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A Zero Carbon Act is important to me because...	I strongly support the introduction of the Zero Carbon Act in New Zealand. Decarbonisation is an essential step for all modern economies if we are to preserve a liveable planet and hope for the future.
Q1. What process should the Government use to set a new emissions reduction target in legislation?	
Q2. If the Government sets a 2050 target now, which is the best target for New Zealand?	The target should be to reduce total greenhouse gases as far as possible by 2050 while meeting basic social criteria for all New Zealanders.
Q3. How should New Zealand meet its targets?	By using domestic emissions reductions only (including from new forest planting). This is essential as carbon credits have very little credibility in actually reducing emissions.
Q4. Should the Zero Carbon Bill allow the 2050 target to be revised if circumstances change?	As a doctoral student in the field of ecological economics, I am concerned that decarbonisation goals are unlikely to be achieved if treated as secondary to current narrowly defined economic goals (as measured by GDP or the unemployment rate). For this reason, the Zero Carbon Act must clearly state that decarbonisation is to be the primary social objective for the foreseeable future, which must not be allowed to be subverted by changes in economic circumstances. 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?	Projected emissions budgets should exist to cover all 5 year periods to 2050 (obviously with varying levels of detail and confidence) in order to maintain a consistent and visible policy commitment.
Q6 - Q7. Should the Government be able to alter emissions budgets?	No increase in carbon budgets should be permitted, unless the basic scientific consensus changes in response to new information. Decreases in the carbon budget should be allowed if democratically supported.
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?	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 consensus regarding climate change • technology relevant to climate change (existing, proven and scalable technology only) • social circumstances and the likely impact of a decision on fuel poverty, together with proposed remediation strategies • energy policy and the likely impact of a decision on energy supplies, the carbon and energy intensity of the economy, and the processes of socio-metabolic transformation - this includes the heterogeneity of energy forms and the existing and potential forms of power capacity in the New Zealand economy.
Q9. Should the Zero Carbon Bill require Governments to set out plans within a certain timeframe to achieve the emissions budgets?	Yes
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>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>	<p>Yes - the Commission must be immune from political pressure in order to function effectively.</p>
<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>	<p>The NZ ETS should be scrapped or de-emphasised in favour of strong, progressive and revenue-neutral carbon taxation.</p>
<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>	<p>The most critical expertise which is currently lacking is ecological and biophysical economics (as opposed to mainstream neoclassical economics), with a focus on the complex processes of socio-metabolic transformations and the role of energy in economic production.</p>
<p>Q14. Do you think the Zero Carbon Bill should cover adapting to climate change?</p>	<p>Yes - this will need to have a provision for flexible and rapid responses to changes in observed climate impacts.</p>
<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>	
<p>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>	<p>Yes</p>

Further comments

Recent mainstream environmentalist commentary is often quick to highlight the potential economic benefits of shifting towards a zero-carbon society. This may be true in the initial stages of the transition, but full decarbonisation will require transforming the ways in which we live, produce, and consume from the ground up, which will involve unavoidable and profound disruptions. The cutting edge of biophysical and ecological economics research is discovering deep and previously obscured links between energy supply, the main source of greenhouse gas emissions, and the creation of economic value (Ockwell 2008, Kümmel, Ayres Robert, and Lindenberger 2010, Ayres and Warr 2009, Foxon 2017). Net energy in particular has a close association with the generation of a flow of societal benefits (Lambert et al. 2014). As such, to a first approximation, greenhouse gas emissions are inseparable from employment and income at the aggregate level without a radical economic transformation. The metabolism of society as a whole remains intrinsically dependent on large quantities of carbon-intensive fuels; a link which will not be easily broken. Therefore, there will be no transition without economic sacrifice.

Short-term economic concerns must not be allowed to forestall or derail progress towards a zero-carbon society. It is also essential that the social consequences of the transition, most notably in the form of unemployment, are adequately addressed. If too many are left behind, the transition will fail. In summary, a successful transition towards a zero-carbon society in New Zealand requires 1) a non-negotiable commitment to achieve decarbonisation within the coming decades, 2) an understanding that that transition will produce a significant level of economic disruption, and 3) the dedication of public resources to support individuals and groups experiencing difficulties as a consequence of the transition.

References

- Ayres, Robert U, and Benjamin Warr. 2009. *The economic growth engine: how energy and work drive material prosperity*. Cheltenham, UK; Northampton, MA: Edward Elgar.
- Foxon, Timothy J. 2017. *Energy and Economic Growth: Why we need a new pathway to prosperity*: Routledge.
- Kümmel, Reiner, U. Ayres Robert, and Dietmar Lindenberger. 2010. Thermodynamic laws, economic methods and the productive power of energy. In *Journal of Non-Equilibrium Thermodynamics*.
- Lambert, Jessica G., Charles A. S. Hall, Stephen Balogh, Ajay Gupta, and Michelle Arnold. 2014. "Energy, EROI and quality of life." *Energy Policy* 64:153-167. doi: [dx.doi.org/10.1016/j.enpol.2013.07.001](https://doi.org/10.1016/j.enpol.2013.07.001).
- Ockwell, David G. 2008. "Energy and economic growth: Grounding our understanding in physical reality." *Energy Policy* 36 (12):4600-4604. doi: [dx.doi.org/10.1016/j.enpol.2008.09.005](https://doi.org/10.1016/j.enpol.2008.09.005).