

## **Submission on Climate Change from Peter Grant, [REDACTED]**

### **The Problem**

"Most projections of climate change presume that future changes - greenhouse gas emissions, temperature increase and effects such as sea level rise - will happen incrementally. A given amount of emission will lead to a given amount of temperature increase that will lead to a given amount of smooth incremental sea level rise. However, the geological record for the climate reflects instances where relatively small changes in one element of climate lead to abrupt changes in the system as a whole. In other words, pushing global temperatures past certain thresholds could trigger abrupt, unpredictable and potentially irreversible changes that have massively disruptive and large scale impacts. At that point, even if we do not add any additional CO<sub>2</sub> to the atmosphere, potentially unstoppable processes are set in motion. We can think of this as sudden climate brake and steering failure where the problem and its consequences are no longer something we can control."

(Report by the American Association for the Advancement of Science, 2014, quoted by Naomi Klein, *This Changes Everything*, Allen Lane an imprint of Penguin Books, 2014, p. 1)

### **The Government's Non-Response to Climate Change**

At a public meeting in Kelston in July 2014, Treasurer Bill English was asked, "How will you act to prevent the impacts of climate change?" He replied "It's a non-issue because there are more pressing concerns.....recent reports show the way the world is moving is increasingly toward climate change adaption rather than mitigation...and adaption policy was more prudent than mitigation strategies." He added National's approach was best described as business as usual in terms of climate change policy, the incentive to act will only be determined by the effects on constituents, i.e., adaption when the time comes." (Gareth Renowden <http://thedailyblog.co.nz/2014/07/30/broken-english-broken-government-broken-climate/#sthash.K5JBoKoK.dpuf>)

English's unguarded comments drew a strong, impassioned response from Gareth Renowden, editor of the "Hot Topic-Global warming and the future of New Zealand" web site:

"It's difficult to overstate just how stupid English's statements are. They are the views of a man — a powerful man, a man at the heart of government — who does not understand the first thing about the climate problem, but who is quite happy to pontificate as if he were an expert.

There is no either/or when it comes to mitigation (cutting emissions to prevent future damage) and adaptation. We have to adapt to the changes that are happening now, and that are inevitable for the next half a century, but if we fail to cut emissions at the same time we commit the world — and future generations of New Zealand voters to

wholly unnecessary extra damage.

English is either misreading what is really happening in the world — handily summarised by the IPCC and the latest “state of the climate” report — or wilfully misrepresenting it. A charitable observer might allow him his ignorance, and ascribe his comments to self-serving hubris. A cynic might point to the National government’s lip service on climate policy and the environment, and believe that English had let slip what the government really thinks.

English doesn’t bother to pay the usual lip service to doing our bit, or being in the forefront of action — the platitudes that Tim Groser and John Key offer at every opportunity. There’s only the glib certainty that other issues are more pressing, and that climate and the environment should take a back seat to economic growth at all costs.

Even on economic issues, where the finance minister might be expected to know a thing or two, it appears he’s out of touch. A new report by President Obama’s council of economic advisors finds that delaying action to cut emissions increases the cost of climate impacts by 40 percent over ten years.

The government’s disinterest in climate policy is evidenced by their complete failure to front up to the weekly questions posed by the Climate Voter campaign. With eight weeks to go to the election, the National Party’s polling must be telling them that climate is not an issue that their core support or target voters care about.

That’s a failure of governance and a failure of the political system as a whole. What’s needed is a generation of politicians who are prepared to stand up and confront reality, and provide real leadership on this issue. Only the Green Party shows any systematic understanding of what’s required in the run up to the election. But climate change is not an “environmental problem” or a “pollution problem”, an issue to be shoved into one policy portfolio or another, or relevant only to one party.

It’s not a left wing or a right wing thing; it’s an existential crisis, and we should not be playing party politics with it. If we don’t cut our carbon emissions quickly and steeply, we run the risk of consigning our civilisation — or at the very least, the way of life we have come to enjoy — to a very large and commodious dustbin. Ask the focus groups what they think of that, Bill.

That’s what English doesn’t understand, and that’s why his glib nonsense makes me despair. I know there are sensible people in the National Party. Will they not stand up for the future of New Zealand and the planet? Or are they just another bunch of time-serving politicians climbing a greasy pole erected in the wrong place, at the wrong time, by the wrong people?”

- See more at: <http://thedailyblog.co.nz/2014/07/30/broken-english-broken-government-broken-climate/#sthash.K5JBoKoK.dpuf>

## **Business as Usual in time of Crisis**

The business as usual response to climate warming also alarms conservative mainstream

agencies as it will lead to unstoppable heating with disastrous consequences. The World Bank in 2012, warned that “we're on track for 4 degree C warmer world by 2100 marked by extreme heat waves, declining global food stocks, loss of ecosystems and biodiversity, and life-threatening sea level rise.” This report cautioned “there is no certainty that adaption to a 4 degree world is possible” (Naomi Klein loc cit, p. 13). The International Energy Agency in its 2011 report projected that we are actually heading for a 6 degree C world with support from Pricewaterhouse-Coopers warning businesses of 4 to even 6 degrees warming by 2100. (Quoted by Naomi Klein, loc cit ps 14 &15) Kevin Anderson, former Director of the Tyndall Centre for Climate Change Research goes further than the World Bank saying 4 degrees C “is incompatible with any reasonable characterisation of a organised, equitable and civilised global community” (quoted by Naomi Klein loc cit p. 13).

“Based on the assessment of the science carried out by the Intergovernmental Panel on Climate Change (IPCC) in 2001, and new evidence, the Stern Review calculated that the dangers of unabated climate change would be equivalent to at least 20% of GDP each year. In contrast to huge Gross Domestic Product (GDP) losses, the costs of action to reduce greenhouse gas emissions and avoid the worst impacts of climate change could be limited to around 1% of global GDP each year. Undoubtedly, people would pay a little more for carbon-intensive goods, but global economies could continue to grow.

In other words, by reducing carbon emissions we would be better off economically (not to mention the healthier environment). Stern makes a ‘no brainer’ case, if we tackle climate change it leads to a pro-growth strategy, and if we ignore climate change, it will ultimately undermine economic growth.”

<http://www.global-greenhouse-warming.com/stern-review.html> 2006.

Melting glaciers are a current example of the need for both mitigation and adaption and the limits of adaption. Given that the threshold for the irreversible melting of a large part of the West Antarctic Ice Sheet has passed without timely recognition, our only option is to adapt for sea level rise. However, this won't stop the irreversible melting of the Totten Glacier if it has passed its threshold. There is no way of knowing which particular warming threshold has been exceeded until something unexpected happens. Then we are past mitigation and forced to adapt when it would have been less costly and disruptive to have mitigated in advance, especially for sea level rise which will hopefully, go on for centuries, not decades. But how do we adapt when keystone or popular plant and animal species go extinct because of miss-management of ecosystems? Earlier timely mitigation was the only feasible option.

## **Irreversible melting of West Antarctic glaciers**

Updated at 7:51 pm on 13 May 2014

[www.radionz.co.nz/news/world/244245/west-antarctic-glaciers-melting-nasa](http://www.radionz.co.nz/news/world/244245/west-antarctic-glaciers-melting-nasa)

Prof Rignot said warm ocean water was relentlessly eating away at the glaciers' fronts and that the geometry of the sea bed in the area meant that this erosion had now entered a runaway process.

"We present observational evidence that a large section of the West Antarctic Ice Sheet has gone into a state of irreversible retreat; it has passed the point of no return," the agency glaciologist explained.

"This retreat will have major consequences for sea level rise worldwide. It will raise sea levels by 1.2m .... but its retreat will also influence adjacent sectors of the West Antarctic Ice Sheet which could triple this contribution to sea level."

The Amundsen Bay sector includes some of the biggest and fastest moving glaciers on Earth.

## **Huge Antarctic glacier melting**

Updated at 9:14 am on 18 March 2015

<http://www.radionz.co.nz/news/world/268921/huge-antarctic-glacier-melting>

Dr Tas van Ommen from the Australian Antarctic Division said what they found was worrying, the ABC reports.

"We're realising that the East Antarctic ice sheet's probably not the sleeping giant that we thought or at least, the giant's starting to twitch and we're concerned," he said.

Dr van Ommen said that there was enough ice in the Totten Glacier alone to raise global sea levels by at least 3.5 metres.

"That three-and-a-half metre sea level rise would take many centuries to roll out," he said.

"But even in this century, the last IPCC [Intergovernmental Panel on Climate Change] report said that if this kind of thing happens, it's going to add several tens of centimetres of sea level rise to their estimate of one metre."

Glaciologist Dr Jason Roberts agreed the melting of East Antarctica's largest glacier could have major implications globally.

"The Totten Glacier drains an area twice the size of Victoria, so there's an awful lot of ice in there, grounded below sea level, so it's got a fair potential for sea level rise," he said.

Scientists plan to use more aerial surveys and eventually underwater rovers to better understand the sleeping giant, before it wakes up.

# The Consultation Process

**It's déjà vu all over again: NZ consultation on climate target set up to be a farce**

**Gareth Renowden May 26, 2015 Hot Topic, Global warming and the future of New Zealand.**

**At the end of last week, with the deadline<sup>1</sup> for submissions on a post-2020 target for New Zealand emissions rapidly approaching, the Ministry for the Environment released a second set of economic cost estimates for various emissions targets.**

These cost estimates are substantially lower, the Ministry admits, than the costs in the consultation document issued by the MfE on May 7th. As it happens, neither the Infometrics modelling used in the consultation document or the newly-published Landcare Research is terribly helpful when considering policy options, as I shall discuss later, but for the time being consider the usefulness of a “consultation” process where the following is true:

- Announce a four week consultation period on May 7, starting then, to conclude four weeks later.
- Publish a consultation document that plays up the costs of action and plays down the costs of inaction — calculated by Treasury to be up to \$52bn.
- Conduct a rushed series of consultation meetings around the country to which no ministers front up.
- Release the economic modelling relied on for the cost estimates in the consultation document 10 days after the process begins, well after the consultation meetings have started.
- Release a second economic modelling report showing costs to be less than the original document presents just over a week before submissions close.

Let's summarise. This is what the economists at Infometrics (and Landcare Research – their assumptions are not too different) were asked to test:

- we will ignore the likely costs to society and the economy of a changing climate
- we will ignore any non-market tool for achieving emissions reductions by regulation
- we will ignore NZ's international exposure to climate risk
- we will ignore anything that agriculture can do to reduce emissions, and assume that the rest of the economy will be happy to subsidise farming
  - we will ignore anything that our forestry industry can do to plant trees and remove carbon from the atmosphere

- and we will assume that we can only meet our emissions obligations by buying overseas emissions units.

In other words: if we assume that we proceed for the next 15 years with a blindfold over our eyes and our arms tied behind our back, we find that action to cut emissions will be expensive. Who'd have thought it? What a surprise...

That's bad enough, but there's more that the MfE's economic consultants refuse to price. The consultation document points out that there opportunities to be had in a transition to a low carbon economy, and suggests that electric vehicles are an example of beneficial change that's already happening. But there are many more to be found in low carbon technology development, both

biological and physical. NZ is already recognised as a good platform for testing software and services — and that could be true for more than iPhone apps or accountancy services.

What's worse is that every year we continue down a path that ignores the inevitability of a transition to a net-zero carbon economy, we make action when it finally comes all the more expensive. There is a very real price to be paid for being locked into a high-carbon economy. Tim Groser and John Key are — unwittingly, one hopes — busy turning a drama into a crisis. And it won't be them that pays the price.

## National literally want to hide the costs of inaction on climate change

Written By: Anthony Robins - Date published: 6:45 am, May 20th, 2015 - Categories: climate change, global warming, national, treasury - Tags: climate change, hiding the facts, scandal, through the looking glass, treasury predictions

The Nats are currently “consulting” we the people on NZ's carbon emissions target. As covered yesterday, the consultation document is largely a vehicle for Nat spin and evasion, focusing on the costs of action to reduce our emissions. The costs of inaction are ignored. But we have Treasury estimates of the costs:

### **Failure to cut emissions could cost \$34,000 per household**

Treasury figures, released by the Sustainability Council today, show failing to take action to cut greenhouse gas emissions will cost between \$2,000 and \$34,000 per household, the Green Party said.

The Sustainability Council has obtained figures previously redacted from a Treasury climate briefing which shows that the cost of failing to take action to cut New Zealand's greenhouse gas emissions is between \$3 billion and \$52

billion from 2021 to 2030. The Treasury report identifies the cost of buying credits to cover a target of a 5 percent reduction below 1990 levels for the 2021-2030 period at a price of between \$10 and \$165 a tonne.

The costs of doing nothing are phenomenal. The topic of many past and future posts here to be sure.

But in this post I want to focus on that phrase “previously redacted”. The redacted Treasury report is here. The Sustainability Council got the figures because they got access to a different version of the report:

Simon Terry of the Sustainability Council, who obtained a copy of the Treasury document with the figures, hoped the massive price tag would frighten the Government into action now.

So where did the different version of the report come from? Yesterday in Parliament:

**Hon TIM GROSER (Minister for Climate Change Issues):** The range of figures contained in the redacted part of that now rather dated document was between 0.3 and 0.8 percent of GDP ...

**Dr Russel Norman :** In light of that answer, what exactly did Treasury get wrong when it said in this paper that the cost to the Government of not cutting our greenhouse gas emissions was up to \$52 billion—as Treasury said in this paper?

**Hon TIM GROSER :** I think what Treasury got wrong was that it did not use sufficiently sophisticated software to conceal the redacted information.

What? So we the people only learned of Treasury projections on the costs of inaction on climate change because someone screwed up a redacted document! We were never meant to know. And National's Minister for Climate Change Issues statement on the matter is that Treasury should have done a better job of hiding this vital information from the public.

National are running a public “consultation” process where they **intended to hide the most important half of the story**. We have become so used to scandals that this one will probably be lost in the noise. But it is huge. What the actual hell?

## Feed back on Formal Questions

### Question 1.

Objectives (a) "Our target is seen as a fair and ambitious contribution –

## **both by international and domestic audiences.**

This objective is fine but NZ's present target of reducing our gross GHG emissions by 5% in 2020 based on our 1990 levels, is neither fair nor ambitious. It is derisively inadequate for a developed country given the magnitude of the global task of reducing emissions and because of our failure to meet two earlier targets, and will be seen as such.

Special pleadings based on our high reliance on agriculture earnings and relatively high level of renewable energy have no substantive justification. For example, Climate Change Issues Minister Tim Groser and Primary Industries Minister Nathan Guy have welcomed news of a breakthrough by New Zealand researchers which offers the potential to cut greenhouse gas emissions from sheep and cattle by 30 to 90 percent without cutting production. Climate Change Issues Minister Tim Groser and Primary Industries Minister Nathan Guy have welcomed news of a breakthrough by New Zealand researchers which offers the potential to cut greenhouse gas emissions from sheep and cattle by 30 to 90 percent without cutting production. <https://www.beehive.govt.nz/release/ministers-welcome-scientific-progress-cutting-agricultural-greenhouse-gases>.

The high relative rate of renewable electrical energy achieved decades ago without any thought of climate change, is a bonus that gives us an advantage over most other countries and not something we should complain about!

Objective (b) Costs and impacts on society are managed appropriately.

Scrap the corrupted ETS which does not fairly reflect costs and benefits and replace it with a carbon tax charged to polluters. Over the last 3 years taxpayers have unwittingly paid polluters \$78 million to pollute via the ETS. This is a cynical ploy by the National government to hide subsidies in the form of corporate welfare. The Government's own official information is that the ETS has had almost no impact on emissions. All it's done is shift money from taxpayers to the biggest polluters. (Why are we paying climate polluters \$31m to pollute? Russel Norman MP on Sunday, May 24, 2015 - 12:20)

In 2020, gross emissions (those from fossil fuels and agriculture) will be just 0.6% lower than if the government had taken no action on climate change. (Simon Terry loc. Cit. In Q. 3)

Objective (c) It must guide New Zealand over the long term in the global transition to a low emissions world. We have not even begun to make a genuine attempt to legislate and implement the procedure NZ agreed to do in 1992. Simon Terry (loc. Cit. In Q. 3).

## **Q2.**

### **What do you think the nature of New Zealand's emissions and economy means for the level of target that we set?**

The target we set should match the seriousness of the problem we collectively face. The habitability of the planet is at stake and we should do what we can as a relatively rich country even if others choose to do less. It is far better for us to commit the sin of doing

more than "our share" and there by encourage others to do the same so that collectively we succeed. Failure is not a option.

With regard to our reliance on agriculture for much of our earnings while other comparable countries rely on manufacturing production to do the same, there is no real difference between these methods for generating wealth. Both approaches generate roughly equivalent amounts of green house gases per unit of GDP with manufacturing producing CO<sub>2</sub> while we produce equivalent amounts on enteric fermentation gases. The main enteric gases, methane and nitrous oxides are more potent ghgs than CO<sub>2</sub> and although methane has a shorter life in the atmosphere it more than makes up in the short term it is active. "Methane, which accounts for only 14 percent of emissions worldwide, traps up to 100 times more heat than carbon dioxide over a 5-year period. This means that even though carbon dioxide molecules outnumber methane 5 to 1, this comparatively smaller amount of methane is still 19 times greater a problem for climate change over a 5 year period, and 4 times greater over a 100 year period. Methane is much more active than CO<sub>2</sub> in the short term when we urgently need to slow warming down to avoid dangerous climate change.<http://www.onegreenplanet.org/animalsandnature/methane-vs-carbon-dioxide-a-greenhouse-gas-showdown/>

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**Q3.**

**What level of cost is appropriate for New Zealand to reduce its greenhouse gas emissions? For example, what would be a reasonable reduction in annual household consumption?**

I refer you to the following excellent discussion paper by Simon Terry that covers the large costs the Government incurred on our behalf and those expected until 2030 together with some solutions to our predicament.

## Targets, Projections, and Liabilities

Sustainability Council of New Zealand December 2014 2<sup>nd</sup> ed

Researched by Simon Terry. [www.sustainabilitynz.org](http://www.sustainabilitynz.org)

New Zealand's Climate Change Targets, Projections, and Liabilities<sup>2</sup>

Carbon Budgeting:

New Zealand plans to meet existing commitments to reduce emissions largely through creative carbon accounting. It will make a third emissions pledge in 2015 and this one will cost: the Treasury advises the bill could range from \$3 billion to \$52 billion. Tackling the actual problem of rising gross emissions will require Carbon Budgeting.

Three Targets, No Emissions Reduction Plan

New Zealand has two emissions reduction commitments:

- 2008 to 2012: A return to 1990 emissions levels, and
- 2013 to 2020: A 5% reduction on 1990 emissions levels.

It also targets a 50% reduction on 1990 emission levels by 2050.

However, the country has no low-carbon development plan for meeting these targets, as required under a 2010 UN agreement.

i

## Government Policies Cut Gross Emissions by Half a Percent

The Emissions Trading Scheme (ETS) is the main tool the government relies on to influence emissions. It started as a weak scheme that imposed little penalty on polluters - cutting gross emissions less than 1% -but was scheduled to ramp up. Instead, in 2012 the ramp was removed through a change of law and the carbon price was allowed to fall to below \$1/tonne of carbon.<sup>ii</sup>

in consequence, Environment Ministry projections are that:<sup>iii</sup>

- In 2020, gross emissions (those from fossil fuels and agriculture) will be just 0.6% lower than if the government had taken no action on climate change.
- In 2030, gross emissions will be just 0.4% lower than if the government had taken no action

## Agriculture the Big Driver of Future Emissions Growth

Gross emissions have risen 26% since 1990 and are officially projected to be 42% above that benchmark by 2030. While energy use has been the biggest driver to date of this increase, it is agriculture that dominates the future growth of emissions.<sup>iv</sup>

- Three quarters (77%) of the growth in emissions between now and 2030 is projected to come from agricultural gases (essentially dairying). Agriculture pays no charges for its 49% share of total emissions now, or in 2030.<sup>v</sup>
- Additional emissions from energy will make up only 15% of the total growth

## 2020 Target to be Overshot by 33%

New Zealand's 2020 emissions target of 5% below 1990 levels has been set outside the Kyoto Protocol and is instead a non-binding pledge to other countries.<sup>vii</sup>

Analysis of Ministry for the Environment projections shows that:<sup>viii</sup>

- New Zealand's gross emissions are projected to be 33% in excess of its 2020 target. That is, 168 mega tonnes of CO<sub>2</sub>equivalent (Mt of carbon) greater than the target would allow during the period from 2013 to 2020.
- If carbon absorbed by crop forests is also counted, this roughly halves the overshoot to 15% -or 78 Mt on what the government terms a 'net' emissions basis.

New Zealand is planning to account for 90 Mt of the excess by claiming further credits from local crop forestry –and so put half this second bill on the Visa card too.

The plan set by the Cabinet for the other 78 Mt of the overshoot is to rely on carbon credits purchased internationally.<sup>ix</sup> The government has accumulated a large quantity of these, primarily as a result of such credits being used by companies to meet ETS obligations (instead of cutting emissions or buying local carbon credits).

International carbon credits accounted for 99% of those surrendered in 2013 and the government expects it will hold 90 Mt worth of such credits that will not be needed to meet its pledge for the first Kyoto period.<sup>x</sup>

So it intends to “carry over” enough credits from the first period to offset half the excess for the second period.

However, countries such as New Zealand that have not made a second commitment under the Kyoto Protocol may not have the same rights to carry over credits.

Tensions during negotiations over these rights have led to rules that have been labelled “ambiguous and somewhat contradictory”<sup>.xi</sup>

A key problem is that far too many credits have been issued into the UN system and unless access to them is restricted and other loopholes are closed, then those countries that have made no real effort to reduce emissions will be able to meet their second period commitments very cheaply while maintaining business as usual.<sup>.xii</sup>

But efforts to restrict surplus credits being carried over from one period to the next have been resisted by a small group of countries holding surpluses – including New Zealand.

During debate on these rules, New Zealand said that it simply wanted to preserve its ability to manage its crop forestry position.<sup>.xiii</sup>

This implies that carry over would be used to allow surplus forest credits that are earned in one period to be matched with emissions from harvesting in another period. But that is not New Zealand’s apparent plan, as what first looked like a meaningful surplus has shrunk to 8 Mt and more importantly because credits from the first period are not being matched with harvesting in the third period, but with a gross emissions overshoot in the second period. What carry over would achieve in effect is an ability to transfer crop forest credits from the first period into the second period. And as New Zealand would then need to fill a gap in the first period tally, the carry over can also be described as effectively allowing the country to meet half its excess for the second period using imported credits that are mostly of dubious environmental integrity-sourced out of the Ukraine and Russia at a price of less than 50 cents a tonne.<sup>.xiv</sup>

If New Zealand cannot settle up using these first period credits, then it is clear that the Government-but not companies or traders –could instead buy credits newly issued for the second period.<sup>.xv</sup>

This would likely be at much higher carbon prices and so a cost to the nation considerably above the few tens of millions of dollars incurred to acquire a surplus of first period credits. However, even then questions have been raised over whether credits designed for use within the Kyoto Protocol can be validly used to meet a commitment made outside it.<sup>.xvi</sup>

In the worst case, the implicit liability would carry over to the third commitment period – meaning that the entire bill for the excess from the second period would go on the Visa card

## The Third Period Carbon Crunch

A third period commencing in 2021 and extending for up to ten years is the focus of

international negotiations scheduled to be concluded in Paris in December 2015. This is the period world leaders are focusing on for global climate action to make a genuine showing. It is also the decade during which the trees New Zealand previously relied on to claim forestry credits are scheduled to be cut down. Including payback for forest credits, New Zealand's emissions for the period from 2021 to 2030 are officially projected to be 55% above even just the current target level –an overshoot of 350 Mt. The Treasury uses this target level as its example when briefing ministers and warns that carbon prices will be considerably higher during this period -expecting them to be between \$10 and \$165 a tonne.<sup>.xvii</sup> So for a target no more ambitious than the current one of 5% below 1990 levels, the Treasury is advising that this could cost New Zealand between \$3 billion and \$52 billion (assuming a 315 Mt excess).<sup>.xviii</sup>

This is the time at which much of the Visa card payment comes due -with major penalty interest in the form of far higher carbon prices expected than in the earlier periods. But it is the continued growth in emissions that generates the biggest portion of the bill and without forest credits to whisk away the excess to another time, the financial cost of failing to take action in the past is suddenly clear. New Zealand's current response is to be in the vanguard of those proposing that each country should take a non-binding commitment based simply on what it is willing to do (though underbinding accounting standards).<sup>.xix</sup> In contrast, the EU says that "legally binding mitigation targets are the only way to provide the necessary long-term signal".<sup>.xx</sup> New Zealand is also brazenly pushing for flexibility in the rules to allow commitments to exclude gases other than CO<sub>2</sub> –when agricultural gases make up half the nation's emissions and three quarters of its emissions growth.

The Ministry of Foreign Affairs and Trade warns that: "the current negotiations on climate change are the most important multilateral negotiation now under way.

Positions taken by countries on climate change and their readiness to contribute to global solutions will increasingly define the way that others perceive them politically and economically".<sup>.xxi</sup> As a small trade dependent nation, New Zealand cannot afford to underperform and on current projections, any meaningful target for the third period is going to require serious spending.

The Treasury also acknowledges the need to "address credibility risks", but would like to contain that spending to a level that imposes "equal costs as a percentage of GDP in each country". But that formula would ignore the historic responsibility of developed countries whose past emission levels were high relative to others, and also ignores those that have made no meaningful long term difference to their emissions since developed countries pledged to act in 1992. New Zealand is represented in both classes and developing countries are of no mind to wipe the slate clean.

Whatever size commitment is adopted, the clear path for a country that relies on food exports and tourism for a living is to first engage in serious programmes to reduce emissions within New Zealand before looking to purchasing credits offshore. This also opens the way to creating a branding win out of necessity while keeping green jobs at home. In particular, there is a large potential for biodiverse permanent forestry and a sizable block of emissions in pastoral agriculture that can be cut at low cost.<sup>.xxii</sup>

## Carbon Budgeting

Delivering serious emissions reductions within New Zealand requires something well beyond erratic ETS settings. It requires Carbon Budgeting.

- A Carbon Budgeting process details the expected carbon flows and how these can be reduced by practical actions. It takes targets, assesses the options, and describes an overall plan for achieving those outcomes. It integrates pricing tools such as the ETS with complementary measures.<sup>xxiii</sup>
- An independent Climate Commission needs to be established to undertake the budgeting process and recommend Carbon Budgets to government.
- Legislation is required to establish the Climate Commission and lock in emissions reduction targets at key intervals. In between these milestones, a series of five-year budgets are progressively struck that guide decarbonising of the economy within the legislated boundaries.<sup>xxiv</sup>

## Beyond Crop Forest Credits

The overall effect of New Zealand's climate change policy has been to put much of the cost of today's excess emissions on to tomorrow's taxpayers. But after many years focused on creative carbon accounting, New Zealand is now feeling pressure to deliver emission reduction results.

The circumstances are different partly because the two biggest carbon polluters, the US and China, have pledged to make meaningful change –though not that much.

Mainly it is that the day has come when there are no longer crop forest credits to provide limited term offsets and the relentless rise in the nation's gross emissions is plain for all to see. At the same time, payback is due on forest credits that were used to duck costs in prior periods -all as carbon prices are expected to rise significantly.

None of this is unexpected –though there is still time to undertake some reshaping of how New Zealand will meet its existing obligations.<sup>xxv</sup>

But tackling the actual problem of growing emissions requires a big change in thinking. It also means an end to the shallow spin that has been used to put off meaningful action, and instead embracing a New Zealand that steps up to its responsibilities and starts to truly look like the country it claims to be.

For references see original article; Sustainability Council of New Zealand December 2014 <sup>2nd ed</sup>

Researched by Simon Terry. [www.sustainabilitynz.org](http://www.sustainabilitynz.org) New Zealand's Climate Change Targets, Projections, and Liabilities<sup>2</sup>Carbon Budgeting:

**Q4 .**

**Of these opportunities which do you think are the most likely to occur, or**

## **be most important for New Zealand?**

- 1. It is seen as a fair and ambitious contribution – both by international and domestic audiences.**

### **Electrification of our transport systems**

To capitalise on our high level of renewable electricity generation we should intensify the very modest measures taken to boost the number of electric vehicles on our roads. For example, encourage electric car manufacturers to set up business here to test and promote their vehicles and establish a network of support recharging stations.

Urgently investigate the use of electric trucks and agriculture machinery.

Reverse the absurd de-electrification of our railways and begin to electrify a new improved national wide system with new rolling stock and lines .

- 2. Costs and impacts on society are managed appropriately**

Scrap the ETS and introduce a carbon tax on all ghg activity and make this financially neutral

by reducing energy cost for the public and sustainable enterprises

## **Q5.**

### **How should New Zealand take into account the future uncertainties of technologies and costs when setting its target?**

Set an ambitious target for the 2020 – 2030 period of 25% reduction of gross ghgs and immediately encourage re-forestation with both indigenous and exotic species. Increase pest control in native forests to prevent death of trees and loss of carbon and maintain biodiversity. Prevent soil erosion.

By urgently taking climate change seriously and rapidly reducing our gross ghg emissions and doing our share of research to decarbonise industrial and manufacturing processing to complement research on reducing enteric emissions.

Immediately stopping all new exploration for oil, gas and coal mining to do our share of trying to keep warming to less than 2 degrees C and improve public health.

Immediately divest the government investment in fossil fuel companies, e.g. our superannuation scheme and encourage private investors to do the same.