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A Zero Carbon Act is important to me because...	I work as a scientist measuring greenhouse gases. I see that, despite all political talks worldwide, the levels of carbon dioxide and methane not only keep rising, but they do so faster than ever. I am familiar with the research on the expected consequences and we are already seeing changes to the worse; damage to people, their property and sources of income and to ecosystems. As a father of two young boys I know that we have to act fast and with resolve to avoid harm to them from climate change and to provide them the best future possible.
Q1. What process should the Government use to set a new emissions reduction target in legislation?	The Government should set a target for 2050 in legislation now, with a clear road map on how to reach it and verifiable measures to monitor progress towards the target.
Q2. If the Government sets a 2050 target now, which is the best target for New Zealand?	We need to reduce emissions as strongly and as fast as possible. The target has to be ambitious. We must achieve a net balance of zero for greenhouse gases by 2050. I also support taking a science-based approach to ensure our efforts to reduce emissions are as impactful as possible: we should aim for negative levels of long-lived gases, while reducing short-lived gases to sustainable levels.
Q3. How should New Zealand meet its targets?	By using domestic emissions reductions (including from new forest planting). This will ensure that NZ is at the forefront of technological innovations and remains internationally competitive. Partnerships for emission reductions overseas are desirable but only in direct partnerships of NZ agencies with local partners so that the impact is verifiable.
Q4. Should the Zero Carbon Bill allow the 2050 target to be revised if circumstances change?	The 2050 target should not be altered in response to “economic changes” as this undermines its long-term certainty. However, the ability to revise the 2050 target in light of major changes in scientific understanding or international agreements should be permitted.
Q5. The Government proposes that three emissions budgets of five years each (i.e. covering the next 15 years) be in place at any given time. Do you agree with this proposal?	yes - I agree with 5-year budgets set 10-15 years in advance, so that 3 are in effect at all times. This will be a necessary tool to mark and evaluate progress.
Q6 - Q7. Should the Government be able to alter emissions budgets?	No - emissions budgets should not be altered in response to “economic changes” as this undermines their long-term certainty. However, the ability to revise budgets in light of major changes in scientific understanding or international agreements should be permitted.
Q8. Do you agree with the proposed considerations that the Government and the Climate Commission will need to take into account when advising on and setting budgets?	I agree that the Government and the Climate Commission should take the following factors into consideration when advising on and setting budgets: <ul style="list-style-type: none"> • scientific knowledge regarding climate change • technology relevant to climate change • economic circumstances and the likely impact of a decision on the economy, as well as the competitiveness of particular sectors of the economy • fiscal circumstances and the likely impact of the decision on taxation, public spending and public borrowing • social circumstances and the likely impact on various population groups • energy policy and the likely impact of a decision on energy supplies and the carbon and energy intensity of the economy.

Q9. Should the Zero Carbon Bill require Governments to set out plans within a certain timeframe to achieve the emissions budgets?	<p>Yes - strict time frames and well defined intermediate targets will be crucial to achieve the overall target.</p>
Q10. What are the most important issues for the Government to consider in setting plans to meet budgets? For example, who do we need to work with, what else needs to be considered?	<p>The Government's policy plans to meet emission budgets must be comprehensive, fair, cost-effective, environmentally sustainable, and reflect a commitment to Te Tiriti o Waitangi. The NZ government must engage with the international community to ensure that steps for reducing carbon emissions do not lead to disadvantages for NZ or any other country and to leverage benefits from international collaboration.</p>
Q11. The Government has proposed that the Climate Change Commission advises on and monitors New Zealand's progress towards its goals. Do you agree with these functions?	<p>Yes - the Commission should not be a decision-making body. The commission needs all necessary power and access to information to fulfil its tasks.</p>
Q12. What role do you think the Climate Change Commission should have in relation to the New Zealand Emissions Trading Scheme (NZ ETS)?	<p>The Commission should advise the Government on policy settings in the NZ ETS. It should not make decisions itself with respect to the number of units available in the NZ ETS, or its implementation.</p>
Q13. The Government has proposed that Climate Change Commissioners need to have a range of essential and desirable expertise. Do you agree with the proposed expertise?	<p>I agree with the following collective expertise:</p> <ul style="list-style-type: none"> • climate and environmental science, including mātauranga Māori, with a focus on regional, national global climate change impacts - climate change mitigation options • climate change policy (including emissions trading) • resource economics and impacts (including social impacts, labour markets and distribution) • te Tiriti o Waitangi, te reo me ona tikanga Māori and Māori interests • experience with addressing adaptation challenges like planning, insurance and local government • risk management • engineering and/or infrastructure • community engagement and communications. • business competitiveness • knowledge of the public and private innovation and technology development system. <p>I think expertise in public health is also important.</p>
Q14. Do you think the Zero Carbon Bill should cover adapting to climate change?	<p>Yes. This may require a separate adaptation sub-committee within the Climate Commission.</p>
Q15. The Government has proposed a number of new functions to help us adapt to climate change. Do you agree with the proposed functions?	<p>I agree with the proposed functions below, but recognise that nuance is required in terms of how local councils are involved:</p> <ul style="list-style-type: none"> • a national climate change risk assessment • a national adaptation plan • regular review of progress towards implementing the national adaptation plan • regular review of adaptation goals and needs in light of newly available research • an adaptation reporting power
Q16. Should the Government explore setting up a targeted adaptation reporting power that could see some organisations share information on their exposure to climate change risks?	<p>Yes</p>
Further comments	