

SUBMISSION FROM 350 Christchurch

to the Productivity Commission

In relation to the Draft Report on Transition Pathways to a Low-Emissions Economy

June 2018

350 Christchurch is part of the worldwide citizens' movement for climate action, 350.org. Our aim is to raise awareness of the climate crisis and ways in which it can and must be tackled. We have over 850 supporters in Canterbury.

We appreciate the opportunity to give feedback on this crucial issue and commend the Productivity Commission for producing this report. We have felt deeply concerned for some years now at the inaction on the part of government and the business sector on addressing the climate crisis – better late than never!

For brevity, this submission follows the headings in the Commission's "At a Glance" summary.

INTRODUCTION/TERMS OF REFERENCE:

The first sentence of the summary includes the phrase "...while continuing to grow incomes and wellbeing....".

- **This phrase represents a significant misunderstanding of the climate challenge.**

Climate disruption is part of a linked set of resource-limitation issues, including but not limited to

- over-fishing,
- desertification and deforestation,
- transfer of valuable strategic minerals to landfill,
- diminishing EROEI (Energy return on energy invested), and
- water shortages.

These limitations call into question conventional assumptions about the inevitability and even the possibility of continued 'economic growth', either nationally or globally.

A wide range of authoritative organisations have documented the unrealistic assumption that economic growth can keep expanding endlessly within constrained resources – these include the World Bank⁶, IMF⁷, OECD⁸, UNEP⁹, Bank of England, the Pentagon and NATO¹⁰ and others^{11, 12, 13, 14, 15}.

*"The most developed and the emerging economies must stabilise and then reduce material consumption levels through: dramatic improvements in resource use efficiency, including: reducing waste; investment in sustainable resources, technologies and infrastructures; and systematically decoupling economic activity from environmental impact."*¹

U.K Royal Society

*"New Zealand's economic growth model is approaching its environmental limits."*²

O.E.C.D.

"By failing to adequately limit population growth, reassess the role of an economy rooted in growth... humanity is not taking the urgent steps needed to safeguard our imperilled biosphere."

World Scientists' Warning to Humanity: A Second Notice³

*"...there needs to be a fundamental change in the core values of developed societies: away from an emphasis on material wealth, and towards a model where individual and societal well-being are considered most important."*⁴

*"Very hard choices will have to be made to achieve 'sustainable development' goals."*⁵

While per capita productivity may continue to improve - especially given the current pace of technological innovation - there is no evidence that endless economic growth (as defined by any of the standard metrics) is possible. It is not too much to say that growth has become a cargo-cult.

We as a species have never faced such a formidable set of global challenges. Given our collective addiction to 'growth', it is questionable whether nations will be willing to make the drastic changes needed to ensure a viable future economy.

A very recent assessment estimates the cost to the global economy of climate inaction at around US\$ 30 trillion¹⁵.

- **We therefore submit that your report replace this statement with one acknowledging the need to consider alternatives to the current assumption of continual economic growth.**

NEW ZEALAND'S ROLE:

- We totally support the wording in the Draft Report. New Zealand prides itself on taking leadership despite our small population. Claims that New Zealand is so small that change would be merely 'virtue signalling' are cynical in the extreme. It is essential that advanced nations including N.Z. are seen to be taking urgent and effective steps to reduce our GHG emissions. Our per-capita carbon emissions are among the highest in the world. Without leadership from nations like us, poorer nations can't be expected to take action.

PATHWAYS TO A LOW EMISSIONS ECONOMY:

"... the sooner that emissions reductions begin, the less disruptive the transition will be."

- **We fully support that intention.**

If a transition to a low-carbon economy is to be successful, **public perception will be vital**. A significant percentage of the population still do not believe the science¹⁶, and many of those will be likely to regard any change as a tax-grab. Therefore it is vital that **evidence-based, persuasive arguments** are presented that demonstrate the advantages of this transition

*"To motivate citizens, financial incentives and information about climate change threats need to be complemented by positive discourses about economic, social and cultural benefits of low-carbon innovations."*¹⁷

POLICY CHANGE TO DRIVE AN EFFECTIVE TRANSITION:

EMISSIONS PRICING:

The relative virtues and vices of carbon tax vs ETS are complex. However ETS schemes mainly target corporations, and that is not sufficient. Consumer habits will not be changed significantly by an ETS.

- **A carbon tax will directly influence consumer choices; therefore it is our clear preference.**

Whichever instrument is adopted, the price of emissions in CO₂ equivalent units must increase, and sharply, if our children are to have any chance at a secure and prosperous future.

- Prices must be set for CO₂, CH₄ and NO separately. The increasing cost paid by polluting activities must return (and be seen to return) to those activities that sequester carbon, such as reforestation.

Effective action is likely to involve hard decisions such as progressive carbon pricing. These measures will be unpopular; therefore they may meet opposition from parliamentarians reluctant to risk disapproval, especially from the sizeable minority of voters (currently about 30%)¹⁶ who either deny the science, or claim that the problem is minor/an issue for future generations to deal with.

Our elected representatives should be aware that we expect them to show leadership.

STABLE AND ENDURING LAWS AND INSTITUTIONS:

- **We fully support the intentions stated in this section.**

Clear and stable climate policies, mitigation targets: emissions targets: all are needed.

But policies and targets need **effective and transparent measurement** and **public reporting systems**.

These must be

- set in place as soon as possible and
- placed beyond the possibility of political interference
- accompanied by clear and effective sanctions against law-breakers.

HARNESSING INNOVATION AND INVESTMENT:

- It is unwise to rely on the emergence of technological solutions such as industrial carbon capture.
- Even more risky are suggestions such as ocean iron-enrichment and cloud-seeding.¹⁸ It is vital that humanity does not reach the point where such desperate and untried measures are contemplated.

On the other hand, there are some innovative researchers in this country, and it may be wise to increase support for local research initiatives in emissions reduction, energy storage, and carbon capture technologies. Carbon capture may enable the non-fossil manufacture of vital synthetics such as polymers, lubricants, paints & dyes, carbon fibre, medicines, and fabrics. We note in passing that recent grants have been made to University of Canterbury researchers investigating initiatives such as this.

On-going initiatives towards lower-carbon production of steel and for improvements to the Haber-Bosch process for nitrogen fixation (fertiliser manufacture) are also worth mentioning here.

While any such manufacturing technology may be developed elsewhere, we will benefit if Kiwis are among the initial innovators.

Given their GHG profile, we also strongly recommend investigating incentives for

- a move away from intensive livestock farming (towards high-value horticulture and forestry).
- reduced dairy farming, along with meat production and consumption, given that livestock (especially cows) are a sizeable GHG source.

However, positive initiatives are not enough.

“Phasing out existing systems accelerates transitions by creating space for niche innovations and removing barriers to their diffusion. The phase-out of carbon-intensive systems is also essential to prevent the bulk of fossil fuel reserves from being burned, which would obliterate the 2°C target. This phase out will be challenging because it threatens the largest and most powerful global industries (e.g. oil, automobiles, electric utilities, agrofood, and steel) which will fight to protect their vested economic and political interests.”¹⁷

The gains we can expect from all the initiatives proposed in the Draft Report will be trivial unless we **phase out all coal mining as rapidly as possible, to be followed by oil and then CNG**. A clear timetable must be set out so that the business and investment sectors have certainty.

Not only must fossil fuel extraction cease as soon as possible, the demand for them must be rapidly reduced.

- **We submit that a clear timetable be set out for the early phase-out of all fossil-fuel extraction in New Zealand, including its territorial waters.**

SUPPORTIVE REGULATION AND POLICIES:

New Zealand's transport system:

Vehicles.

- The suggestion of a **vehicle 'feebate' system is, in principle, a good one. We strongly support it.**

The sooner New Zealand develops a viable nationwide infrastructure for the sale and servicing of EVs the better. In our view this is not something that should simply be left to the so-called 'free market'.

- Active national planning for recharge infrastructure and the adoption of EVs for the central and local government vehicle fleets would send positive signals.

However, manufacturing and disposal processes are a significant part of a vehicle's lifetime GHG profile. In the short term therefore,

- **preventing the import of older petrol/diesel vehicles may be counterproductive.** A detailed analysis needs to be done of longevity vs. GHG profile.

At least in the short-term, less well-off people need to have access to transport options while better alternatives come through.

International Travel and Trade.

Our geographically remoteness works against our interests re emissions associated with international trade. Currently, any gains in fuel efficiency appear to be more than offset by increased shipping and air traffic – especially inbound tourism. (Which, of course, highlights the conundrum described in our introductory remarks about the self-defeating nature of endless growth.) There appears little scope for mitigating those emissions in the foreseeable future.

However the carbon footprint of tourism, both inbound and outbound, must remain under active consideration, and **the cost of that carbon must be reflected in carbon pricing or an ETS.**

- The only suggestion we can offer is to **encourage or require tourists both inbound and outbound to offset their GHG emissions via accredited reforestation schemes.**

LOW EMISSIONS ELECTRICITY:

- Current disincentives for small-scale solar energy generation by households and businesses must be removed. **Households must be able to sell excess electricity back into the grid.** The development of a smart grid to distribute this energy nationwide will make the grid more resilient, and therefore outages and price spikes far less likely.

However, back up fossil electricity generation is likely to be needed for the next decade or two. **As coal has the highest carbon profile per unit energy, its use in energy generation should be phased out immediately.**

The private sector is neither equipped nor motivated to accommodate shortages. Therefore

- backup energy generation should be **compulsorily nationalised** and maintained for now, with maintenance costs shared industry-wide, and back-up energy sold to wholesalers when needed.

TARGETED INTERVENTIONS:

Waste sector:

- **We support the proposed extensions to the waste disposal levy, along with improved data collection, and support for local councils.**
- **We also request that methane emission from landfill sites be monitored and active measures implemented to minimise it.**

SUPPORT FOR HOUSEHOLDS FACING COSTS:

- **We strongly support the proposal that low-income households be supported in facing costs incurred by climate policy.**

If the less well-off find themselves seriously disadvantaged by climate initiatives and the resulting structural changes, a political backlash is highly likely and any progress will be seriously disrupted.

- **We therefore request that all initiatives take this into account, particularly where employment patterns change, or the cost of food and transport is affected.**

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