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<tr>
<th>Name</th>
<th>Peter Bacchus</th>
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A Zero Carbon Act is important to me because...

If we do not pull this off the human population will become sicker and sicker before mass extinctions occur. It is vitally important to my grand children and their grandchildren if humanity lasts as long as that. When we reach the tipping point we get tipped off!!

**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. Yes the gloves need to come off and we need to get serious. Not only do we need to consider how to stop more going into the atmosphere we need to get it back into the soil via vegetation. Beware of large plantation forests as one lightning can put thousands of tonnes back into the atmosphere in a few days. They are also large mono cultures highly susceptible to disease. We need mixed forests interspersed with farming where the land is most suitable for it.

**Q2. If the Government sets a 2050 target now, which is the best target for New Zealand?**

The most ambitious target: reducing total greenhouse gases to net zero 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. Some of this will be though changing the way we nourish animals giving them quality fodders that each animal type was designed to consume.

**Q3. How should New Zealand meet its targets?**

By using domestic emissions reductions only (including from new forest planting). Forest should be of mixed species, mostly slow maturing native trees that would be selectively logged. Shelter planting should be actively undertaken with advice from experts as required. Some farms have shown that thirty percent of the farm can be planted in trees and shrubs and produce more grass within a decade and more profit from farming greatly increasing fish life as a commercial potential.

**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. It should be possible to increase the nations economy if the job is done to the best of our collective capacity.

**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.

**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. Work should be commissioned to research how to improve profitability. I has and can be done on the small scale.
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:
- 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 of a decision on fuel poverty
- energy policy and the likely impact of a decision on energy supplies and the carbon and energy intensity of the economy. The best advice may come from unexpected quarters. The brains that caused the problem are unlikely to find the best solution.

Q9. Should the Zero Carbon Bill require Governments to set out plans within a certain timeframe to achieve the emissions budgets?

Yes - we must learn from the mistakes of the UK's Climate Change Act and specify a strict time frame for producing a plan.

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?

The Government’s policy plans to meet emission budgets should be comprehensive, fair, cost-effective, environmentally sustainable, and reflect a commitment to Te Tiriti o Waitangi.

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?

Yes - the Commission should not be a decision-making body.

Q12. What role do you think the Climate Change Commission should have in relation to the New Zealand Emissions Trading Scheme (NZ ETS)?

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. Carbon should not be traded, focus instead on getting it out of the atmosphere back into the soil where it will attract and hold moisture and regulate temperatures. 1 kg. carbon in the soil can hold up to 4 liters of water.

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?

I agree with the following collective expertise:
- climate change policy (not including emissions trading)
- resource economics and impacts (including social impacts, labour markets and distribution)
- te Tiriti o Waitangi, te reo ona tikanga Māori and Māori interests
- climate and environmental science including mātauranga Māori
- experience with addressing adaptation challenges like planning, insurance and local government
- risk management
- engineering and/or infrastructure
- community engagement and communications. Very important!!!
- business competitiveness
- knowledge of the public and private innovation and technology development system. Also very important!!!

I think expertise in public health is also important.

Q14. Do you think the Zero Carbon Bill should cover adapting to climate change?

Yes. This may require a separate adaptation sub-committee within the Climate Commission. Perhaps but the whole point is to mitigate the effects of climate change. THIS HAS BEEN DONE IN SMALLER AREAS. COPY AND EXPAND!
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<tr>
<th>Q15. The Government has proposed a number of new functions to help us adapt to climate change. Do you agree with the proposed functions?</th>
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| I agree with the proposed functions below, but recognise that nuance is required in terms of how local councils are involved:  
  • a national climate change risk assessment  
  • a national adaptation plan  
  • regular review of progress towards implementing the national adaptation plan  
  • an adaptation reporting power  
  This should only be required if effective action is not taken |

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<th>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?</th>
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| Yes  
All pertinent information should be freely available to keep all informed. Changes happen faster when there is public buy in and participation. |

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<td>There needs to be a change in the way land is managed. Soil chemistry needs to be brought up to date as this is a large part of what has lead to losses of soil carbon. A much better understanding of soil biology needs to happen and be implemented. A much better integration of trees and shrubs into farm landscapes to reduce the mixing of carbon rich air in the leaf canopy of pasture and crops with the general atmosphere. Understand and implement the maximum uptake of carbon by plants by generating the highest possible refractometer readings. [Brix]</td>
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