

Your submission to Zero Carbon Bill

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Clause

1. What process should the Government use to set a new emissions reduction target in legislation?

Notes

SUBMISSION ON THE ZERO-CARBON BILL. I welcome this opportunity to make a submission as I am confident that the probability of human induced global warming and its consequences are so great that a precautionary approach must be taken with vigor. If human rights are to be considered then rationing must be the end goal to avoid a situation where the rich can avoid the consequences that we all must face. The greatest polluters must take the biggest change. The creation of a Bill is supported. In approaching the submission form I could not help resisting the tick box approach. I do not have a feel for the degree of effect of goals, stabilisation, or targets. The most important action is to actually reduce the effect of the heat inducing gasses by reductions rather than legislating a magic figure. The target/goal must be secondary. Actual reduction of the most polluting gases must be the most energetically reduced. The reductions must take place now. I felt constrained by predetermined structure of the submission form. I worked through a review of the form with friends trying to respond to the proscribed feedback. I am diverting from the form. The problem rises from the excessive growth in population. I know that orthodox economists promote the fantasy of growth being a goal as a matter of ideology. This basic fact must be recognised. The economists target of GDP has no good meaning for the welfare of people. Growth means that the infrastructure that is needed always lags behind and much endless effort is required to catch up. A human and satisfactory life can be had in a no-growth stabilised equilibrium status. In such a society at equilibrium and with a balanced infrastructure, there will be no need to always falling behind. People will find that dying people will leave houses at the rate that will supply people wanting to set up a family home. New houses will not be needed. There will be no need to build new roads, water supply dams, filtration plants, stadiums, power plants, transmission lines, factories, hospitals, conference centres, warehouses, office blocks, hangars, airports, ports, or clear new land for cultivation. The requirements of a steady state population will be met by a constant infrastructure balanced to the needs of steady population. What will remain important is to keep up with maintenance of the infrastructure which often gets forgotten in the need to cope with the growth. We could all then have a good work-life balance without having to work too hard in always having to catch up. The only losers in this stable situation will be banks which depend on the never ending need to advance more capital and create more debt in the need to catch up with infrastructure. It is the constant trying to catch up with infrastructure that requires the activities that produce most of the excessive harmful gases. I assure you that I and my two daughters are breeding in replacement mode only. My ancestors had too many children for stability. This should be a goal for all parents. Reducing the polluting gas creation must mean that there will be a lot of stranded assets. Tough. The risks businesses once took on have not paid off because they did not take into account the damaging externalities they produced. There will need to significant changes in current activities. Production of cement produces CO₂ effluent. This means a move away from using concrete. The production of aluminium produces CO₂ in about the same weight as the Al. Al production also produces small amounts of very polluting gases. As the 'pots' used in the electrolysis operation become inefficient and are retired, they should not be replaced and a gradual decline in production will occur, scaling down the production of polluting gases. The gain in electricity supply will offset any the need to produce CO₂ in marginal power by coal or gas fuel means. The requirement in the increase in electric transport needs can thus be met. The scaling back of the aluminium smelting is a win-win solution. The development of laminated wood that can be used for large buildings needs accelerating by government application to help with the transition from concrete, steel, and aluminium which contribute to the pollution in an accelerated substitution. The plan for increased tree planting is supported. But the colossal damage in Tolaga Bay by logs and slash coming down in floods and the amounts of it, requires a change in the way that forestry is done. The slash and waste left on the ground will decay and produce CO₂. If the carbon taken up by the trees is to return to the atmosphere as CO₂ we should get some benefit. That material should be used as the source material for a charcoal industry. This can be done by enforcing the removal of the waste to avoid flooding damage and be the input to a pyrolysis plant. Pyrolysis to produce charcoal is a very old industry and needs reviving. The output is a combination of materials that can be distilled into a wide range of chemicals (substituting for petroleum based production) and charcoal. The amount of waste seen at Tolaga Bay indicate that good sized efficient plants are feasible close to forestry operations. Charcoal can be used for pollution free home fires, substituting for coal as a heating agent in milk dehydration plants and other heating applications, as a high quality smelting material substituting for taking coal out of the ground, and as a soil improver that reduces the loss of nutrients. I think this means a return to the days when the state got involved in industry for the public benefit rather than relying on business to do it for the benefit of the wealthy few. In the past the state built the railways, P & T, NZED dams, etc for the public good. In the past we collectively had to get involved in insurance (State Ins), banking (BNZ), airlines, MOW etc when business was failing our needs. We need a direction for the common benefit not for niches that just might be profitable for the rich. Action is more important than making plans. The Climate Change Commission will have a very important role and could do with an Applied Mathematician. The loss of the Applied Maths Division of the old DSIR was a mistake as was the privatisation of the MOW. The State needs a lot of skills that have not been privatised to feed a private profit target rather than public benefit. The State will have to develop its own in-house expertise. I do not dispute the need for a set-point figure to work to. With my training as a chemical engineer I see the need for a Process Control System with a set point objective. The pollution set-point should be effectively a continuously reducing one, certainly not a 5 yr target steadily dropping to our commitments. The science of process control has advanced since I did a course in 1960 on my OE. Drone technology proves that. In process control the discrepancy from the set-point is measured for difference, rate of change and the integral of the difference. These three measurements are used to calculate correction activity in order to get change quickly and not overshoot nor create oscillations. This is highly technical and requires good calculus and understanding of Laplace Transforms, Nyquist criteria etc. Each

polluting industry and business will have to have its own set-point for reducing its polluting gases. It interesting to note that before he was effectively killed by the CIA, Salvador Allende was installing a type of industry control system called the Cybersyn system using computers and the telex network to manage using the skills of the British expert Stafford Beer. We could have learnt from that system if it had not been destroyed. Paul Bieleski, Nelson.