

New Zealand Green Building Council

Submission on New Zealand's Climate Change Target

June 2015

Executive Summary

- Intended Nationally Determined Contributions (INDCs) to reducing global greenhouse gas (GHG) reductions provide New Zealand with autonomy to determine its own aspirations and policies. New Zealand should use this opportunity to carefully develop options for sector-specific pathways to a sustainable, low-carbon future.
- New Zealand should not be influenced by the simple numeric commitments made by other countries. A single numeric commitment for 10-15 years from now cannot be credibly derived for New Zealand because of the country's disparate greenhouse gas (GHG) emissions profile. It will also be subject to the uncertainty surrounding future international accounting rules.
- New Zealand should determine stringent, aspirational objectives and targets for each of its GHG emitting / absorption sectors. New Zealand's INDC should be expressed in terms of these sector aspirations and objectives. It should also include other relevant international contributions, such as further support for agricultural scientific research, and support for Pacific Island countries. Any aggregated numeric target should be expressed as a broad range, with clearly stated assumptions. A numeric target should be the outcome of sector policies and activities, not the driver.
- New Zealand's INDC should:
 - Reflect our aspirations for a sustainable, low-carbon economy.
 - Contribute to the goal of global GHG emission reductions.
 - Be derived from a series of sector scenarios, with sector targets being the primary numeric expression in our commitment.
 - Use these sector-specific targets and clear, transparent assumptions, to provide a broad range target. (This aggregate target may not be for all GHGs).
- New Zealand should support the use of flexible market instruments to enable the internationally lowest cost emission reductions to be achieved. This does not necessarily mean a single "all sectors, all gases" market. It may be appropriate to have a market that is limited to similar emission sources (for example, CO₂ emissions from energy use), and allow verified offsets for activities such as forestry and agriculture.
- New Zealand can continue to provide leadership in the international negotiations with an INDC that demonstrates the alternative approach that needs to be taken by small countries with atypical GHG emission profiles.
- Development of our INDC highlights the need to address domestic policies. It is clear that the current emissions trading scheme (ETS) will not, on its own, ensure New Zealand's progression to a sustainable, low-carbon economy. Supporting sector-specific policies and measures are also required. It may be that some sectors should be included in a different way in the ETS.

Introduction

Countries across the globe have committed to create a new international climate agreement by the conclusion of the U.N. Framework Convention on Climate Change (UNFCCC) negotiations at the Conference of the Parties (COP21) in Paris in December 2015. In preparation, countries have agreed to publicly outline what post-2020 climate actions they intend to take. These are their Intended Nationally Determined Contributions (INDCs). The INDCs will largely determine whether the world achieves an ambitious 2015 agreement and is put on a path toward a low-carbon, climate-resilient future.

The process for INDCs combines national policy-setting — in which countries determine their contributions in the context of their national priorities, circumstances and capabilities — with a global framework that drives collective action toward a low-carbon, climate-resilient future.

The INDCs can create a constructive feedback loop between national and international decision-making on climate change.

The INDCs will reflect each country's ambition for reducing emissions, taking into account its domestic circumstances and capabilities. Some countries may also address how they'll adapt to climate change impacts, and what support they need from, or will provide to, other countries to adopt low-carbon pathways and to build climate resilience.

New Zealand has actively participated in these international negotiations for over 20 years. Credibility has been achieved as a result of both our constructive engagement in the international negotiations and our commitment to domestic policies.

New Zealand ratified the Kyoto Protocol in 2002. This required New Zealand to reduce its emissions in the period from 2008 to 2012 to their 1990 levels. New Zealand has achieved this target. It has subsequently set targets for reducing GHG emissions that cover both the medium and long term. In the short-term, there is a target of between five and 20 percent reduction on 1990 levels by 2020, and a long-term target of 50 per cent below 1990 emissions by 2050.

We need to sustain our engagement and action through these next negotiations to establish a new international climate change agreement. All countries must participate in this process, so that an effective global response is developed. Countries with higher levels of economic activity and household income need to ensure that they provide leadership to the international effort.

International context

Well-designed INDCs will signal to the world that the country is doing its part to combat climate change and limit future climate risks. Countries should follow a transparent process when preparing their INDC in order to build trust and accountability with domestic and international stakeholders. A good INDC should be:

- Ambitious - leading to transformation in carbon-intensive sectors and industry
- Transparent - so that stakeholders can track progress and ensure countries meet their stated goals; equitable - so that each country does its fair share to address climate change.
- Clearly communicated so domestic and international stakeholders can anticipate how these actions will contribute to global emissions reductions and climate resilience in the future.

An INDC should also articulate how the country is integrating climate change into other national priorities, such as sustainable development. It should articulate the contributions anticipated from both the public and private sectors. It will describe emission reduction pathways for the period through to 2025 to 2030. Cumulative international contributions are intended to set a pathway to emission reductions that will limit global temperature increases to no more than 2°C.

The United States (US) and the European Union (EU) have already published overall numeric targets contained within their INDCs, namely:

- United States: Reduce emissions by 26-28% below 2005 levels by 2025.
- European Union: Reduce emissions by at least 40% below 1990 levels in 2030.

These two targets reflect strong commitments from both regions. However, they also demonstrate that simplistic comparisons of INDCs is not possible. Countries will express their commitments and targets in a format that is appropriate to their circumstances, including different baselines.

New Zealand needs to make sure that domestic debate about its proposed target does not become a debate about the stringency of simplistic, numeric targets. This will reduce the quality of informed public discussion that is needed for this important issue.

It is also important to understand the potential emission reduction pathways on which other countries' targets are based, and the differences between these and the possible pathways for New Zealand. Both the US and the EU have based their commitments on:

- Opportunities for reducing the carbon-intensity of electricity generation. Very few countries generate a similar proportion of their electricity from renewable sources, as New Zealand does. In the EU, the current proportion of renewable electricity generation is 22%. In addition, significant quantities of electricity are still generated using coal as the energy source.
- Opportunities for industrial energy efficiency. The EU and the US have a higher proportion of their emissions resulting from industrial facilities. New Zealand has less opportunity for emissions reductions from industrial energy efficiency as a result of a proportionately smaller industrial sector, and that electrical energy has a low emissions factor because of the high proportion of electricity generated from renewable sources.

Given the scale of the electricity generation and industrial sectors in the US and EU, there is likely to be a relatively linear relationship between carbon and economic costs. Similarly, there is likely to be a steady availability and uptake of new energy sources and energy efficiency technologies as these costs increase. That enables more meaningful modelling of the costs and effects of a carbon price and / or regulatory interventions.

Objectives for New Zealand's contribution

The discussion document has requested feedback on three potential objectives for New Zealand's contribution.

- *It is seen as a fair and ambitious contribution - both by international and domestic audiences.*
- *Costs and impacts on society are managed appropriately.*
- *It must guide New Zealand over the long term in the global transition to a low emissions world.*

The first and third objectives are appropriate. The second objective is not appropriate. It will be impossible to obtain a consensus on "appropriate costs and impacts".

The first and third objectives above offer sufficient direction. "Fair" encompasses many aspects. It should not require one sector to assume a disproportionate share of change, because of the potential for disruptive effects within that sector. "Fair" also implies not impacting on the competitiveness of New Zealand businesses. Displacing fossil fuel exploration and production, energy intensive industrial production and agricultural production offshore will not reduce global emissions, as those emissions will simply be occurring in other countries.

Discussion of New Zealand's pathway to a low emissions future must address the following issues:

- Energy security achieved while reducing future GHG emissions.
- Opportunities and constraints in the agricultural sector.
- Enabling investment and achievement of other environmental objectives, and avoiding large swings in net emissions /absorption in the forestry sector.
- Support for innovation and new technology uptake, so that New Zealand improves energy efficiency with the rest of the world.
- Maintaining international competitiveness, so that emissions are not exported to countries with less stringent policies.

These discussions could lead to several sector scenarios, which are then used to develop policies for each sector. Monitoring sector and aggregate performance against these scenarios would provide the basis for adjusting policy settings. Such discussions would be more likely to lead to engaged, constructive debate about the contribution that New Zealand needs to make to the international effort to reduce GHG emissions.

The nature of New Zealand's emissions and economy and the level of target

As noted in the discussion document, predicting what New Zealand can achieve to reduce emissions 10 to 15 years from now, and what technology will be available, is a significant challenge.

New Zealand has little scope for further reductions in the emissions factor for electricity generation. Further industrial GHG emission reduction opportunities are also limited because of the low emissions factor for electricity. This is illustrated by the emissions profile (Figure 2) in the discussion document.

Further analysis is required to enable informed public discussion about New Zealand's emission reduction pathways and targets. Such discussion needs to include data and information about projected emissions pathways for:

- Agricultural emissions
- Forestry absorption and emissions through harvesting
- Fuel mix and the proportion of renewables for electricity generation
- Industrial energy efficiency
- Commercial and domestic energy efficiency
- Domestic production of energy sources and fuels
- Transport energy efficiency and fuel mixes.
- Purchase of overseas emission units.

Assumptions for each of these would undoubtedly be arbitrary. But this information would promote more informed discussion about New Zealand's options for a target.

The outcome of such discussion could be a consensus that an overall numeric target needed to be expressed as a broad range (for example, between continued stabilisation at 1990 levels and 30% reduction by 2030). Such a broad range would be unacceptable for a large country or region. However, it would be appropriate for a small country with an atypical emissions profile.

The document uses three examples of potential comparison measures with other countries' commitments:

- *GHG emissions per capita* - this is not a suitable indicator to compare countries with disparate emissions profiles.

- *CO₂ emissions per capita* - this is more meaningful as it an indicator of energy efficiency within an economy. Even so, it also has limitations because it will be affected by national circumstances and natural resources. For example, New Zealand's performance is assisted by its abundance of renewable energy resources.
- *National circumstances/cost* - there is a significant degree of uncertainty involved in this approach. In the models of cost in the New Zealand economy, there is no information to state whether carbon cost-induced emission reductions are derived from emission efficiencies, or from exporting emissions. Even so, this analysis demonstrates that New Zealand does not have a wide range of emission reduction opportunities.

This international process enables countries to determine their own format for targets and other elements of their INDCs. While numeric targets become the 'headlines', other elements of the INDCs are more important. New Zealand has the opportunity to provide leadership to smaller countries with atypical emission profiles, by placing more significance on its other commitments, and illustrating why a single numeric target is unsuitable, both as its expression of its international contribution, and as the basis for determining its domestic policies.

Cost of the target in relation to household consumption

This is not an appropriate question, and is not helpful in terms of determining NZ's target. It is likely to be divisive, with those particularly concerned with the need to reduce the risk of global climate change advocating that any economic cost should be considered as subservient to the future costs of the future impacts of climate change.

New Zealand needs to move towards sustainable policy settings for reducing GHG emissions. The public discussion about suitable policies in New Zealand has been framed by divergent views over the level of economic costs that New Zealanders (businesses and householders) should be prepared to assume. However, framing the discussion in this way has polarised the discussion – from those who believe that any cost is justified in reducing the risk of future climate change, through to those who believe that there are more important and immediate social and economic imperatives to address. This has significantly hindered sensible discussion and it is impossible to reconcile these perspectives. Attempting a compromise leaves neither perspective satisfied, and results in unsustainable policies.

It is assumed that the estimates of the cost of the target provided in the discussion document are based on economy-wide modelling of input costs, and that cost increases have been determined based on the levels of potential carbon costs.

Recent history, particularly the global financial crisis, have illustrated the extreme difficulty of predicting future economic parameters. Developing an overall New Zealand target based on modelled costs of carbon and the effects on economic growth and household income is nebulous to say the least.

New Zealand's approach to determining a target should be based on stringent but feasible actions and scenarios for each of its significant sectors, to produce emission reduction target ranges for each, with associated transparent assumptions. This provides a framework for future domestic policies, by:

- Providing an outcome for each sector, and then addressing the question: "What policies and measures would be most effective to achieve this outcome"?
- Enabling the settings within that policy to be modified over time, based on results and any other effects of the policy.

New Zealand's target is likely to be met through a mix of reducing domestic emissions, establishing new forests and through using international carbon markets.

It is not known how a target will affect the New Zealand economy and it is very likely the effect will not be as modelled.

Commitments should be made that will be beneficial for the New Zealand economy. Policies and measures that accelerate the uptake of efficiencies and innovation will improve New Zealand's productivity and increase economic growth. However, policies and measures that render parts of the current economy internationally uncompetitive (with countries without such policies) would be likely to result in higher economic costs.

Determining a target based on modelled economic costs is not an appropriate approach. New Zealand has a responsibility to support international action to reduce GHG emissions. It should do this with a sustainable policy mix that enables efficiency and innovation in each sector, and enables the economy as a whole to evolve to less dependency on carbon, and to de-coupling economic and GHG emissions growth.

Opportunities for New Zealand

The discussion document identifies a number of potential benefits from reduced GHG emissions, including cost savings from fuel and energy efficiency, opportunities from New Zealand's high level of renewable energy, the environmental benefits of forests, and remaining competitive in a world in which the emissions intensity of products and services will increasingly be an issue.

These are all significant and important opportunities for New Zealand. Most of these are independent of each other, and therefore there is no need for prioritisation among these. All should be pursued together with other opportunities, as part of a comprehensive approach to enable New Zealand to transition to a sustainable, low-carbon economy.

Future uncertainty in technologies and costs when setting New Zealand's target

An overall target is less likely to motivate change towards a sustainable, low carbon economy than well-developed sector-specific policies. For example, in terms of fuel and energy efficiency standards, graduated standards provide a clear pathway into the future for businesses and households.

When the New Zealand contribution is set, it is also important the target is realistic for future governments to achieve. There are major uncertainties surrounding any commitment to which a future New Zealand government would be held to account in 2030. It is critical that the country's contribution is appropriate given our national circumstances and interests, and that it represents fair and ambitious action towards the global solution.

As stated earlier, New Zealand's commitments should:

- Be derived from a series of sector scenarios, with targets for sectors being the primary numeric expression in our commitment.
- To provide an aggregate target, the ranges should be combined to provide a broad range target, with clear sector assumptions expressed with it. (That aggregate target may not be for all GHGs).

New Zealand should support the use of flexible market instruments to enable the internationally lowest cost emission reductions to be achieved. This does not necessarily mean a single, "all sectors, all gases" market. It may be appropriate to have a market that is limited to similar emission sources, (for example, CO₂ emissions from energy use), and allow verified offsets for activities such as forestry and agriculture.