

Submission to the Productivity Commission report on Low-emissions economy.

John Sexton 8 th June 2018

The report covers very extensively possible emission reductions that may be possible in the future, but it fails badly by not covering the IPCC projections that all the policy decisions are being made on.

The report is also flawed (a-long with most of the submitters) in that no mention is made of the Carbon Cycle which is the fundamental basis of all life on earth and is fundamental to this whole report.

The Carbon Cycle is the fundamental pathway ahead but it is completely ignored. Repeatedly it is demonstrated that there is no understanding of the carbon cycle and carbon dioxide's vital role in the solutions you are claiming to achieve.

We are continually told "human related activities are emitting greenhouse gases that is increasing the average global temperature at an accelerated rate compared to historical temperatures"

There is no the data to back this claim, only the IPCC computer models – all wrong.

We have another major problem, there is only a consensus among those who work for governments or their agencies.

Any person working for the government or a government agency (including universities, research institutions, NIWA) **has a conflict of interest** as they are not allowed to speak out against the "PC agenda of Climate Change"

Yes, we have Climate Change but the climate has always changed over the past centuries and always will continue to change, nothing new in this. Considerable parts of NZ are flood plains, protected by stop banks.

Yes we have recent global warming, from the Medieval Warm Period, 900-1200 the earth cooled 2° C to the Little Ice Age, 1600-1800, it has warmed 0.81° C since 1850 as we recover from the Little Ice age, nothing exceptional about this. This is Natural variability. Or would you prefer the climatic conditions of the little ice age?

In the AR5 IPCC report their scientists admitted that the world is warming more slowly than predicted, the IPCC predicted a warming of 0.34° C per decade but it is only 0.11° C.

This admission has been complexly ignored and suppressed by all concerned.

Section I: Climate science overview

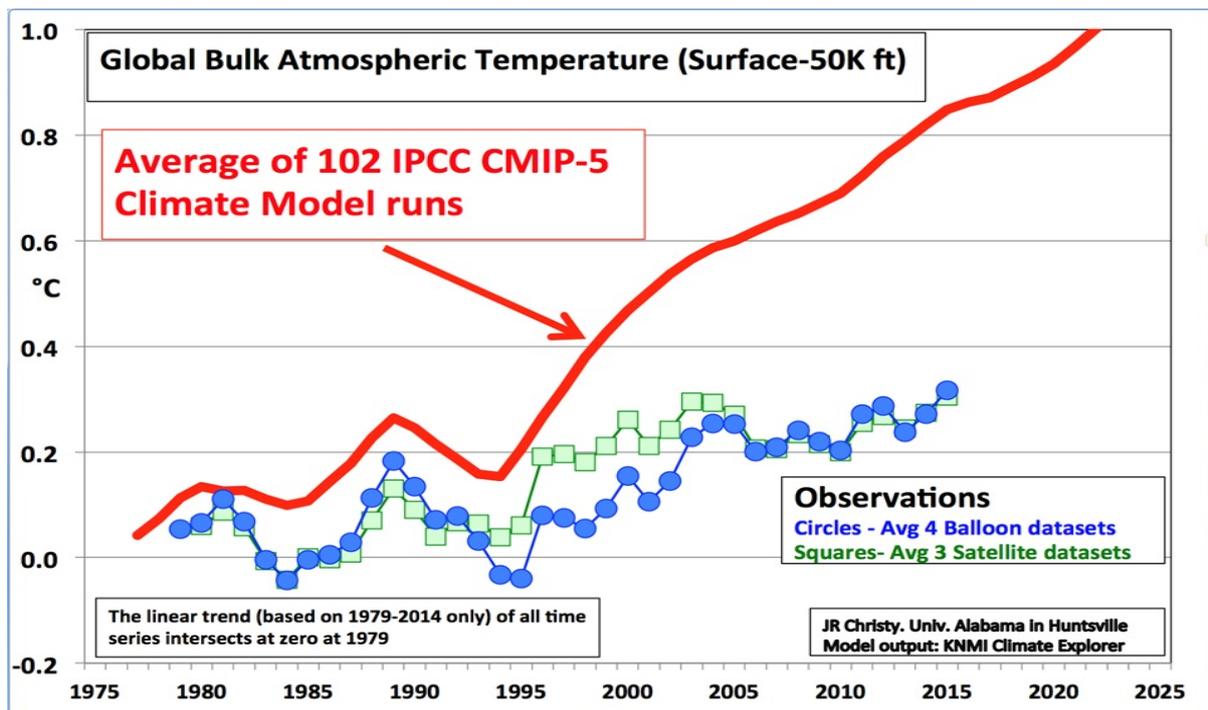
Our overview of climate science is framed through four statements:

1. The climate is always changing; changes like those of the past half-century are common in the geologic record, driven by powerful natural phenomena
2. Human influences on the climate are a small (1%) perturbation to natural energy flows
3. It is not possible to tell how much of the modest recent warming can be ascribed to human influences

4. There have been no detrimental changes observed in the most salient climate variables and today's projections of future changes are highly uncertain

We offer supporting evidence for each of these statements drawn almost exclusively from the Climate Science Special Report (CSSR) issued by the US government in November, 2017 or from the Fifth Assessment Report (AR5) issued in 2013-14 by the UN's Intergovernmental Panel on Climate Change or from the refereed primary literature.

From a paper by Happer, Koonin, Lindzen. See Appendix 5



The red line is the IPCC projections and are what all policy decisions are being made on, the blue and green are the real- world temperatures from the balloon and satellite measurements. Sea level is steady at 1.4 mm per year, 11.2 cm by 2100

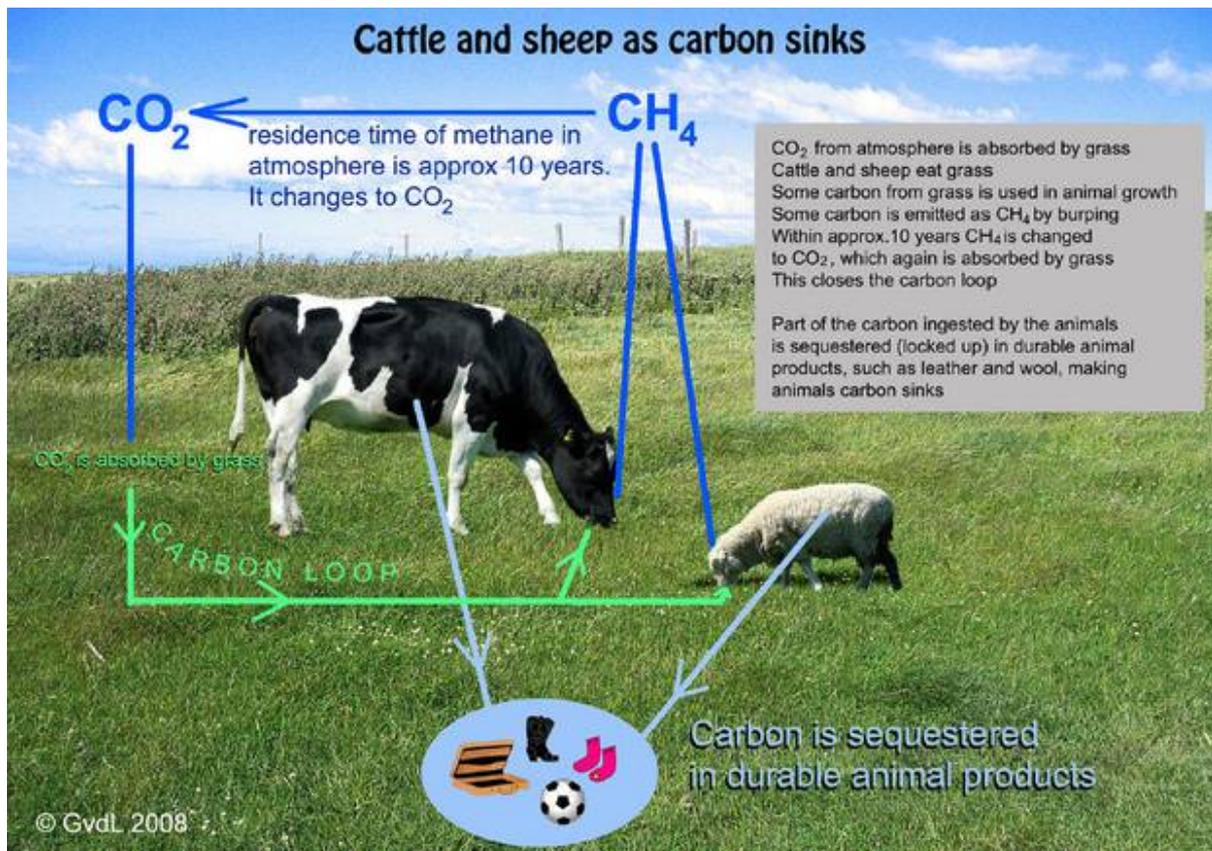
The latest satellite temperature for May 2018 is $+0.18^{\circ}\text{C}$ since 1980 – 0.047°C per decade. The IPCC prediction was 0.34°C per decade. Where is the problem?

The main points from the NOAA web site, toolkit/basics

- Water vapour is the predominant Greenhouse Gas
- Water vapour absorbs infrared radiation
- The sun ultimately drives the climate
- Plants remove large amounts of CO_2 from the atmosphere.

The “PC ETS agenda” to date is to only account for gross agricultural emissions. All farmers know that growing grass and crops sequesters carbon dioxide during the process of photosynthesis and this must be accounted for. To do otherwise is fraudulent.

All discussions must be on **net agricultural emissions**.



Schematic illustration of cattle and sheep acting as carbon sinks. Photo / Dr Gerrit van der Lingen

There are 4 reasons for agricultural methane must be excluded from the ETS

- A steady state of methane emissions are offset by photosynthesis growing grass and crops.
- Agricultural emissions must be accounted for on a net emissions basis.
- Water vapour is the dominant greenhouse gas at 10,000 ppm of the atmosphere, CO₂ is 405 ppm of the atmosphere, Methane is 1.8 ppm of the atmosphere, livestock emissions are only 17% of methane emissions which equals 0.306 ppm – a very tiny portion.
- Any warming effect by methane has already been covered by the dominant greenhouse gas – water vapour

Perhaps there is a glimmer of hope with the article yesterday on “Climate scientists new way to treat Methane”.

It is pleasing to read there is some rethinking from Professor David Frame and his colleagues over accounting for agricultural methane emissions, this is what I have been promoting for a long time – net emissions for agriculture.

Methane in a steady state is simply recycled, Pastural Farming Climate Research.

<http://farmcarbon.co.nz/>

From the Parliamentary Commissioner for the Environment report on Biological Greenhouse Gases P32.

“Methane is a more powerful greenhouse gas than carbon dioxide – each molecule of methane traps about 26 times more heat than each molecule of carbon dioxide.

Methane is a short-lived greenhouse gas. Molecules emitted into the atmosphere last on average about 12 years before being broken down into other gases – but a small proportion will remain for decades.

About a third of the warming impact of methane is not caused by methane itself. Under the influence of sunlight, most of the methane emitted into the atmosphere breaks down into carbon dioxide, ozone, and water vapour. The ozone and the water vapour contribute to the warming of the atmosphere.

However, somewhat counter-intuitively, the carbon dioxide does not contribute to warming – if the methane has come from agriculture. This is because the methane has its origin in the grass eaten by the animal – grass that grew by taking carbon dioxide out of the atmosphere. This carbon dioxide has simply been recycled.”

In the conclusion of the Commissioners report this was ignored”.

Dr Doug Edmeades. Should methane be included in the ETS. Appendix 5

Total methane emissions,

Natural, termites 5%, Oceans 4%, Wetlands 28%

Manmade, Biofuels 2%, Rice growing 6%, Biomass burning 7%, Land/waste 10%, **Livestock 17%**, Fossil fuel 21%

Livestock emissions 17% of total methane emissions of 0.00018% of atmosphere.

Methane, this explains why methane is irrelevant. See Appendix 3

Water vapour the dominant greenhouse gas is 10,000 ppm of the atmosphere, CO₂ is 405 ppm of the atmosphere, Methane is 1.8 ppm of the atmosphere, livestock emissions are only 17% of methane emissions which equals 0.306 ppm

We are never told that livestock methane is such a tiny portion of NZ's emissions

A steady state of methane is off-set by CO₂ sequestration.

Basic physics – you can only emit what is sequestered.

Agricultural emissions must be accounted for on a net emission basis.

Methane madness, see Appendix 4

Dairy cows at a stocking rate of 2.8 cows per hectare have emissions of 6.5 tons/ht, that stocking rate would require grass or crop growth of 16 tons dry matter/ht 40% carbon equals 6.4 tons/DM/ht sequestered.

NZ has 3% of the worlds dairy cows, what happens to the worlds other 97% ? No other country in the world is stupid enough to tax agriculture, their food producers.

Until there are economic scientific solutions to reduce agricultural emissions and all of our world agricultural competitors do the same NZ agriculture must remain out of any ETS. Putting agriculture into the ETS will NOT reduce agricultural emissions as there are no economic solutions - just a new tax and raise our costs compared to our competitors.

NZ emissions are very small, only 0.15% of global emissions

There are 1600 coal fired power stations being constructed or planned

63% of the world's emissions are from "developing countries", yes that includes China and India. 37% left, and Trump is pulling out!, leaves 22% of those with commitments including NZ's 0.15%

China, presently 29.5%, says it will double by 2030 = + 29.5%,

India, presently 6.8% says it will triple by 2030 = +13.6%,

Pathways.

NZ has a good record in reducing our emission profile, our per person emissions have been reduced but we have had a huge increase in population. Agriculture, dairy has reduced its emissions per unit of production by 1% per year or 16%. Sheep farming have a 30% reduction per unit of production.

As explained above for agriculture, it is fraudulent accounting, not emissions intensity that is the problem.

Transport

There is a place for EVs for city commuters but there are no viable options on the horizon for rural transport or heavy transport/ construction/shipping/aircraft/railways.

Subsidies cannot be justified, they just distort the market.

Electricity.

There will be big increase in demand for electricity by a growing population, EVs and other industrial electrification will mean a requirement for new generation. More hydro? More wind and solar are very expensive because they are very intermittent and need an equal amount of back up generation.

It is absolutely essential that our present fossil fuel backup generation be retained for security of supply. Lessons must be learnt from the UK and Germany the problems they are having attempting to move to wind generation as well as the 25% increase in power prices their consumers are facing.

NZ must facture in the huge transitional import costs of a new transport fleet, huge costs for additional power generation at the same time of restraining our main base exports. In 2017 NZ Current account deficit was - \$7.7 billion, that is, NZ imports \$7.7 billion more in goods and services than it exports.

How are we going to pay for all the additional imports required?

If our remaining heavy industry is forced to close by ETS costs production will be shifted to Asian countries with much higher emissions as their power is all coal fired generation.

Conclusion

Clearly this report is based on the assumption that carbon dioxide and methane emissions are causing warming at an accelerated rate compared to historical temperatures. No data is provided to back up this claim. The NZ Royal Society cannot provide any data and the Minister of Climate Change has not been able to provide any data to back these claims.

The red line of the atmospheric temperature graph shows the IPCC models of 1° C of warming to 2015 but the satellite and balloon real world temperature records only one third of the IPCC prediction at 0.3° C. At May 2018 this has fallen to 0.18° C.

This IPCC predicted temperature increase is basis of all climate change policy and this the perceived need for this Low-Emission economy report which is totally flawed.

The claim that 48% of emissions are from agriculture, based on gross emissions is fraudulent accounting, it must be based on net emissions. Agriculture is an integral part of the carbon cycle.

All agricultural emissions are offset by carbon dioxide sequestration growing grass and crops. Basic physics – you can only emit what is sequestered.

Appendix 3 shows why methane is an irrelevant greenhouse gas.

There no cost/benefit analysis for attempting to move electricity generation to 100% renewable.

There is no cost/benefit analysis for biofuels. If properly accounted for biofuels will have similar emissions as fossil fuels and the cost will be considerably higher.

There must be a much greater effort to understand elementary biological science, the carbon cycle is the basis of all life on earth, additional CO₂ is a great benefit to the biosphere, there is solid data showing the extra CO₂ is providing a 14% greening of the planet. If we lock up much additional carbon in trees we run the risk starving the planet of the carbon dioxide needed to grow food for the worlds population and to grow the proposed biofuels.

There must be a comprehensive review of the whole Climate Change processes with truly independent input.

