Submission on New Zealand’s Climate Change Target

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Summary

- NZ has now exceeded its 1990 emissions by 26%, hence will only meet the existing 2020 target of a 5% reduction on 1990 emissions by the most imaginative enviro-accounting manipulations and purchase of cheap and low credibility carbon credits.

- Given this failure, it is ludicrous to push for any greater reduction by (eg) 2030. All this would do is result in further failure, would impact critically on the NZ economy, hence the wellbeing of all NZ’ers, and would distort genuine efforts to increase the efficiency of both energy generation and usage.

- A 40% reduction on 1990 emissions by 2030 ( a commonly espoused target) would only result, by the IPCC AR5’s own mid range estimate for Equilibrium Climate Sensitivity ( ie response to a doubling of CO2 of 3 degrees C ), of a reduction in global temperature of 1/2000’th of a degree, ie 99/100’ths of SFA. ( I note that several recent calculations of ECS in the peer reviewed literature, are landing at about half this 3 degree estimate, hence the impact on temperature may be only half that quoted above).

- Hence NZ would be damaging its own ability to respond to real environmental and social problems for no gain. This would be the height of stupidity.

- Since anthropogenic global warming is a global issue, I would like to see NZ applying its established expertise in geothermal power to assist third world countries with real power issues yet genuine geothermal potential, such as Ethiopia and Kenya. Providing geothermal power as an alternative to coal fired power is a more realistic approach to addressing the Anthropogenic Global Warming issue, and a more beneficial approach to other peoples, than the stating of delusory targets for the Paris meeting, where already it appears no agreement will be reached anyway.

- In due course, technological improvements in such areas as autonomous vehicles, distributed power systems and power storage, will enable all countries to reduce their CO2 emissions while maintaining their quality of life. NZ should be an early adopter of such technologies, but being a small and capital-constrained economy it is in no position to lead in their implementation

- I recommend that NZ’s target should be stated as a real effort to achieve a 5% reduction over 1990 levels by 2030. What NZ does after that should be reviewed again at that time.
Commentary

It had been my intention to write a lengthy analysis of the AGW issue and NZ’s contribution to it. But frankly, it is not worth my time to do so, nor MfE’s time to read.

This hugely overstated issue is so shot with holes it is not worth myself or government diverting resources to address it at length. Suffice to say that it is a gross understatement that NZ is a bit player in this issue. As an emitter of approx. 0.09% of man’s (and woman’s) CO2 emissions, it really does not matter whether NZ doubles our CO2 emissions or completely curtails them, it would have no noticeable effect on global temperatures. We are 4 million people clinging to a rock in the middle of the ocean, in a world of 7 billion. We are a mid rank economy which operates a reasonably energy efficient system to sustain ourselves. Our influence in the world is so negligible that if the rock of Aotearoa sank beneath the waves, with us clinging to it, the world would hardly notice. It is laughable to say our actions on an issue as fraught with half truths and exaggerations as this, have any bearing on world attitudes, other than to provide amusement.

Yes, CO2 is a good absorber of em radiation in the 15 micron wavelength, hence an increase in its abundance in the atmosphere can only have a warming effect. No-one I have ever met disputes that. A doubling of CO2 in the atmosphere is broadly accepted to lead, by itself, to an increase of 1.2 deg C in global temperatures. Feedbacks such as the effects of clouds (poorly understood) can increase that figure. The IPCC AR5 report’s midrange figure is an increase of 3 deg C per doubling of CO2 concentration. Most recent calculations land at about half this, in the 1.5-2 deg C range.

CO2 in the atmosphere is increasing at about 2 ppm per annum, with a present level of 400 ppm. At this rate, the first doubling of CO2 from pre industrial levels of about 280 ppm should occur around the end of this century. Despite numerous shortcomings of the data base, it is reasonable to say we have seen a rise since the 1880’s of global temperature by about one degree. If we assume this is all due to man’s output of CO2, then it suggests (for an ECS of 2) that there may be about one degree more of temperature rise by 2100 (if it is not all due to man’s influence then natural factors are large relative to the anthropogenic CO2 effect). I doubt we will ever get near the second doubling.

Plants use CO2 in photosynthesis, just as humans breathe it out. Peer reviewed studies have found that the earth is greening rapidly, as CO2 rises. Australia’s CSIRO has published results showing up to a 30% increase in biomass in arid areas adjacent to deserts during the 30 years of satellite observations. So it seems like we will see a slightly warmer, and slightly greener earth by 2100. That is nothing to fear.

Statements concerning the amount of stored carbon, in the form of coal, oil and gas, that we can use if we are to keep warming under 2 deg C are non-scientific, and fail to recognise the CO2 absorption effect. The outgoing flux of CO2 from rotting biomass, volcanoes and other natural sources is some 25-30 times greater than that emitted by man (hence some 3,000 that emitted annually by NZ). CO2 is absorbed back from the atmosphere by biomass and oceans, and ultimately is tied up in carbonate rocks until ejected again by volcanoes. So has man’s increase of atmospheric CO2 concentration from 3 to 4 molecules per 10,000 materially got this dynamic balance out of kilter?
An assumption inherent in all the IPCC summary reports is contradicted by empirical evidence. The residence time of carbon in the atmosphere as CO2 is quoted by them as around 100 years. But this is very directly contradicted by the absorption rate of the C14 isotope from the atmosphere. In the late 50’s-early 60’s, the Russians obligingly bunged a huge pulse of C14 into the atmosphere in their nuclear tests. C14’s decay half life is ~5,700 years, yet we can clearly see from the figure below that the atmospheric C14 has been absorbed out of the atmosphere with a half-life of around 15 years.

As with C14, so with the common carbon isotope C12. Why is this important? Because it shows that the IPCC reports assume far too long an atmospheric residence life for carbon, hence overestimate the global warming effect. As seems to be the case.

I want MfE to focus on real environmental issues in NZ, in preference to squandering their resources on AGW posturing.
Countries with strong economies have the best environmental practices – because they can afford them. And vice versa.
I want MfE to concentrate on applying reasonable environmental standards on economic activities in a way which allows those activities and industries to prosper.
That is for our common good, and for the long term good of the NZ environment.