Submission on the Climate Change Response (Zero Carbon) Amendment Bill

To the Environment Committee July 2019

Submitter details

This submission is from the Parliamentary Commissioner for the Environment, Simon Upton.

I wish to appear before the Environment Committee to present my submission.

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Key points

- Achieving cross-party support for the Bill is very desirable.
- The best way of securing cross-party support for the 2050 target is to confirm it
 only after the Climate Change Commission has had an opportunity to review it,
 applying a robust and transparent framework.
- In addition, careful consideration should be given to the extent of forest offsetting for fossil carbon dioxide emissions.

The Parliamentary Commissioner for the Environment

The Parliamentary Commissioner for the Environment was established under the Environment Act 1986. As an independent Officer of Parliament, the Commissioner has broad powers to investigate environmental concerns and is wholly independent of the government of the day. The current Parliamentary Commissioner for the Environment is Simon Upton.

Introduction

The Environment Committee will know from my March 2018 report, A Zero Carbon Act for New Zealand: Revisiting Stepping Stones to Paris and Beyond, that I strongly support the statutory basis for long-term targets and institutions this Bill seeks to establish.

My report built on the commentary of my predecessor, Dr Jan Wright. Dr Wright correctly noted that the key benefit of the budgeting approach taken in the Bill is that the process can endure through changing governments. As she put it: "I would not want such a law to scrape through in Parliament. Support across political parties is vital. Climate change is the ultimate intergenerational issue, and governments change."

Whatever Parliament decides to enact must be able to endure. Responding to climate change involves a profound economic transformation that will play out over the coming decades. Achieving cross-party buy-in at the outset is very desirable. All of my recommendations are made with this in mind.

Proposed section 5J: Commission's functions

The long list of functions assigned to the Climate Change Commission (the Commission) includes significant monitoring and reporting responsibilities (see 5J(f)). There is a risk that the Commission will be caught up in an endless cycle of reporting, diverting scarce resources away from its two most important functions (setting emissions budgets and preparing regular national climate change risk assessments).

Regular monitoring and reporting on progress on climate policy implementation is important and is currently undertaken by departments. In particular, the information requested in the Commission's annual reports, such as greenhouse gas trends, emissions projections and implementation of policies and measures, is already gathered together by the Ministry for the Environment and reported in biennial reports and national communications to the United Nations Framework Convention on Climate Change (the UNFCCC).

The Environment Committee should consider whether all the reporting detailed in proposed sections 5ZG to 5ZI is necessary. The Commission will need to track the unfolding trajectory of emissions as an input into developing future emissions budgets. There is a risk that an annual report on emissions and removals, future projections and an assessment of the current emissions reduction plan will divert resource and attention from the Commission's primary functions, which are recommending emissions budgets and climate change risk assessments.

In particular, the requirement in proposed section 5ZI for the Commission to report two years after the end of an emissions budget period seems of particularly questionable value. By then the Commission will be in the process of recommending a budget a decade and a half in the future. In doing so it will obviously have to take account of the trajectory the country is on, but reporting on an expired budget would be to focus on the past.

Change sought

Review the functions of the Commission as they relate to monitoring and reporting to ensure that the Commission can train its primary focus on setting emissions budgets and preparing national climate change risk assessments.

Proposed section 50: Target for 2050

Setting emissions reduction targets

The main benefit of setting a target is to make the long-term direction of travel clear, so communities and businesses can plan accordingly. A target that is successively re-litigated will not provide that certainty. And besides, we are running out of time to debate how far and how fast we make progress. So a robust and transparent process for setting the 2050 target is critical to the success of this Bill. While there will always be debate and disagreement about policies, we should be aiming for targets that can stay the course.

This would be easy if targets were purely dictated by science. But setting targets depends on a raft of physical, economic, social and political factors. Coming up with long-term targets that can stand scrutiny over time is challenging. It is worth taking the time to secure a consensus.

In my report Farms, forests and fossil fuels I felt confident saying that any target for carbon dioxide emissions had to be zero – at some point. The 'at some point' involves a judgment that must draw on science, but also technological possibilities and social sustainability.

On nitrous oxide and methane I was less confident about an exact emissions reduction target. I modelled several different levels of abatement, but suggested that Parliament really needed expert advice from the Commission that this Bill seeks to establish.

I explained why the risks of relying on forest sinks make them an unsuitable offset for fossil carbon dioxide emissions, but less so for the biological gases.

The targets set out in the Bill reflect different judgments, namely that:

- forest offsets are acceptable for carbon dioxide and nitrous oxide emissions, and a target for these gases of net zero by 2050 is appropriate; and,
- biogenic methane shouldn't be eligible for offsets, but need only be reduced by 24-47 per cent in gross terms by 2050.

This raises the question of how these – or any other approaches to target setting – should be assessed.

A framework for setting targets

Applying a transparent framework in setting the 2050 target, and then clearly communicating the results of that process, could significantly improve cross-party consensus and public understanding of the inevitable trade-offs that have to be made. Surprisingly, despite the desirability of such a framework, there are few international examples to turn to.¹

Some of the main elements that need to be considered when setting targets are:

- 1. Factors to consider when setting the level of ambition:
 - Global emissions pathways consistent with the global goal of the Paris Agreement
 - b. Capacity
 - c. International and inter-generational equity
 - d. Leadership and reputational risk
 - e. Treaty of Waitangi considerations
 - f. New Zealand's economic and fiscal circumstances
 - g. Expected costs of emissions reductions in New Zealand relative to costs in other countries
 - h. Expected technological developments in New Zealand
 - i. Any other particular national circumstances.
- 2. Factors to consider when proposing different ways of bundling emissions and allowing them to be offset by forest sinks or the purchase of international units:
 - a. The likely reduction in gross emissions
 - b. Economic efficiency
 - c. Sectoral and distributional impacts
 - d. Uncertainty regarding the impact on temperature
 - e. Exposure to risk from misalignment between sources and sinks
 - f. Co-benefits and co-costs, including changes in land use patterns.

A more detailed, tentative framework that could be used to set the 2050 target is presented diagrammatically in Annex A.

¹ One that may be of interest can be found in the Australian state of Victoria. See State of Victoria. 2017. *Climate Change Act 2017.*

www.legislation.vic.gov.au/Domino/Web Notes/LDMS/PubStatbook.nsf/f932b66241ecf1b7ca256e9 2000e23be/05736C89E5B8C7C0CA2580D50006FF95/\$FILE/17-005aa%20authorised.pdf.

Differently constructed targets will make different trade-offs. To illustrate this point, Table 1 compares the targets in the Bill, the targets in my *Farms, Forests and Fossil Fuels* report, a single target for all sources and sinks, and separate targets for each source and sink.

Table 1: Comparison of different targets using my framework

Factor	Separate gross targets for each source and separate targets for sinks	Zero Carbon Bill targets	Farms, Forests and Fossil Fuels targets	Single target for all sources and sinks
Level of gross emissions reductions	Focus on gross emissions reductions, likely significant transformation of the economy	Focus on reductions in gross CH ₄ emissions but gross CO ₂ and N ₂ O emissions could remain relatively high in 2050	Focus on reductions in gross CO ₂ emissions but gross CH ₄ and N ₂ O emissions could remain relatively high in 2050	Gross emissions of all gases likely to remain high in 2050, likely insignificant transformation of the economy
Economic efficiency	Lowest efficiency, highest transaction and administration costs, lowest flexibility	Low to medium efficiency, relatively high transaction and administration costs, some flexibility	Medium efficiency, relatively low transaction and administration costs, some flexibility	Highest efficiency, lowest transaction and administration costs, greatest flexibility
Sectoral and distributional impacts	Depends on the targets chosen	Forest sector growth driven initially by fossil sector	Forest sector growth driven by agricultural sector	Forest sector growth driven by all sectors
Uncertainty of temperature impacts	Lowest	Relatively low	Relatively high	Highest
Exposure to risk from misalignment between sources and sinks	Lowest risk, highest alignment	Relatively high risk, relatively high misalignment	Relatively low risk, relatively low misalignment	Highest risk, lowest alignment
Co-benefits and co-costs, including changes in land use patterns	Highest co-benefits, depending on the targets chosen	Relatively low cobenefits, competition between fossil and biological emitters for access to forest sinks	Relatively high co-benefits, competition between landowners for access to forest sinks, focus on landscape approach	Lowest co-benefits

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² These are a gross target for fossil carbon dioxide and methane, and a net target for biogenic methane and nitrous oxide.

There are notable differences between the outcomes that would be delivered by applying the 2050 target specified in the Bill and the targets modelled in *Farms, Forests and Fossil Fuels*. These include the uncertainty of the temperature impact of New Zealand's actions over the next century, the risks associated with sinks, and co-benefits including impacts on land use. The preferred approach will depend on the relative weight assigned to different considerations.

It is difficult to be sure if or how elements such as those above have been weighed in reaching the 2050 target in the Bill. For example, we have not seen any modeling that estimates the likely extent of land use change in response to the 2050 target.

The essential point is that targets need to issue from a robust and transparent process so that trade-offs can be understood. I therefore remain of the opinion that the best way to secure public confidence in the target, and thereby a broad consensus, would be to require the Commission to examine the target using a framework along the lines I have suggested.

A pragmatic way forward would be to pass this Bill without specifying a 2050 target, while requiring that one must be set by the Minister -

- after considering the Commission's advice; and -
- subject to an affirmative resolution procedure, to ensure proper scrutiny by the House.

This need not be a protracted affair. I would suggest that the Commission should be required to provide an assessment of the 2050 target by early next year. It would then be for the Minister to consider the advice, set the 2050 target and seek a resolution from the House to bring it into effect. More detailed comment on the merits of using an affirmative resolution procedure is set out in my comments on proposed section 5ZA below.

Finally, in relation to the 2050 target, I would like to comment on three further issues: the use of forest offsets, the level of the methane target and the need for continued reductions in emissions after 2050.

Use of forest offsets

Whatever emissions reduction targets are contemplated, I would strongly recommend careful consideration of the extent of forest offsetting that should be permitted, taking into account:

- the risks of matching permanent additions to the stock of atmospheric carbon dioxide with living carbon reservoirs subject to disease, fire, management failure and the effects of climate change itself;
- the effects on rural communities, including their ability to respond to a variety of inter-connected water, soil and biodiversity challenges; and,
- the risk of delaying the transformation to a low-emissions economy where fossil carbon dioxide should be the top priority.³

³ Carbon dioxide will continue to cause warming no matter what its level so reducing it must be a top priority globally to peak global temperature at any level.

Land use change could be significant in the absence of a limit on forest offsets, especially given that the net zero long-lived target proposed by the Government continues beyond 2050.⁴ The sheer availability of land for forest sinks, and the relatively low cost of establishing them, could see forest planting becoming the default solution for a very long time. This would be at the cost of gross emissions reductions.

If denying recourse to forest offsetting altogether for fossil carbon dioxide emissions is considered too challenging, it could be limited in various ways. For example, a discount factor could be applied whereby forest offsets for fossil emissions would not be granted on a one-for-one basis. Alternatively, access to forest offsetting could be limited to those sectors that for the moment do not have practical decarbonisation options (e.g. aviation).

A limit to the amount of forest offsetting allowed has been imposed elsewhere. Whatever the means used to limit forest offsets of fossil carbon dioxide emissions, careful analysis would be required to ensure that any limit applied was adequate to drive gross reductions rather than more planting.

Determining the methane target

The Bill proposes a target for biogenic methane emissions of "at least 24% to 47%" below the 2017 level by 2050. This target is a *gross* target which means it cannot be met in whole or in part through forest planting. A separate net target for biogenic methane seems problematic unless a gross target is set for long-lived gases.⁶

The methane target proposed in the Bill seems to have attracted the most significant controversy. I have resisted the temptation to nominate an appropriate level and consider that this issue would be best addressed by the Commission. However, I would make two observations.

First, it would be preferable in the interests of clarity to nominate a minimum single-point target (for instance, at least x per cent) rather than a range.

Secondly, the level of ambition for any separate methane target needs to be defensible both domestically and internationally as a reasonable contribution to combating climate change.

⁴ Modelling undertaken for my office indicated that to reach a net zero emissions target resulted in 2.6 million hectares of additional forest plantings by 2050, and a further 2.8 million hectares of forest planting by 2075. While the Bill's target proposal will not likely reach these levels of forest planting modelled, as this modelling was for net zero all emissions, we might expect a similar trend of a continued increase in forest planting post-2050 without significantly limiting forest offsets of fossil emissions.

⁵ California limits forest offsets in their emission trading scheme to eight per cent of total emissions.

⁶ Counting forestry offsets towards two separate targets – one for biogenic methane, one for long-lived gases –would be complicated and would likely require forestry to be split into two categories.

In seeking to understand the contribution of a given level of methane emissions to global warming, I commissioned Dr Andy Reisinger to calculate the level of emissions reduction that would be needed to secure a temperature outcome of 'no additional warming' above the 2016 level. The answer was 10-22 per cent (depending on the level of global action) with most of the reduction having to take place within the first few years if any short-term overshoot were to be avoided. I would like to make it clear that the 'no additional warming' outcome was used for modelling purposes and is not, in my view, a sufficiently ambitious target.

What is a fair target for biogenic methane is not merely a question of stabilising the temperature impact of each gas in a given year. The long-lived nature of nitrous oxide and, in particular, carbon dioxide, mean that it is impossible to achieve no additional warming above any given baseline without reducing emissions to zero (or offsetting them with carbon dioxide removal technologies).

The short life of methane in the atmosphere, by contrast, makes it the one gas which, if reduced, can yield a relative cooling impact within a reasonably short time period. Given the need to head off peak global temperatures by whatever means we can, contributions are needed from wherever they can be found. In my view, if we can reduce emissions by more than 22 per cent (e.g. by means of new management practices or technologies), we should attempt to do so.

At the same time, how much further we go is a question involving technical capacity and economics. The target should also be credible internationally for a country that will increasingly have to trade on its environmental credentials. Simply attempting to 'grandfather' our existing contribution to warming from methane could be seen to be self-serving and provide an excuse for others to do the same.⁷

As a separate point, I note that the Bill currently includes an additional 2030 target for biogenic methane, but not long-lived gases. The Commission could usefully examine what a 10 per cent target for biogenic methane by 2030 implies for the trajectory of long-lived gases if we are to achieve our first nationally determined contribution (NDC).

I understand that if biogenic methane emissions are only reduced by 10 per cent by 2030, long-lived gases will need to be reduced by over 40 per cent from 2005 levels in order to achieve our NDC commitment to reduce total greenhouse gas emissions by 30 per cent. If this level of reduction of long-lived gases by 2030 is deemed unrealistic, the 2030 biogenic methane target may need to be adjusted accordingly.

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⁷ A useful elaboration of some of these points can be found in *Scientific aspects of New Zealand's 2050 emission targets,* Reisinger A. and Leahy S., NZAGGRC, 2019.

⁸ Excluding land use, land use change and forestry.

The need for continued reductions after 2050

I note that the Bill currently specifies that after 2050, net emissions of long-lived gases will remain at zero for each calendar year, and that biogenic methane emissions will remain at their 2050 level in each subsequent calendar year. This is not aligned with the IPCC Special Report on 1.5°C, which found that further reductions of all greenhouse gas emissions will be required after 2050 to achieve a 1.5 degrees Celsius or well below 2 degrees Celsius global temperature goal.

Changes sought

- Replace proposed section 50 with new provisions which:
 - 1. Establish a clear and robust framework for examining the 2050 target;
 - Require the new Commission to recommend a 2050 target based on the application of a robust and transparent framework by 31 March 2020, providing a clear explanation of the rationale for its advice;
 - 3. Require the Minister to present the Commission's advice to Parliament;
 - 4. Require the Minister to consider the Commission's recommendation and then set a target; and,
 - 5. Provide that the target will only take effect once the House has resolved to approve it.

An indicative draft of these provisions is attached as Annex B.

Or, in the alternative (if a 2050 target is enacted as part of the Bill):

Rephrase proposed sections 5O(1)(a) and (b)(ii) to replace the words "and for each subsequent calendar year" with:

...and are further reduced in each subsequent calendar year.

- Limit the extent of forest offsetting of fossil carbon dioxide emissions to reduce the risks of sink impermanence and incentivise a higher level of gross emissions reduction.
- Express any biogenic methane targets (including the target for 2050) as a specified minimum percentage reduction instead of a range.
- Request the Commission to examine what a 10 per cent target for biogenic methane by 2030 implies for the trajectory of long-lived gases if we are to achieve our first nationally determined contribution.

Proposed section 5P: Target reviews

Proposed section 5P(1)(a) requires the Commission to review the 2050 target every time it prepares a budget for a period beginning on or after 2036, even though it can only recommend a change if one or more of the criteria in proposed s5Q are met. This is unduly onerous and could undermine certainty.

Change sought

Rephrase proposed section 5P(1) to read:

- (1) The Commission:
 - (a) may review the 2050 target when preparing advice under section 5X on setting an emissions budget for an emissions budget period beginning on or after 2036; and
 - (b) must review the 2050 target at any other time the Minister requests a review.

Proposed section 5U(3): Duration of emissions budgets

The Bill proposes to establish five-year emissions budgets, except for the first budget which will last four years. As I noted in my previous submission, there are two main problems with this.

First, the United Kingdom's experience suggests that having a five-year gap between policy reviews is too long, because the process ends up starting from scratch each time. UK officials have suggested to me that a useful addition to their system would be a requirement for the Government to undertake a review of its policy plan midway through the five-year period.

Second, the process of setting emissions budgets needs to be sheltered from the short-term ebb and flow of politics. Setting an emissions budget should be a parliamentary occasion to ensure cross-party commitment. I remain of the view that the best way to achieve this is to require each parliament to formally turn its mind to emissions budgets once during its three-year term. This would not preclude New Zealand communicating a nationally determined contribution to the international community every five years.

Change sought

Amend section 5U(3) to change the length of emissions budgets to six years, with a mid-term review after three years.

Proposed section 5U(4): Duty of Minister to set emissions budgets and ensure they are met

The current wording of proposed section 5U(4) requires the Minister to 'ensure' that emissions budgets are met. This is beyond the powers of any Minister. Whether a budget is met will depend on many forces in the economy over which a Minister has little control. Ministers and governments change — a Minister could be appointed too late in an emissions period to salvage inadequate policy-settings presided over by a predecessor.

The provision seems to stem from a misunderstanding about the purpose and timing of budgets. By the time a budget period commences as much as fifteen years will have elapsed since it was set. A Minister should take all practicable steps to ensure that the trajectory of emissions is such that the emissions budget for current and prospective emissions budget periods will be met. But the Minister cannot 'ensure' that a budget will be met.

Change sought

Rephrase proposed section 5U(4) to read:

The Minister must take all practicable steps to ensure that the trajectory of emissions is such that the emissions budget for current and prospective emissions budget periods will be met.

Proposed section 5Y: Minister's response to Commission

As currently drafted, proposed section 5Y does not require the Minister to explain his or her rationale for the response to the Commission's advice. To ensure confidence in emissions budgets, and enable Parliament to assess whether a budget is consistent with the country's long-term targets, the Minister's written responses should set out the basis on which he or she is satisfied that the emissions budget in issue will keep the country on track to achieve the 2050 target.

Change sought

Rephrase proposed s5Y(1)(a) to read:

responds to the advice received from the Commission, and explains the basis on which the Minister is satisfied that the emissions budget will produce the trajectory of reductions needed to achieve the 2050 target

Final decisions on emissions budgets

One of the most significant points of difference between the Bill and the United Kingdom's Climate Change Act is that the latter provides for Parliament to make the final decisions on emissions budgets. Furthermore, the Bill provides that emissions budgets will not even be subject to the usual disallowance procedures.

In my view this is not appropriate. Emissions budgets are not about resolving minor or technical matters of implementation. Decisions will involve exercising significant discretion, and have very far reaching consequences. As is recognised in the Legislation Guidelines 2018, 'Important policy content should be a matter for Parliament to determine ... through an open democratic process'. ¹⁰

Material released by the Ministry for the Environment indicates that Ministers were advised not to leave the final decision with Parliament for the following reasons:

- Delay officials advised Ministers that it would be difficult to secure a resolution in under six months;
- Contentiousness it would be challenging to build consensus through a Parliamentary debate, and the process would highlight differences;
- Complexity; and,
- Decisions that affect the economy are fundamentally Government decisions and will have multiple impacts on other Government policies.

I find this reasoning unconvincing on every count. Dealing with each issue in turn:

- A resolution could be delivered within whatever timeframe is stipulated in the legislation. Indicatively, standing order 322 requires that if a Select Committee is tasked with reporting on a notice of motion for an affirmative resolution it must do so within 28 working days of the day the notice was lodged. A resolution could be expected to follow shortly afterwards. The Government controls the Order Paper.
- The Legislation Guidelines 2018 expressly recognise that delegated legislation should not be used, 'to avoid full debate and scrutiny of politically contentious matters in Parliament'. The notion of securing advice on budgets from an independent and respected source should make the task of securing a consensus much easier. The advice of officials seems to discount this foundational element of the Bill. But even if a proposed budget is contentious, the prospect of debate is a salutary reminder to any Government that it needs to make the case for what it proposes and to any Opposition, that if it disagrees, it must be prepared to explain why. Parliament should not be frightened of debate, especially when the elaborate process of budget preparation has been designed to narrow the grounds for disagreement.

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⁹ Refer section 8.

¹⁰ Refer chapter 14.

- Emissions budgets will certainly be complex, but no more so than many other decisions that Parliament debates. The annual debates on Budget Policy Statements are an obvious example.
- The fact that many decisions affecting the economy are fundamentally government decisions does not evacuate the role of Parliament. Government decisions that affect the economy and will have multiple impacts on other Government policies are routinely affirmed by the House. Again, the annual debates on Budget Policy Statements are an obvious example.

I also note that officials provided advice that, "affirmative resolution procedures are used infrequently in New Zealand, and are used in very limited circumstances (e.g. the appointment of Officers of Parliament)". 11 In fact, a range of delegated legislation is subject to a process akin to affirmative resolutions in this country.

This ranges from national civil defence emergency management strategies¹² through to regulations adding further breeds to Schedule 4 of the Dog Control Act 1996. 13 There is also a wide array of confirmable instruments. ¹⁴ If it is good enough to reserve parliamentary affirmation for determinations under the Dog Control Act, it is good enough for emissions budgets that are of infinitely more moment.

In brief, I consider that Parliament can and should make the final decisions on emissions budgets.

Changes sought

Rephrase proposed section 5ZA to read:

- (1) An emissions budget does not take effect until the House of Representatives resolves to approve it.
- (2) Within 28 days after an emissions budget has been approved in accordance with subsection (1), the emissions budget must be—
 - (a) notified in the Gazette, stating the date on which the emissions budget comes into effect, and the dates on which the emissions period commences and ends; and
 - (b) presented by the Minister to the House of Representatives; and
 - (c) made publicly available at the direction of the Minister.
- (3) A Gazette notice published under this section is neither a legislative instrument nor a disallowable instrument for the purposes of the Legislation Act 2012, and does not have to be presented to the House of Representatives under section 41 of that Act.

¹¹ Ministry for the Environment. 2019. *Clarifying the process for setting emissions budgets*. Briefing to the Minister for Environment, released under the Official Information Act.

¹² See section 35 of the Civil Defence Emergency Management Act 2002.

¹³ See section 78A.

¹⁴ See Schedule 2 of the Legislation Act 2012, which currently includes legislation under 38 different Acts of Parliament.

Proposed section 5ZD: Requirement for emissions reduction plan

The current wording of proposed section 5ZD requires the Minister to prepare an emissions reduction plan for "an emissions budget". To be effective, emission reduction plans will need to have a long-term focus, setting policies and strategies with a view to meeting all of the present and prospective emissions budgets, and not just one particular emissions budget.

Change sought

Rephrase proposed section 5ZD(3)(b) to read:

a multi-sector strategy to meet current and prospective emissions budgets and improve the ability of those sectors to adapt to the effects of climate change; and

(Similar changes will need to be made to proposed sections 5ZE and 5ZF)

Proposed sections 5ZK: 2050 target and emissions budgets are permissive considerations and 5ZL: Guidance for departments

The combined effect of proposed sections 5ZK and 5ZL is that government entities are not required to take the 2050 target and emissions budgets into account in making relevant decisions. The step change needed to get the country's emissions trajectory on track to meet the 2050 target will not occur unless all relevant public authorities work together to achieve it.

This point was highlighted in the report 10 Years of the UK Climate Change Act published by the Grantham Research Institute on Climate Change and the Environment and the Centre for Climate Change Economics and Policy in April 2018, 15 which states (on page 4):

Government buy-in is uneven across departments: The Act was expected to put climate change on the agenda across government departments and to enable policymaking in the relevant sectors in line with the long-term climate objectives. This has happened only to a degree. The Act has informed many policy debates (for example, on airports, renewable energy, shale gas, flooding) but whether or not it changed their outcomes materially is less clear.

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www.lse.ac.uk/GranthamInstitute/wp-content/uploads/2018/03/10-Years-of-the-UK-Climate-Change-Act_Fankhauser-et-al.pdf

The range of public functions, powers or duties whose exercise should be informed by consideration of the 2050 target will change over time. Accordingly, I consider that the Government should be able to make regulations that require public authorities to:

- Take the 2050 target and emissions budgets into account in making relevant decisions (for example, on delegated legislation which will directly impact on New Zealand's ability to achieve the 2050 target, and in procuring goods and services using public funds); and,
- Explain how the 2050 target and emissions budgets have been taken into account in making those decisions.

Changes sought

Add a new provision empowering the Governor-General, by Order in Council, to make regulations that require government entities exercising statutory functions and powers to:

- Take the 2050 target and emissions budgets into account in making relevant decisions; and,
- Explain how they have been taken into account in making those decisions.

(Proposed sections 5ZK and 5ZL will need to be amended to carve out an appropriate exception).

Also add a new provision empowering the Governor General, by Order in Council, to make regulations that require government entities exercising statutory functions and powers to:

- Take the national climate change risk assessments and the national adaptation plans into account in making relevant decisions; and,
- Explain how they have been taken into account in making those decisions.

Annex A: Tentative framework for setting targets

1a. Set the level of ambition - global analysis Global emissions pathways consistent with the global goal of the Paris Agreement • Likely reductions in gross emissions Expected climate change impacts and damages economy international units 1b. Set the level of ambition - national Expected land prices Material substitution effects analysis Whether NZ should aim to do more or less than • Economic efficiency the global average, based on: o Number of emitters covered • Capacity Degree of flexibility o Income per capita, quality of education, Expected transaction costs access to skilled, research and • Sectoral and distributional impacts development capability · International and inter-generational equity gas/sector o Future emissions per capita, development rights, historical gas/sector responsibility • Leadership and reputational risk o Willingness to demonstrate leadership, international reputation, marketing opportunities o Level of uncertainty of NZ's total • Treaty of Waitangi considerations • NZ's economic and fiscal circumstances • Expected costs of climate action in New Zealand relative to costs in other countries sources and sinks o NZ-specific marginal abatement costs for each gas NZ-specific macroeconomic impacts o Level of matching of offset with gas including innovation potential

- · Expected technological developments in NZ
- Any other particular national circumstances
 - o NZ-specific geography, natural resources, population, expected climate change impacts

2. Consider different ways of bundling emissions, forest offsets and international units

- - o Degree of transformation to a low-emissions
 - o Expected gross emissions reductions
 - Expected emissions prices of domestic and

 - Expected technological developments
- - Equality of warming contributions for
 - Equality of abatement effort/cost for
 - Distribution of expected socio-economic impacts across sectors/regions
 - Sector-specific competitiveness issues
- · Uncertainty regarding the impact on temperature
 - contribution to global temperature
 - o Uncertainty of offsets to temperature
- Exposure to risk from misalignment between
 - Vulnerability of offsets to disturbances including climate change impacts
- · Co-benefits and co-costs, including changes in land use patterns
 - Expected land-use change
 - Expected impacts on biodiversity, soil erosion and ecosystemservices
 - Expected impact on rural communities

Level of ambition of targets **Bundling of sources and sinks** 2050 target

Iterative process to set final 2050 target

Annex B: Indicative drafting for setting 2050 target

Commission must recommend 2050 target

- (1) The Commission must, before 1 May 2020, recommend a 2050 target to the Minister.
- (2) In preparing its recommendation for bundling sources and sinks the Commission must consider:
 - (a) [insert specified criteria]
- (3) The Commission's advice to the Minister must explain how it has addressed the matters set out in subsection (2), and the reasons for the recommendation.
- (4) The Minister must present a copy of the Commission's advice to the House of Representatives as soon as practicable, and within 20 working days of receiving it.

Minister must set 2050 target

- (1) The Minister must set a 2050 target, and present it to the House of Representatives, within 60 working days of receiving the Commission's advice under section [TBC].
- (2) Before setting the 2050 target, the Minister:
 - (a) must have regard to the advice provided by the Commission under section [TBC]
 - (b) may consult any persons that the Minister considers appropriate.
- (3) The 2050 target does not take effect until the House of Representatives resolves to approve it.