fibres.

There have been plans to introduce charges for livestock-related methane production, but in August 2023 these were pushed back by the Labour government to 2025, while in June 2023, while Labour was still in power, National said it would keep agriculture out of the ETS but implement a fair and sustainable pricing system for on-farm agricultural emissions by 2030 at the latest.

On 11 June 2024 the National/ Act/ NZ First Coalition Government announced that it plans to amend the Climate Change Response Act 2002 "to ensure agriculture does not enter the NZ ETS". However, it says it is planning to take other steps to reduce on-farm emissions.

**We need stronger and more rapid action to control our agricultural emissions, including a further review over whether including some of these emissions under the ETS would be a workable step forward.**

### **Action needed to protect public from rising costs of goods and services**

Higher carbon charges will push up the price of goods and services. To make this workable, US climate scientist, James Hansen, and others, have recommended introducing a citizen's dividend, funded by the revenue the government receives from carbon charges. All citizens and legal residents receive a regular dividend, with smaller payments made in relation to children.

The citizen's dividend or bonus approach has already been introduced in Switzerland, Canada and Austria, and was earlier proposed in New Zealand by the Green Party, and more recently by the Act Party.

**We strongly recommend that a citizen's dividend be promptly introduced to help compensate the public for the rising costs of goods and services that will result from**

**higher carbon charges, with a major part of the carbon charge revenue used in this way. A smaller amount can also be used to assist organisations in reducing their emissions.**

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On behalf of the National Committee of Engineers for Social Responsibility Inc.

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