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Via Email: energystrategy@mbie.govt.nz

SUBMISSION TO THE MINISTRY OF BUSINESS, INNOVATION AND EMPLOYMENT ON ADVANCING NEW ZEALAND'S ENERY TRANSITION

Thank you for the opportunity to present this submission on Advancing New Zealand's Energy Transition.

The Queenstown Lakes District Council (**QLDC**) is supportive of the work on Advancing New Zealand's Energy Transition to feed into the development of an Energy Strategy (**the Strategy**) for Aotearoa New Zealand.

This submission outlines the significance and vulnerabilities of energy in the Queenstown Lakes District (**QLD**) and its communities. There are several points that are detailed in the submission for consideration in developing the Strategy in order to advance New Zealand's energy transition, including:

- achieving consistency between various planning instruments and the Strategy;
- an energy transition needs to ensure it enhances and maintains wellbeing, particularly focusing on the most vulnerable communities and people;
- the Strategy should take the opportunity during transition to minimise stress on energy networks;
- the Strategy should consider how innovation and partnership can benefit energy networks; and
- the Strategy should outline a financial strategy to ensure an equitable transition to renewable, sustainable, and resilient energy networks.

QLDC would not like to be heard at any hearings that result from this consultation process.

Thank you again for the opportunity to comment.

Yours sincerely,

Michelle Morss
GM – Strategy and Policy

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1.0 Context of the energy in the Queenstown Lakes District

1.1 QLD is a district with an average daily population of 71,920 (visitors and residents) and a peak daily population of 114,790[1]. It is one of the fastest growing populations in New Zealand Aotearoa, with 5.6% average growth per annum over the ten years to June 2022. The total population growth has been 74% over the past ten years, and Statistics NZ predicts that the district's population will grow an additional 48% by 2043.

1.2 At the same time, for the year ending April 2023, there were 4M guest nights spent in the QLD, which could soon be a return to the peak of 4.6M of year ending April 2019[2]. Tourism is a foundation of the local economy, accounting for 39% of GDP and 55% of all employment in 2019[3] and contributing significantly to the national GDP.

1.3 The QLD faces a complex electricity challenge due to the capacity of the infrastructure, the topography, landscape values and protections, seismic risk of the landscape, the rapid increases in energy demand and the affordability of asset investment and maintenance programmes. Secure electricity transmission can only be provided from a resilient distribution network that has sufficient capacity to cope with peak demand. Currently the QLD is subject to significant vulnerabilities from both a disruptive shock to the district's transmission network as well as the stress of insufficient capacity to manage the increased demand from decarbonisation. In light of these vulnerabilities, careful consideration needs to be applied to future generation and transmission network planning and how smart technology can assist to alleviate pressure on the grid and avoid the risk of capital over-investment.

1.4 Additionally, the district's landscapes are of significant value to the people who live in, work in, or visit the Queenstown Lakes. The district relies on the quality of the landscape in large part for its social and economic wellbeing, open spaces and the natural and built environment. These landscapes also have inherent values, particularly to Tangata Whenua. 97% of land in the QLD is classified as being an Outstanding Natural Landscape or an Outstanding Natural Feature (**ONL/F**) which provides functional and operational constraints for both traditional transmission solutions and some regenerative energy generation.

1.5 The district contains a diverse range of indigenous vegetation and significant natural areas (**SNAs**). These habitats contain many endemic species, comprising forests, shrubland, herb fields, tussock grasslands, wetlands, and lake and river margins. Indigenous biodiversity is also an important component of ecosystem services and the district's landscapes. There are over 100 SNAs identified in the Proposed District Plan.

1.6 QLDC has a comprehensive Climate and Biodiversity Plan[4] which strives to reduce emissions, prepare for climate adaptation and pursue biodiversity restoration. One of the three goals is mitigation, that the district reduces its greenhouse gas emissions by 44% by 2030[5] and achieves net zero greenhouse gas emissions by 2050. One of the six key outcomes is focussed upon transport, that the district's transport system is low-emission and better connected. Through ten actions, the plan seeks to pursue a low-emission transport network and a collaborative approach to travel behaviour change. The transportation sector is the most

[1] https://www.qldc.govt.nz/community/population-and-demand

[2] MBIE Commercial Accommodation Monitor.

[3] Infometrics

[4] https://www.qldc.govt.nz/your-council/climate-change-and-biodiversity

[5] Against a 2019 baseline an aligned with the 1.5 degrees science-based target pathway outlined in the 2020 Emissions Reduction Roadmap.

significant source of greenhouse gas emissions within the district's economy[6] and is therefore of critical importance to decarbonize and electrify.

1.7 QLDC, Lake Wānaka Tourism and Destination Queenstown partnered to develop the Regenerative Tourism Plan[7] for the region, that also included Kāi Tahu and the Department of Conservation. The Regenerative Tourism Plan is testament to the collaborative approach to destination management taken in the Queenstown Lakes District. Its keystone project is aiming for zero carbon 2030 for the tourism sector.

1.8 QLDC is supportive of central government direction which promotes the decarbonisation of energy generation and the transition of energy within Aotearoa New Zealand. QLDC believes that reducing carbon emissions, adapting to a changing climate, and restoring indigenous biodiversity should not be approached separately. Government should consider the role of renewable energy generation and small community scale energy generation in order to enable decarbonisation and improve energy and community resilience.

2.0 Wellbeing factors should be at the forefront of planning for energy transition, generation, and transmission.

2.1 All wellbeing factors and the current inequitable access to alternative energy solutions should be recognised in the Strategy. Mitigation measures should be incorporated into the Strategy to prevent those who are more vulnerable to adverse effects associated with any transition to renewable and sustainable energy systems from being disadvantaged.

2.2 There is currently a significant level of inequity in relation to gaining household savings from home solar systems. The current high cost of solar installation means only those on higher incomes can obtain the substantial savings over the long term that are enabled by these investments. Installation costs are forecasted to reduce in the coming years, however careful consideration needs to be applied to how these benefits can be made accessible to low-income families who are most exposed to increases in fossil fuel prices.

2.3 In addition, the Strategy should address how more remote communities will be supported. These are locations where it is unlikely that commercial entities will play a role, and further attention is required as to how these communities will be able to access new technologies and renewable energy. The QLD is a large district with many rural and remote communities, many of which have a desire to play their part in the renewable energy transition.

2.4 The above factors provide a unique opportunity for an integrated and holistic lens to be applied to Aotearoa New Zealand's energy transition. QLDC is concerned that an opportunity may be lost if the intersection between the four wellbeings and energy transition is not robustly investigated and incorporated into the Strategy. QLDC requests that the four wellbeings are integrated into the development and execution of the Strategy .

2.5 A systems approach for energy infrastructure resilience is needed, including integrated planning that emphasises and aligns with spatial planning, destination management principles and their associated work programmes and other government planning instruments. Different communities have a range of social, economic, or cultural drivers in transitioning to renewable energy options, particularly within unique environmental features like those in the QLD.

2.6 The Strategy should also consider the implications of visitor populations on the resiliency demands of critical energy infrastructure and how this could be addressed across the whole energy system. Increased

[6] Carbon Zero Discussion Paper at page 6. Regenerative Tourism By 2030 (queenstownnz.co.nz)

[7] https://www.queenstownnz.co.nz/regenerative-tourism-2030/

information and data sharing is a key enabler of improved resiliency outcomes, particularly in areas like the QLD where communities and energy demands are diverse, and the landscape provides unique challenges.

Recommendations:

R.1. QLDC recommends that the Strategy considers access solutions to solar energy infrastructure across all socio-economic groups and for more remote communities.

R.2. The Strategy should acknowledge and incorporate social, economic, environmental, and cultural influences on energy use in planning for energy infrastructure.

R.3. The Strategy should address the impact that visitors have on critical energy infrastructure demands and how this could be addressed across the entire energy system.

3.0 Maintaining and enhancing wellbeing through the transition – the implications of a just transition need to be addressed transparently.

3.1 The need for an equitable, inclusive, and well-planned transition needs to be included in the Strategy. This needs to be viewed with a holistic approach to wellbeing and a focus on social equity with a priority placed on vulnerable people. The strategy should squarely address the hardships that society will face during the transition period, irrespective of whether or not the transition is just. Even in the pursuit of equitable transition, there may be considerable changes to lifestyle needed. QLDC recommends that a programme of education is considered to sit alongside the strategy to effectively prepare people for the transition.

3.2 QLDC recommends that the Strategy acknowledges the potential difficulties in making lifestyle changes through the energy transition. It should ensure a just transition is advocated for when planning for change. A sliding scale of impact based on a number of factors should be taken into account when planning for transitions. Furthermore, the intergenerational impacts of a sustainable energy system need to be taken into account, as all future work will be based on what is currently underway.

3.3 The strategy should place emphasis on systems thinking and inter-generational equity as a way to approach resilience building. This approach would allow for better coordination, improved outcomes, and the realisation of long-term benefits and equity in energy supply and availability for all communities across Aotearoa New Zealand.

Recommendations:

R.4. The strategy should take a holistic approach to energy transition to ensure that the needs and wellbeing of all, particularly the most vulnerable people and communities across Aotearoa New Zealand are prioritised.

R.5. The strategy needs to account for any potential difficulties in transition and how they might be mitigated.

4.0 The Strategy should aim to minimise stress on the energy system across Aotearoa New Zealand.

4.1 Rapid growth and high visitor numbers means that the energy demand is ever increasing in the QLD. Options for decentralised energy generation and transmission should be considered within the development of the Strategy, for example, incorporating community scale or home solar energy generation.

4.2 The role that community scale and home solar generation plays in minimising stress on the electricity network could be significant in both energy transition, resilience, and in ensuring equity throughout the transition. The integration of home solar into energy networks represents a transformational opportunity to improve network resilience, reduce peak demand levels and enable significant levels of household savings.

4.3 Trials are currently being conducted internationally [8] and within the Queenstown Lakes District [9] to demonstrate how a solar energy system can be implemented at a household, neighbourhood, and community level to save money, improve community resilience, and reduce peak network loading, particularly with regard to the uptake and usage of electric vehicles (**EVs**) and an integrated charging system for EVs at home. If these projects were to be adopted at a district and national scale, they could help to avoid the risk of over-investment in central power generation and transmission capacity.

4.4 The growing population living in the QLD and the increasing number of visitors and the mass transition from internal combustion engine cars to EVs will create a significant increase in energy demand. The Strategy should include load management consideration in its development.

Recommendations:

R.6. The Strategy should be developed in a manner that focuses on the minimisation of stress on already strained energy systems and infrastructure across Aotearoa New Zealand.

R.7. The role of community scale and home solar energy generation should be strongly considered in the development of the energy strategy.

R.8. The Strategy should address load management to ensure that increasing energy demands are addressed and planned for.

5.0 The immediate energy resilience challenge needs innovation and partnership.

5.1 The Strategy will need to recognise that critical energy infrastructure is already at crisis point. QLDC has been working within the traditional energy infrastructure system to ameliorate the risks and effects of a limited spur line providing power to the major urban centre of Queenstown. This poses risks in terms of capacity, resilience, affordability, and emissions reduction. It is a good example of where the traditional energy system, land use planning and local generation initiatives need to work together to achieve the district's vision for a low emissions, and renewable energy-based economy.

5.2 The Strategy will need to address the role of innovation, transformation, and partnership in improving resilience. It is no longer sufficient (as this example shows) to rely on traditional critical energy infrastructure provisions. There is a significant risk of over-investment in traditional models (at great expense), in order to improve resilience if insufficient exploration of alternative models occurs. For example, in the QLD, building significant new lines infrastructure come at a high cost for the community, when investment in local generation solutions may better meet the need, and decrease the risk of failure to supply sufficient energy to meet the needs of the district.

Recommendation:

R.9. QLDC recommends that the Strategy reflects the principle of avoiding over-investment in traditional energy infrastructure solutions, where progressive alternatives exist.

6.0 Significant investment is required in a massive-scale transition to resilient decentralised energy generation.

6.1 An energy transition strategy for Aotearoa New Zealand will need to include a clear financing strategy.

[8] https://electrify2515.org/

[9] https://www.stuff.co.nz/environment/climate-news/130786927/how-your-ev-could-power-your-cooking-heating-and-gadgets

6.2 QLDC recommends that the Strategy includes support for financing energy infrastructure for transitioning to renewable, sustainable, and resilient energy with a long-term perspective in mind. For example, ensuring that investments are resilient to climate hazards.

Recommendation:

R.10. QLDC recommends that the Strategy include long-term support for financing transitioning energy generation and transmission to renewable and low emission energy.