

Your submission to Zero Carbon Bill

Larry Blair, **Larry Blair**

Reference no: 7651

Submitter Type: Individual

Clause

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

Notes

The government should only commit to emissions intensity targets. The countries with the largest emissions in the Paris Agreement have not have not capped total emissions. To cap in once country and not another will result in the manufacture and the means of production relocating.

Clause

2. If the Government sets a 2050 target now, which is the best target for New Zealand?

Notes

Emissions intensity targets only.

Clause

3. How should New Zealand meet its targets?

Notes

Global carbon trading schemes implemented to date have not reduced emissions and have only created an environment for traders and speculators to personally gain from tax payers and consumers.

Clause

4. Should the Zero Carbon Bill allow the 2050 target to be revised if circumstances change?

Position

Yes

Notes

I do not support the implementation of targets. It is becoming increasingly likely that CO2 is not driving climate change as such we should be able to change our position as the science matures. Also if the social impact of the legislation is too great there should be an option to roll it back.

Clause

5. The Government proposes that three emissions budgets of five years each (i.e. covering the next 15 years) be in place at any given time. Do you agree with this proposal?

Position

No

Notes

Commitments to emissions intensity is the only fair position given the global context.

Clause

6. Should the Government be able to alter the last emissions budget (i.e. furthest into the future)?

Position

Yes - each incoming Government should have the option to review the third budget in the sequence

Notes

The government of the day should have the option to review any of the budgets.

Clause

7. Should the Government have the ability to review and adjust the second emissions budget within a specific range under exceptional circumstances? See p36 Our Climate Your Say

Position

Yes

Notes

The government of the day should have the option to review any of the budgets.

Clause

8. Do you agree with the considerations we propose that the Government and the Climate Change Commission take into account when advising on and setting budgets? See p44 Our Climate Your Say

Position

Yes

Notes

These should be minimum considerations. They should also be objective, published with supporting documentation in the public domain and contestable.

Clause

9. Should the Zero Carbon Bill require Governments to set out plans within a certain timeframe to achieve the emissions budgets?

Position

Yes

Notes

There must be a costed and independently reviewed implementation plan. Targets should not be set without a realistic plan for delivery being agreed in the public domain.

Clause

10. What are the most important issues for the Government to consider in setting plans to meet budgets? For example, who do we need to work with, what else needs to be considered?

Notes

There are numerous issues. Please refer to the supplementary information provided with this submission via email.

Clause

11. The Government has proposed that the Climate Change Commission advises on and monitors New Zealand's progress towards its goals. Do you agree with these functions? See p42 Our Climate Your Say

Position

Yes

Notes

I oppose any mechanism that makes the climate commission independent of government. This is not democratic and the commission should only have an advisory role in all aspects. The government should not be obliged in any form other than public pressure to act on the advice provided.

Clause

12. What role do you think the Climate Change Commission should have in relation to the New Zealand Emissions Trading Scheme (NZ ETS)?

Position

Advising the Government on policy settings in the NZ ETS

Notes

The commission should only have advisory capacity. Anything over and above this is anti-democratic.

Clause

13. The Government has proposed that Climate Change Commissioners need to have a range of essential and desirable expertise. Do you agree with the proposed expertise? See p45 Our Climate Your Say

Position

Yes

Notes

Yes there are numerous considerations for any policy position and these all need to be fully evaluated to avoid negative outcomes.

Clause

14. Do you think the Zero Carbon Bill should cover adapting to climate change?

Position

Yes

Notes

Climate change is a natural phenomenon that we can not stop or stabilize as such adaptation is a natural part of life since the beginning of time. It should be our primary and only concern.

Clause

15. The Government has proposed a number of new functions to help us adapt to climate change. Do you agree with the proposed functions? See p47 Our Climate Your Say

Position

No

Notes

Partially agree. The creation of an adaptation plan is advised but this must be subject to review and based on science that is supported by empirical evidence. The actions should also be regularly reviewed as new information comes to light. Emphasis on choice and personal responsibility as opposed to regulation should be the primary mechanism of the plan.

Clause

16. Should we explore setting up a targeted adaptation reporting power that could see some organisations share information on their exposure to climate change risks?

Position

No

Notes

This is an over reach of government.

Clause

Do you have any other comments you'd like to make?

Notes

Supplementary information attached.

Supporting documents from your Submission

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Zero Carbon Bill

Submission Supplementary Information

Reference no: 7651

Objective:

The objective of this submission is to outline several scientific, technical and economic issues that need to be considered in relation to the Zero Carbon bill, the overall effect on emissions and New Zealand's society.

These issues are discussed using the following elements:

1. Justification.
2. Policy based on climate models.
3. Energy availability / security.
4. Alternative energy option evaluation.
5. Emission reduction options evaluation.
6. Cost vs benefit.
7. International policy results.

Justification:

The justification for this bill is to take action against climate change.

This is a significant piece of legislation and will have widespread societal impacts. The NZIER have reported that the legislation will have significant negative impacts to GDP. Due to the impacts of the legislation the justification needs to be very robust and well considered.

Justification for this bill has been made on the basis of the IPCC assessment reports and associated predictions. Additionally commitments to the Paris Climate Accord are also mentioned. Both of these issues are discussed in more detail below.

I would challenge that these justifications are not well founded and that the science is not settled for the following reasons:

1. Global temperature records suggest that the average global temperature has risen by approx. 0.8 - 1 deg C since 1880. A general warming trend is not disputed however the magnitude of warming this century is much less certain.
There are significant statistical issues with the temperature record as prior to the late 1970's and the introduction of satellite temperature records (noting that the satellite records also suffer from coverage issues). As such the data set is largely based on mercury weather stations. These stations have reduced significantly in number since the 1940's and suffered for inconsistent measurement conditions such as fading boxes, urban heat island effect, site relocation and other interferences. As such the observed temperature increase is likely to be within the margin of error of the measurement methodology.
This conclusion is supported by analysis rural only data which does not indicate the same warming trend as the combined urban and rural data.
There is currently no robust evidence to suggest that the current climatic conditions are significantly different to the Roman warm period or Medieval warm period. With recent research suggesting that both events were global and not localized.
2. The greenhouse effect of CO₂ diminishes as concentrations increase following a "logarithmic dependence". The IPCC acknowledge this phenomenon in their reports. At 400ppm atmospheric CO₂ is at or near saturation and subsequent increases in concentration will have little or no effect in terms of atmospheric heat retention. As such climate models are based on

this minimal warming effect driving increased water vapor in the atmosphere. This however has not been observed.

3. Proxy data indicates that CO₂ lags temperature and as such CO₂ does not drive temperature. It is more likely that the temperature cycle drives the CO₂ cycle.
4. Anthropogenic sources of CO₂ only account for 3-4% of global emissions.
5. Sea levels were rising long before the industrial revolution and have been rising in a linear manner since the last interglacial period. Further the negative effects of sea level rise may have been over estimated. A recent study by Auckland University study of 101 islands in the Tuvalu atoll showed a net land area increase of 2.9% despite sea level rise.
<https://www.nature.com/articles/s41467-018-02954-1>
6. Adverse weather is not increasing in real terms. Historical data suggests that the 1st half of the 20th century was likely more extreme than the second half and that occurrences of adverse weather have not been increasing. Adverse weather events are typically quoted by the media in terms of cost. This is a misrepresentation as it is affected by inflation and population density. It does not directly compare the intensity of the event.
 - a. For local context I attach a link to the Australian Bureau of Meteorology tropical cyclone trends which shows a downward trend in both frequency and intensity.
<http://www.bom.gov.au/cyclone/climatology/trends.shtml>
 - b. Statistics New Zealand Environmental Indicators report does not show any significant trends in terms of:
 - i. Seasonal rainfall
 - ii. Rainfall intensity
 - iii. Drought
 - iv. Water physical stocks
 - v. Wind
 - vi. Warm days
 - vii. Frost days
 - c. Global research reference material:
<https://www.omicsonline.org/open-access/trends-in-extreme-weather-events-since-1900--an-enduring-conundrum-for-wise-policy-advice-2167-0587-1000155.php?aid=69558>
 - d. There are increased global flooding trends, however this has to be considered in the context of both land subsidence and changes in land use that effect drainage.
7. There are benefits to plants of increased growth rates and drought resistance as a result of increased atmospheric CO₂ concentrations.
8. To date no scientific organization has been able to accurately determine what ratio of climatic change is due to natural climatic variability and is what is due to anthropogenic activities.
9. The IPCC is a political organization. The mission statement of the organization predetermines that anthropogenic global warming is proven and as such the material produced is not objective and does not comply with basic scientific methodology of the null hypothesis. Insufficient rigor is applied to understanding other climatic inputs and feedback mechanisms due to the dogma that CO₂ is the temperature control knob of the climate.
10. The Paris Climate agreement is not a good deal for New Zealand. This agreement does not lay a level playing field for all countries with self-determined and reported targets. For example Singapore is a developed country we have a close trading relationship with. Singapore and has only made commitments regarding “emissions intensity” which is a measure of efficiency and does not limit total emissions in any way. Singapore have considered this carefully and recognize the limiting total emissions will have a negative impact on their economy.

China is the world largest emitter and have made no commitment to reduce emissions. India has also used “emissions intensity” with on total cap. European NGO’s have reported this year that all EU countries are failing to meet their targets under the agreement. There is significant civil unrest in Europe due to energy costs that are rising rapidly as a result of “green” energy which is heavily subsidized. Setting targets for New Zealand in legislation over and above efficiency measures is anticompetitive and the equivalent to a self-imposed tariff on New Zealand exports. In the global trading context capping emissions in one country but not another will only result in relocating the means of production and not reduce total emissions. It is bad business for developed countries and a boon for developing countries that have no emission caps and poor environmental regulations.

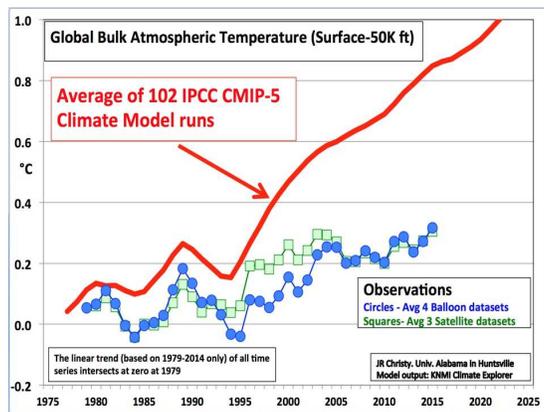
<https://climateactiontracker.org/countries/china/>
<https://climateactiontracker.org/countries/india/>

Policy based on models

Climate policy globally has been made on the basis of climate modelling. There is however a problem with this approach – the models do not match the observations. The models over estimate warming on average by a factor of three.

Until understanding of the climate increases and the models can accurately fore and hind cast they should be considered of insufficient reliability on which to base public policy.

The following graph has been produced by Dr John Christy from the University of Alabama in Huntsville to illustrate this issue.



New Zealand Energy Security / Availability

Energy security and availability in New Zealand will impact this legislation.

According to MBIE 2017 figures New Zealand’s energy demand across all sectors is approx. 600 PJ. Natural gas supplies approx. 200 PJ of this demand. Natural gas is used as either a raw material or heat source for numerous industrial processes across all our primary industries.

Natural gas also supports the electrical grid with approx. 55-60 PJ being used for electricity generation. The significance of this generation capacity is that it is not intermittent and can vary in output with demand. This provides stability and reliability to the grid.

The latest estimate of natural gas reserves is approx. 1800 PJ. At current consumption rates this will last us 7-8 years unless new reserves are bought online.

The lead time for bringing new reserves online using existing infrastructure would be 3-4 years. The lead time for new reserves that require new infrastructure would be 7-10 years depending on the complexity of the field.

However there are no companies are currently looking for new reserves. As such the lead time for replacement has become a significant risk for the economy and standard of living of all New Zealanders.

Failure to replace these reserves will result in industries having to move offshore or transfer to fuel sources with higher emissions such as coal or imported liquid fuels. Noting that we do not have the infrastructure to import gas. Transitioning from gas without a suitable replacement technology available will increase CO2 emissions.

Electricity is not a suitable replacement as a heat source for industry and we are unable to build the renewable generation capacity or grid infrastructure to support such a transition within the remaining natural gas reserve window. The prospect of coal fired generation to keep the grid going is increasingly likely.

As such primary industries are now facing energy security issues that present significant risk in terms of energy availability, cost, and productivity. This creates a very uncertain investment environment.

In the worst case businesses may be forced to relocate offshore. This will have a negative effect on GDP and both corporate and personal tax take for the government. Large scale job losses and resultant unemployment will create political instability. South Australia is a good case study for the social impact of transitioning to high levels of renewable energy.

Energy availability vs GDP

There is a correlation globally between GDP and the availability of energy. As such carefully consideration needs to be given to capacity and reliability of any alternative "renewable" energy sources. Any policy position that has a negative impact on GDP will be faced with wide ranging consequential issues that are outlined below.

GDP vs social outcomes

There is an equally strong correlation between a country's GDP and the social outcomes. Government social spending is reliant on a tax base that is generated by a healthy economy. This is why the standard of living all over the world has improved when communities have access to cheap, reliable and readily available energy.

GDP vs environmental outcomes

Environmental outcomes improve as GDP increases. This is obvious as people who are struggling to survive in a subsistence lifestyle give little consideration to the environment. Inversely people with disposable income and time for leisure are more environmentally aware. This improves environmental outcomes through increased education, purchasing behavior, support for environmental NGOs and many other social mechanisms.

Any policy position that reduces New Zealand's GDP will have negative environmental outcomes.

Energy efficiency

I support initiatives that improve energy efficiency such as better house design, more fuel efficient vehicles and the like. However it is a fallacy to believe that this results in an overall energy reduction. It just means that we do more with the same amount of energy.

As such any policy position that reduces the availability of energy on the assumption that this will be offset by increased efficiency is misguided.

Energy transition options

When considering the technical options for transitioning to lower emission energy systems we have to acknowledge the operational limitations of the technology and the total lifecycle CO2 footprint of the technology.

Energy for industrial heat sources and high energy demand process is a significant challenge that currently only fossil fuel technology can address.

However for the purpose of this submission if we just focus on electricity generation we need to first consider grid design. New Zealand currently enjoys a very good distribution of energy sources primarily from hydro, geothermal, wind and natural gas. This is an enviable spread of renewable and peak demand generation capacity. However the majority of our hydro capacity is located in the South Island with transmission issues limiting supply to the North Island.

When looking at removing natural gas and coal from this equation we need to recognize their role as low cost, on demand, scalable sources that provide reliability to the system when other sources have limited output due to environmental conditions.

Replacement low emission options can be classified as follows:

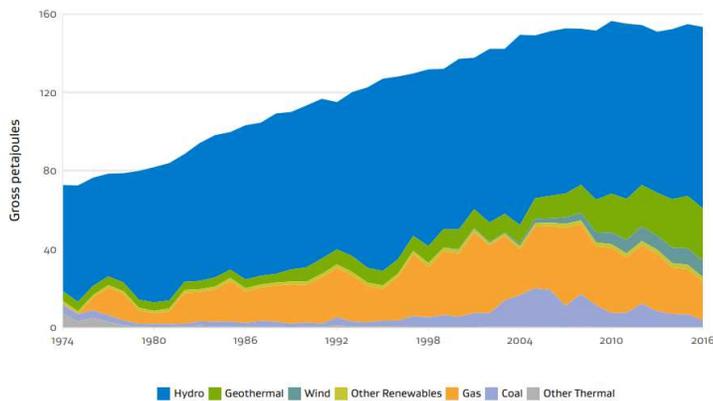
- On demand
 - Nuclear
 - Hydro
 - Geothermal
 - (biomass is not considered as low emission)
- Intermittent
 - Wind
 - Tidal / wave
 - Solar

To replace natural gas as an on demand energy source for electricity generation we ideally need to replace it with another on demand source. Geothermal generation can be expanded somewhat but has reservoir limitations. Hydro is another obvious choice however the Resource Management Act (RMA) and water rights debates will hinder efforts as witnessed by the Ruataniwha dam project.

To replace natural gas with intermittent sources is un-economic as a very large over capacity is required to address the intermittent nature of generation and even then there will be times when the sufficient generation capacity is unavailable.

Wind is the best option available from the intermittent group of energy sources. However the RMA will also hinder efforts with expansion of wind. Significant expansion is required to replace fossil fuel generation sources (primarily natural gas). The following graph from MBIE highlights the current generation by fuel.

Figure F.4: Electricity generation by fuel



As noted in the graph natural gas forms a moderate but not insignificant piece of the electricity generation profile. We do not have sufficient lead time to upgrade the transmission network and build sufficient capacity to replace this energy source within the current natural gas reserves window available.

Global vs local perspective

When evaluating “green” technologies the total lifecycle CO2 footprint of the technology must be considered.

Electric vehicles (EV) for example will reduce CO2 emissions in New Zealand but will not reduce global emissions. There have been a number of papers released recently that suggest that over an EV's lifecycle its total emissions are equal to an equivalent internal combustion powered vehicle. This is largely due to battery manufacture and the energy required for the associated rare earth metal mining, which includes numerous other negative environmental impacts. Battery disposal energy and emission requirements must also be considered. It is therefore reasonable to conclude that EV's are not a good option in terms of global emissions or global environmental stewardship.

Supporting a fleet of EV's will require further electrical generation capacity over and above that required to replace natural gas.

Wind generation faces similar issues as it is energy intensive to manufacture, maintain and decommission these units. Many of the components are not recyclable and currently decommissioned blades from Europe are being exported to landfills in Africa where the environmental regulations are non-existent.

Similarly domestic solar installations in New Zealand are likely to increase global emissions as our electricity generation is 85% renewable and manufacture of solar panels and associated storage systems is energy and emissions intensive. Solar also has the negative environmental impact of mining and manufacture in countries with poor environmental regulations.

The total global impact of each option must be considered if the action is to be considered meaningful. To consider only the local impact is a hypocritical position to maintain.

Cost vs Benefit Analysis

On the basis of the issues discussed above the Zero Carbon bill needs further analysis if, or before it is committed to legislation.

There must be a plan before there is a target. Failure to do this makes the legislation aspirational and risky with the potential to increase emissions and have negative environmental outcomes in a global context.

All analysis needs to consider both the cost vs benefit and total lifecycle CO2 equivalency.

The bill should not compromise the position of New Zealanders to access plentiful, cheap and reliable energy.

There are several examples of similar policies being implemented in other countries. The UK, EU and Australian examples must be considered before implementing a similar policy. In all of these instances targets have not been met, the cost to the consumer has increased massively and political pressure has been brought to bear as a result.

Emission trading schemes have failed to deliver and are promoted by the political oligarchy and business elite who buy low and sell high for personal gain. The people who ultimately pay for this are the Mum & Dad consumers and tax payers.

Summary Position

I do not support the Zero Carbon bill and believe it is unjustified on the basis of taking action against climate change.

I believe it is rushed and to date no plan has been presented or sufficient evaluation of the economic and social impact.

An unelected climate commission that controls energy policy and as such has more influence over the economy than the democratically elected government of the day is not something that I can support. This is a step towards changing New Zealand from a democracy to a totalitarian state.