Consultation on Advancing New Zealand's Energy Transition

Climate Justice Taranaki submission, 2 November 2023

Introduction

1. Climate Justice Taranaki (CJT)[1] is a community group dedicated to environmental sustainability and social justice. This includes issues of inter-generational equity, notably in relation to climate change, which will increasingly impact present and future generations' inalienable rights to safe water, food and shelter, crucial to sustaining livelihoods and quality of life. Composed of a broad range of people with varied expertise and life experiences, CJT has engaged respectfully with government on numerous occasions.

2. CJT welcomes the opportunity to provide feedback on the Ministry for Business, Innovation and Employment (MBIE) consultation on advancing New Zealand's energy transition[2]. CJT has submitted on numerous consultation papers relating to energy and in particular hydrogen (October 2019[3], September 2023[4]), offshore renewable energy (April 2023)[5] and renewable electricity generation consenting (June 2023)[6]. These submissions are relevant to the current consultation, and we ask them to be read as part of this submission.

Key points of submission

3. New Zealand's energy transition needs to be informed by an independent whole-of-system energy analysis. It should not be market led by different commercial interests as suggested in the various consultation documents.

4. Renewable energies cannot support the same level of energy demand and economic activities made possible by fossil fuels. We need to strategically reduce the overall demand, conserve energy and use it wisely and efficiently for sufficiency[7] and collective wellbeing[8], rather than for continued economic growth and productivity.

Gas Transition Plan and a Ban on new fossil-fuel baseload electricity generation

5. We fully support banning new fossil-fuel baseload electricity generation and rapidly phasing out fossil gas peaking power generation also. Many of the exemptions proposed under the baseload ban are unnecessary and would delay the transition off fossil gas.

6. We do not support the proposal to blend hydrogen into fossil gas pipelines because that would create various technical and safety problems, add cost burdens on households and have little effect on overall emissions.

7. We advocate phasing down fossil gas as the currently producing fields are exhausted, by not allowing new or further exploration anywhere, as recommended by the IPCC and all credible science academies globally. This means retaining the offshore petroleum exploration ban and extending it to onshore including Taranaki. Rather than focussing on maintaining security of fossil gas supply for commercial consumers, prioritise energy security for public services, marae, papakāinga, households and essential small businesses.

8. We are opposed to using carbon capture and storage (CCS) to offset emissions by fossil fuel producers and high emitting industries. Globally there is no evidence that CCS has effectively reduce net GHG emissions, but rather serves as greenwashing for emitters and another form of industry-led predatory delay. We do not support government funding for any carbon capture and utilisation (CCU) by industries.

Measures for Transition to highly renewable electricity

9. To enable an effective and just energy transition, public investment funded by revenues from a progressive tax regime is needed. The Climate Emergency Response Fund (CERF) needs to be safeguarded[9] for public service energy transition and limited loans or co-funding for certain industries.

We support further exploring and testing the application of Renewable Energy Zones and EECA's Regional Energy Transition Accelerator (RETA) and improve or adapt them based on the lessons learnt[10].

10. To address peaking and intermittency of renewables, the government needs to put in place incentives and regulations to ensure that Ripple Control[11] continues to play its role as an effective, reliable and low-cost technology in controlling peak electricity demand, until smart technologies are ready to take over. At the same time, the government needs to invest in grid-scale storage such as batteries[12], and support the development of distributed, smart renewable energy networks. Small pumped-hydro energy storage systems[13] may also be considered, for example using existing farm dams as it's being investigated in Australia[14]. In the transport area, the Avoid-Shift-Improve[15] framework would help to reduce peak demands and overall energy use and emissions.

11. Regarding the electricity market, one of the first and most important thing to act on is 'vertical separation' of the 'gentailers'. These currently dominate the electricity market and stifle innovation and participation from independent retailers and community-based operations. Rather than pushing for economic efficiency, put greater focus on energy equity and affordability for Māori, households and communities in need[16]. Fundamentally there needs to be a reconstruction of regulatory institutions, culture and practices[17] to effectively manage the electricity and wider energy system for the common good.

12. We support investment in transmission and distribution networks with strong focus on flexibility and resilience against extreme weather events and other disruptions, with demand control capability.

Interim hydrogen roadmap

13. We see limited applications for 'green' hydrogen, not the necessary solution to decarbonise all hard-to-abate applications. For example, there may be potential for hydrogen in steel making but only after efforts to reduce, reuse and recycle steel are exhausted. We are opposed to using it for the manufacturing of urea fertilisers which drive industrial agriculture. They need to be phased out, to reduce the impacts on soil, waterways and climate, as the agriculture transitions to become regenerative. Replacing fossil hydrogen with 'green' hydrogen to produce fertilisers is 'greenwashing' while enabling the many environmental problems to perpetuate.

14. We are strongly opposed to exporting hydrogen[18] because it risks derailing New Zealand's decarbonisation efforts and causing unacceptable environmental and social harm associated with vast renewable energy development. We do not support government spending on hydrogen development because of its inherent wastefulness.

Regulatory framework for offshore renewable energy

15. We do not support the developer-led approach and prefer a government-led, spatially planned approach from the start. Permitting for offshore renewable energy should only be considered after an independent whole-of-system analysis that determines the amount of energy required for sufficiency, not economic growth. Thorough considerations of alternatives including substantial demand management, other renewables and energy storage are also required.

16. If a permitting system is to proceed, the criteria for feasibility and subsequent commercial permits must include environmental concerns and demonstration of the proponent's willingness and ability to minimize impacts, or else the "*indicative economic development opportunities*" and perceived "*national interest considerations*" will override any environmental safeguard.

Planetary boundaries

17. On a finite planet, we simply cannot keep extracting, producing and wasting energy and materials without getting into trouble. Globally we have overshot six of the nine planetary boundaries[19], risking the survival of humanity and many of the species we share this planet with. Economic growth is the key driver of the overshoots. We therefore cannot agree with the last of the four premises of the Energy Strategy which is to support economic growth and productivity.

18. Roger Bradbury (1971)[20] had some early, sage advice:
"Individuals and communities must begin to accept the ecological realities of this earth. We must accept, as real, the limitations of our environment and reject economic systems which say otherwise; we must accept, as necessary and vital, the complexity of our ecosystem and reject attempts to simplify it; and we must accept, as essential, the regulation of all organisms within the carrying capacity of this ecosystem and reject, as unecological, those philosophies that advocate continuous, mindless, growth."

19. Renewable energy and technology development is far from harmless or infinite[21]. The Energy Return on Energy Invested (EROI) ratio of renewable energies is generally lower than that of fossil fuels, so renewables cannot be expected to support similar economic growth enabled by fossil fuels[22]. Renewable energy and technology production and deployment currently relies heavily on fossil fuels and mining of minerals including rare earth elements, all of which are finite.

20. Rarely are full life cycle analyses conducted to understand the whole environmental and social impacts of new energy systems including bioenergy[23]. At least one study concluded that "*Biofuels can only reduce atmospheric CO_2 over time through post-harvest increases in net primary production (NPP)*" so "*projected growth in wood harvest for bioenergy would increase atmospheric CO2 for at least a century because new carbon debt continuously exceeds NPP*" (Sterman, et al., 2018)[24]. To put it simply, we cannot plant enough trees fast enough to be burnt to meet growing energy demand, not to mention the landuse conflicts and threats to food production, biodiversity and indigenous rights.

21. "*While we inevitably face a future underpinned entirely by RE [renewable energies], the question is not how to meet current total demand, but rather to determine: (a) which RE technologies are actually sustainable and viable; (b) the contexts in which they might be so, including the priority uses to which they might be applied; and (c) how to effectively and fairly reduce energy demand*", Seibert and Rees, 2021[25].

22. In our view, the way forward is Degrowth[26] – a planned reduction of energy and material throughput to enable collective wellbeing within ecological limits. This requires reducing the overall energy and material demand, starting with the most polluting and most frivolous. We believe priorities ought to be focused on the energy required for public services from healthcare to public and active transport infrastructure, community-scaled renewable energy system, energy efficient healthy homes and integrated farming systems that produce food, fibre, timber and fuel for local communities, without relying on synthetic fertilisers.

23. The Collaborative Low Energy Vision for the European Region (CLEVER)[27] developed through a four year technical dialogue between 26 partner organisations is based on the Sufficiency-Efficiency-Renewables (SER) framework. It "*focuses on the demand-side by first scaling energy needs to what is considered essential to provide a decent level of services to all (sufficiency). Then, sufficiency is combined with a reduction in energy intensity through technological improvement (efficiency), thereby lowering the amouhnt of energy required to satisfy this tailored level of services. Finally, the actual energy demand remaining is supplied with renewable energies*." CLEVER projects that "*A reduction of final energy demand to -55%[28] by 2050 compared to 2019 levels can set Europe on a resilient and strongly sustainable transition pathway. -25% in 2030 and -45% in 2040 are milestones along the way.*"

Whole-of-system energy analysis

24. In December 2022, the Parliamentary Commissioner for the Environment (PCE) wrote to the Minister of Energy and Resources, emphasizing the urgent need of a whole-of-system energy analysis before committing to a particular energy pathway that may impact on the rest of the system:

25. "*The essential high level point is that the Government must undertake a comprehensive whole-of-system energy analysis that compares different energy scenarios on a fair and consistent basis prior to any decisions being made to advance specific options*," PCE (Dec 2022)[29]. The Minister's reply[30] to the Commissioner, while listing the actions relating to some of the 'no-regrets' options the Commissioner

identified, did not respond to the request for a 'whole-of-energy system analysis' or critique the large energy projects that would have system-wide impacts, notably green hydrogen or offshore energy.

26. The PCE emphasized: "*It is the system-wide impacts of these different options and how they may interact with other options that must be fully understood before decisions are made. This requires a comprehensive understanding of the environmental, economic and climate impacts that these various projects will have should they become part of the energy system…. Given the consequences of these choices for the public at large, they should not be left to market forces alone to resolve.*"

27. It is quite clear that on the contrary, the Government is following 'market forces', crafting papers and legislation to smooth the way for energy investors, from home-grown Hiringa Energy to Australia's Woodside Energy[31], the Copenhagen Infrastructure Partners[32], Blue Float[33] and international giants like Airbus[34] and Black Rock[35], to list a few.

28. Because renewable energy technologies also come with environmental and social costs domestically and overseas, their considerations need to be informed by full life cycle analyses and site-specific ecological and cultural impact assessments. Rather than driven by profits and market interest, any new energy development proposal ought to be treated with caution. Question to focus on is whether this new energy would contribute to community sufficiency, equity and wellbeing, in other words, meet universal basic needs for everyone.

Advancing New Zealand's energy transition

29. The 'Advancing NZ's energy transition' consultation document claims: "*The Energy Strategy, due for release in late 2024, will take a whole of system view of the energy transition out to 2050.*" But MBIE has already preselected specific energy pathways (prolonging fossil gas reliance, push for a hydrogen economy and offshore energy development) ahead of the supposedly whole of system energy transition. This is contrary to the PCE's advice (see above).

Gas Transition Plan issues paper

30. The terms of reference (TOR) of the Gas Transition Plan set out the timeline. We cannot understand the logic behind aiming to complete the GTP one year ahead of the Energy Strategy. Shouldn't the Energy Strategy, informed by a system-wide energy analysis, guide the development of the GTP and other energy pathways that the strategy identifies as important?

31. The TOR also explicitly state that "*Cabinet agreed for …MBIE to work in conjunction with Gas Industry Company Limited (GIC, the gas industry co-regulator) to develop the GTP*". The GIC, not MBIE, commissioned multiple analyses as part of the GTP, including the Wood-Beca review of CCUS/CCS potential and Enerlytica report on LNG import and options. In our view, these cannot be considered 'independent analyses' as claimed by the GIC. This process is little different from the formulation of the Taranaki 2050 Roadmap[36] and the subsequent Energy Transition Pathway Action Plan (2019)[37] facilitated by the CEO of Todd Energy and Chairperson[38] of the Petroleum Exploration and Production Aotearoa NZ (formerly PEPANZ, now ERA – Energy Resources Aotearoa) who also chaired the Taranaki 2050 Lead Group. Sadly such 'regulatory capture' and 'revolving doors' remain common practice, influencing public policies with little public scrutiny. The inaction of regulatory agencies, including MBIE, EPA and WorkSafe on a leaky well at the Kupe field since 2018 is another case in point[39].

32. The International Monetary Fund (2023)[40] has calculated that globally, fossil fuel subsidies were US$ 5.9 trillion in 2020, and are expected to increase. Companies' advertised transition plans are often greenwash[41, 42], part of a predatory delay[43] campaign. United Nations Secretary-General António Guterres (2023)[44] warned:
"… stop subsidizing fossil fuels … Our ocean is choked by pollution, plastics and chemicals. And vampiric overconsumption is draining the lifeblood of our planet ... No more greenwashing. No more bottomless greed of the fossil fuel industry and its enablers. … I have a special message for fossil fuel producers and

their enablers scrambling to expand production and raking in monster profits: If you cannot set a credible course for net-zero, with 2025 and 2030 targets covering all your operations, you should not be in business. Your core product is our core problem."

33. We urge the new government to retain the ban on new offshore petroleum exploration and extend the ban to include onshore exploration including Taranaki.

34. We fully support banning new fossil-fuel baseload electricity generation and rapidly phasing out fossil gas peaking power generation also.

35. We do not support the proposal to blend hydrogen into fossil gas pipelines[45] because it would prolong the reliance on fossil gas, create various technical and safety problems, add cost burdens on households and have doubtful emission reduction results, especially considering the state of our pipelines. Notably hydrogen, being tiny and corrosive, is very hard to contain without leakage. Leaked hydrogen[46] reacts with hydroxide radicals (OH) and several gases in the atmosphere, altering the abundance of GHG like methane, ozone and water vapor. Hydrogen is short-lived and may be 100 times more potent than CO2 in ten years. Its global warming potential is 11.6+/-2.8 over 100 years[47]. Moreover, given its high flammability at low concentrations, it presents added safety risks to people in the household settings.

36. There is no evidence that blending hydrogen into fossil gas pipelines is an effective way of reducing emissions, in terms of costs or environmental trade-offs. On the contrary, a recent study[48] on the proposal by gas utilities in the Commonwealth of Massachusetts "*to use variable renewable energy sources, particularly wind power, to produce green hydrogen to replace various proportions of fossil methane (natural gas), now burned for heat in 1.3 million homes and hundreds of thousands of commercial buildings across the Commonwealth*". The study found that the electricity needed to produce green hydrogen in quantities necessary to replace the natural gas currently used in the buildings would be 3.4 times higher than what would be needed for electric heat pumps. The study also found that 3.9 GW of offshore wind energy generation is needed to manufacture enough green hydrogen to replace 20 percent of the fossil gas burned in buildings. The study concluded that "*Blending hydrogen with methane to heat buildings will cannibalize the supply of clean electricity, diverting it from its primary targeted purpose of direct delivery to the electric grid and reducing GHG emissions from the electrification of buildings and vehicles.*"

37. We are opposed to carbon capture and storage (CCS) as carbon offsets for oil and gas producers and high emitting industries. There is no evidence that CCS has effectively reduce overall emissions from these industries[49]. Carbon capture, utilisation and storage (CCUS) projects are often used for Enhanced Oil Recovery (EOR) to extract yet more oil which leads to more emissions. While there may be some other use for CCUS by industries, they can be financed by the private sector.

38. Compared to mechanical CCS, biological sequestration or carbon dioxide removal (CDR) has been shown[50] to be "*more effective and more resource efficient in achieving a climate-relevant scale of CO2 removal. Additionally, the co-impacts of biological methods are largely positive, while those of mechanical methods are negative.*" However, neither is of any real significance until we substantially curb and drive down gross emissions[51].

39. One of the tools that could help progressively reduce fossil fuel use and gross emissions in an equitable way is the Tradable Energy Quota (TEQ)[52]. We ask that an independent feasibility study on the potential application of a TEQ scheme in New Zealand be conducted.

40. Government facilities and front-line operations consume about 1.8 petajoules (PJ) of gas each year via some 700 connections[53], through an All-of-Government contract with Genesis Energy[54]. This contract will expire on 30 September 2024 with no further rights of renewal after three terms. The government has recently opened a new tender for potential gas suppliers. We think that the government should lead by example in a swift phase out of fossil gas, by expanding the Carbon Neutral Government Programme[55] and State Sector Decarbonisation Fund to include fossil gas.

41. In 2021, the International Energy Agency (IEA)[56] advised that "*Reducing methane emissions from oil and gas operations is among the most cost-effective and impactful actions that governments can take to achieve global climate goals*". In Taranaki, flares[57, 58] and vents are common on oil and gas and petrochemical producing sites, all holding consents to discharge emissions into air issued by the regional council[59]. During transition, the government and councils should put in place more stringent regulations and enforcement to reduce fugitive emissions from fossil fuel operations, including flaring[60], venting and leakages[61].

Interim Hydrogen Roadmap

42. As warned by the Parliamentary Commissioner for the Environment (PCE) in March 2022[62] and then in January 2023[63], the push for green hydrogen carries with it opportunity costs that need to be assessed under a whole energy system analysis, or else we risk derailing Aotearoa New Zealand's decarbonisation pathway. In June 2023, the Commissioner released a modelling report which showed Southern Green Hydrogen as the poorest performing pathways across a range of indicators, including high residential electricity prices and supply risk; i.e. "*the social benefits of this pathway do not outweigh the costs…*" (PCE, June 2023)[64].

43. The Commissioner also reflected on the 'Think Big' era following the oil shocks of the 1970s: "*Many of those investments were controversial, some of them proved to be extremely costly. All of them had system-wide consequences that created a path dependency from which New Zealand must now extricate itself. The absence of publicly available information to expose the 'Think Big' era projects to proper scrutiny was widely lamented at the time. Today's decarbonisation challenge is every bit as significant, and the scale of investment required even greater. We are already seeing significant public subsidies being extended to technologies that are claimed to be part of the future...*"

44. According to the consultation document, $88 million of government funding has already been spent on hydrogen research, demonstration, trials, and commercial partnerships. We do not support a further $100 million for the Regional Hydrogen Transition consumption rebate or the $30 million for the clean heavy vehicles focusing on hydrogen. MBIE needs to face the reality of escalating global prices of materials which is almost certainly going to continue as extreme climate disruptions become more frequent, and fear and stress leads to more conflicts, fuelling a vicious cycle. Serious considerations are needed in respect of bonds and insurances in case of company liquidation[65] and failed ventures, as well as decommissioning, site clean-up and remediation[66].

45. Taranaki has had a fair share of government funding for hydrogen. In 2020, the New Plymouth District Council was successful in securing a $37 million[67] of Covid-19 infrastructure funding to replace the Wastewater Treatment Plant's thermal drier with one that would run on a blend of fossil gas and hydrogen, to dry wastewater into a sellable fertiliser. Ironically, New Plymouth ratepayers now face a $40 million blowout[68] on the thermal dryer project, due to inadequate "*level of review*" during the rush to secure the funding.

46. Another fast-tracked project is for Hiringa Energy to set up a 'green hydrogen' hub in Kapuni[69], including infrastructure for hydrogen production and four onshore wind turbines opposed by local hapū and Greenpeace[70]. The plan is to use 'green hydrogen' to replace a small amount of the fossil gas used in the Ballance Agri-Nutrients ammonia-urea fertiliser plant. Synthetic fertilisers like urea fuel and prolong the harms of industrial agriculture on our climate, the health of our waterways and wellbeing of farmers and rural communities. Once applied to land, the urea fertiliser, whether it is derived from fossil gas or 'green' hydrogen, will result in nitrous oxide emissions to the air and nitrogen pollution in our surface and groundwater. The term 'green urea' is totally misleading. The use of hydrogen for trucking also largely serves the export driven dairy industry, the bulk of its product ends up in confectionary. A more domestic focussed farming system would centre on food sufficiency and resilience for local communities, requiring less long-haul freights.

47. Compared to hydrogen, heavy land transport can be more effectively served by rail[71], electric trucks and coastal shipping[72]. For the rural or waste sector[73, 74], biogas/biomethane trucks may be considered as it

does not require lithium mining or major technological advancement. Domestic aviation can be replaced by a much-improved rail system and electric ferries[75, 76]. International aviation must be reduced substantially[77], and even after that, long-haul hydrogen flights or other technologies such as making use of sunlight and captured CO2[78] are far from ready. There may be a role for hydrogen in maritime transport, but other alternatives including wind[79], must also be considered.

48. The creation of a hydrogen economy requires vastly over-building renewable energy capacity, notably offshore wind energy generation, the process of which would cause irreversible environmental and social harm domestically, abroad, and potentially in international waters[80], where mining[81] increases to support our renewable energy expansion.

Offshore renewable energy

49. In August 2023, the then energy minister Megan Woods was talking up offshore wind energy generation while fast-tracking three onshore windfarms[82]. Meanwhile, the National party has vowed to fast-track offshore wind projects[83] to give decisions within a year.

50. We think it is unwise and irresponsible to take a developers-led approach to offshore renewable energy and allow "*a first wave of development*" of multi-decadal projects, ahead of an independent whole-of-system analysis or spatial planning approach (See points 24-28 above).

51. In June this year, the Parliamentary Commissioner for the Environment pointed out that MBIE "*…proposes liberalising the placement of generation and transmission assets in areas with significant environmental values but provides no robust, quantifiable basis for establishing the necessity for such proposals or the scale of necessity that would justify them. This assessment should be completed and considered before decisions are made on national direction… Increasing renewable energy generation, and the transmission of that electricity, is critical to meeting New Zealand's climate and energy goals. But doing so should not disregard other environmental values…"* (PCE, 2 June 2023)[84].

52. NZ Conservation Authority's submission (April 2023)[85] on MBIE's discussion document 'Enabling Investment in Offshore Renewable Energy' was damning, pointing to the assumption made by MBIE that "*offshore energy is an appropriate activity in New Zealand waters given the surge in interest from both local and international firms. While there are statements about the wind environment in the NZ region being very suitable for wind farms, there is no information about the relative wind availability on land when compared to offshore.*"

53. NZCA warned, "*Environmental and biodiversity data are lacking for many areas of the New Zealand coastal and marine regions. There is little baseline data on which to model potential adverse effects of developments. At present in New Zealand relevant research agencies are not funded to undertake the type and extent of research that would be needed to provide reliable independent information about the biodiversity impacts of offshore renewable energy. Consideration must be given to how this research is to be resourced if it is not fully funded by developers. Some funding could be built into the regime, for example cost-recovered through fees/permits and the regime could ensure that all data collected is made publicly available… NZCA considers there are significant risks associated with taking an industry-led approach, particularly if data gathered by industry are not publicly available to be scrutinised."*

54. NZCA recommended that at the feasibility stage there should be requirements that are clearly outlines to potential developers regarding the information that must be provided with respect to environmental impacts, and how these will be mitigated and monitored. Yet the current consultation document does not include such requirements. We do not think that such requirements should be left to the environmental consenting stage only. Granting exclusive right to feasibility (or exploratory) permit holders to apply for commercial permit could lock in proposals that are potentially unviable or environmentally unacceptable, and risk legal challenges.

55. It is NZ's national interest and international obligation to protect and support the recovery of threatened species, notably seabirds, marine mammals and other taonga species. The vast scale of offshore wind proposals will not only impact on iconic species, but numerous lesser-known benthic species that are

crucial to the health of the marine ecosystems and fisheries. Such impacts will exacerbate the existing stresses from commercial fishing, maritime traffic, oil and gas and potential seabed mining, on marine species and ecosystems. Based on our experience with many marine consent applications for petroleum activities in the EEZ, cumulative impacts have never been properly assessed[86].

56. Furthermore, the life cycle impacts of the development, from mining overseas for the minerals required, to construction, operations and maintenance, and end-of-life disposals, can cause far-reaching environmental injustice domestically and across the globe[87]. As a socially responsible nation, these need to be thoroughly assessed before any decisions. If permits are to be considered, information on lifespan and plans for repowering or life extension to delay disposal[88], should be provided for assessment.

57. Why are we rushing? This developer-led rush for offshore wind investment fails to take into account the extremely fragile state of the present global economy, in terms of growing supply chain problems[89], bank failures[90], fuel shortages[91] and geopolitical unrest[92]. Critically, offshore wind projects were 2-3 times more expensive per installed MW than onshore projects ten years ago[93], and more so in recent years as projects moved further offshore. In 2021, the global weighted average levelized cost of electricity (LCOE) of new onshore wind projects was USD 0.033/kWh while that of offshore wind was USD 0.075/kWh[94]; i.e., more than double. It is clear that there will be government co-investment or other offers to investors. "*The question comes down to the specific distribution of risks and rewards… the devil will be in the detail*," warned Prof. Brett Christophers in an interview[95] concerning BlackRock's deal with the government. We say potential investors and developers can wait until a robust system-wide Energy Strategy, prudent cost-benefit analyses and regulatory framework are well developed.

Conclusion

58. During this crucial transition period, our focus should be on how to end fossil fuel reliance, reduce overall energy demand equitably and decarbonise effectively. Critically, we do not want to create additional environment problems or squander renewable energy resources when there are more efficient ways of harnessing and using them[96] (See also points 17-23 and 48 above).

59. It is wise and responsible to invest in energy reduction, efficiency and truly sustainable renewable energy production while shutting down polluting industries. A progressive tax system and prudent fiscal management would ensure adequate investment in public services and jobs for nature, fostering community wellbeing and resilience. A degrowth[97] economy would help us all thrive within safe planetary boundaries.

60. Please find a link to our Toitū Taranaki 2030 transition plan[98] to read as part of our submission.

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[1] https://climatejusticetaranaki.wordpress.com/
[2] https://www.mbie.govt.nz/have-your-say/consultation-on-advancing-new-zealands-energy-transition/
[3] https://climatejusticetaranaki.files.wordpress.com/2019/10/cjt-submission-on-mbie-hydrogen-green-paper-oct19-v3-final.pdf
[4] https://climatejusticetaranaki.files.wordpress.com/2023/09/cjt-sub-mbie-regional-hydrogen-transition-sep23.pdf
[5] https://climatejusticetaranaki.files.wordpress.com/2023/04/cjt-submission-on-mbie-enabling-offshore-renewable-energy-6april23-final.pdf
[6] https://climatejusticetaranaki.files.wordpress.com/2023/06/cjt-submission-on-mbie-consenting-renewables-1june23-1-1.pdf
[7] CLEVER – The Collaborative Low Energy Vision for the European Region aims to reduce final energy demand to -55% by 2050 compared to 2019 levels. https://clever-energy-scenario.eu/
[8] https://doughnuteconomics.org/about-doughnut-economics
[9] https://www.newshub.co.nz/home/politics/2023/10/analysis-new-zealand-s-carbon-emissions-are-on-the-way-down-thanks-in-part-to-policies-now-under-threat.html
[10] https://www.eeca.govt.nz/co-funding/regional-decarbonisation/about-reta/
[11] https://www.eeca.govt.nz/assets/EECA-Resources/Research-papers-guides/Ripple-Control-of-Hot-Water-in-New-Zealand.pdf
[12] https://www.araake.co.nz/assets/Uploads/March-2023_Ara-Ake-Battery-Report.pdf
[13] https://www.abc.net.au/news/science/2023-09-07/rural-australia-is-pockmarked-with-small-dams-batteries/102799756
[14] https://www.sciencedirect.com/science/article/pii/S0306261923010796?via%3Dihub
[15] https://www.nzta.govt.nz/assets/planning-and-investment/nltp/2024/docs/nltp-signals-emissions-reduction-vehicle-kilometers-travelled-vkt-planning.pdf
[16] For example, vastly expand the Māori and Public Housing Renewable Energy Fund to support more community-scale distributed renewable energy system initiatives aimed at sufficiency and affordability.

[17] https://geoffbertram.files.wordpress.com/2022/07/short-paper-for-florence-2022.pdf
[18] https://pce.parliament.nz/media/obzpgjze/pce-letter-to-ministers-woods-shaw-and-robertson-re-green-hydrogen.pdf
[19] https://www.science.org/doi/10.1126/sciadv.adh2458
[20] https://www.academia.edu/77124478/Ecology_and_the_politics_of_survival
[21] https://www.gtk.fi/en/current/there-are-bottlenecks-in-raw-materials-supply-chain-a-glimpse-of-the-systemic-overview-is-here-discussion-and-the-development-of-the-solutions-have-started/
[22] https://www.youtube.com/watch?v=T19tHn_LA80
[23] https://insideclimatenews.org/news/18102023/alabama-wood-pellet-mill-enviva-climate/?utm_source=InsideClimate+News&utm_campaign=d093065138-EMAIL_CAMPAIGN_2023_10_21_01_00&utm_medium=email&utm_term=0_29c928ffb5-d093065138-328740906
[24] https://iopscience.iop.org/article/10.1088/1748-9326/aaa512/pdf
[25] https://www.mdpi.com/1996-1073/14/15/4508
[26] https://www.degrowth.nz/
[27] https://clever-energy-scenario.eu/wp-content/uploads/2023/06/clever_final_report-exec_summary.pdf
[28] This figure may vary depending on the choice of perimeter. Within the EED perimeter (i.e. EU27, including international aviation, excluding ambient heat and international maritime), CLEVER's 2050 reduction corresponds to -55% final energy consumption (FEC). Within a EU27 plus UK, NO and CH perimeter including international aviation, international maritime and ambient heat, CLEVER's 2050 reduction corresponds to -51%.
[29] https://pce.parliament.nz/media/ndudvpxt/letter-considerations-for-the-development-of-new-zealand-s-energy-strategy.pdf
[30] https://pce.parliament.nz/media/upmdtt05/letter-from-hon-dr-megan-woods.pdf
[31] https://www.meridianenergy.co.nz/news-and-events/meridian-selects-southerngreenhydrogen-partner
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