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## Renewable Energy Zones National Consultation 2022

Genesis Energy supports Transpower evaluating whether Renewable Energy Zones (“REZ”) can help New Zealand decarbonise. We are firmly of the view that the concept has merit.

New Zealand’s low-carbon, highly renewable electricity resources are a key competitive advantage for the country as fossil fuels transition out of the energy system. Electricity can and should be the fuel of choice for transport and most industrial processes in the future.

However, as Transpower and others have noted, seizing this opportunity will require billions of dollars in investment in new renewable generation plant, both to meet the projected increase in demand and increasingly displace baseload thermal generation.

In line with our purpose of empowering New Zealand’s sustainable future, Genesis is working to displace 2,650 GWh a year of baseload thermal with renewable electricity generation by 2030, with the majority by 2025. This will involve direct investment and partnerships that enable development of wind, solar, and geothermal assets over the next few years.

Genesis’ activities alone will see New Zealand’s electricity system reach about 90% renewable by 2025, and 93% renewable by 2030. Our modelling across a range of credible scenarios indicates New Zealand will reach between 96% and 98% renewable electricity by 2030.

New Zealand is currently seeing the heaviest investment into new generation in over a decade, and this is set to continue in the short term. However, ensuring that a steady pipeline of investment progresses is critical to achieving New Zealand's sustainability goals.

There is currently almost 1,500 MW in wind generation alone consented but not built<sup>1</sup> across the country. Hundreds of megawatts of grid scale solar are expected to be brought to market in the next few years by Genesis and others. New Zealand will need all this capacity and more to achieve its decarbonisation ambition. If the way transmission costs are allocated is a barrier to even a fraction of this generation being developed, this should be addressed to the extent possible.

### First mover disadvantage

Transmission new connection costs have a major role to play in either encouraging or discouraging electrification, on the supply and demand side. The cost of connecting load is often too high for electrification to be economic for many large energy users. Furthermore, connection costs fall disproportionately on the first generation or load customer to need the infrastructure, creating a 'first-mover disadvantage'.

The Infrastructure Commission notes that "innovative funding, financing or indemnity arrangements may be needed to strike a better balance in maintaining incentives on investors to make careful choices, while reducing barriers to grid and network expansion"<sup>2</sup>. Genesis agrees. Given the national benefits associated with renewable electricity generation (and electrifying high emitting industrial activity), we consider there is an argument for introducing a mechanism that socialises the cost of the infrastructure required to support these activities.

In the absence of such a mechanism, a coordinated cost-sharing approach like the Renewable Energy Zones Transpower proposes could enable more investments that contribute to decarbonising the economy. Genesis considers REZs could be beneficial to encouraging greater utilisation of New Zealand's abundant renewable electricity potential.

Potential investors have long highlighted the first mover disadvantage as an issue. For Genesis, transmission connection costs are a material barrier to development of the Castle Hill windfarm in Wairarapa, for which we hold resource consents. Local network constraints are also a barrier to expanding the capacity of our nearby Hau Nui windfarm.

### Selection criteria

Transpower suggests REZs could be suited to regions in New Zealand that are located on the 'edge' of the national grid such as Northland, Taranaki, Wairarapa, Hawkes Bay, the East Coast of the North Island, the West Coast of the South Island, and Southland. Genesis agrees.

Recognising resource constraints, and the need to invest scarce capital most efficiently, it is important to ensure REZs are identified and progressed in the right order so the benefits are maximised.

Genesis considers the selection criteria Transpower proposes are a sound basis for evaluating where REZs should proceed, and in what order. We would urge Transpower to consult on

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<sup>1</sup> <https://www.windenergy.org.nz/consented-wind-farms>

<sup>2</sup> Infrastructure Commission. 2021. *Draft New Zealand Infrastructure Strategy*, <https://www.tewaihangā.govt.nz/assets/Uploads/211012-Draft-New-Zealand-Infrastructure-Strategy.pdf>

detailed selection criteria as a matter of priority, before moving to consult on the regions that should be designated as REZs and proposed projects.

For that reason, it is currently not clear why Northland should be 'first cab off the rank'. Certainly, the region appears suitable for a REZ. However, without evaluating Northland against other suitable regions the benefits of proceeding with a REZ in Northland relative to other regions cannot be fully understood.

The criteria for evaluating proposed projects in support of a REZ also appear sensible. We would urge Transpower to also consider wider social and economic benefits of proposed projects, similarly to how this criteria features when evaluating the potential for a REZ in a region more broadly.

In particular, the expected generation output of a proposed project should be a specific consideration, and how this contributes to decarbonisation of the electricity system and the economy more broadly.

### Challenges

Transpower highlights challenges associated with recovery of the costs of REZ investment, due to the risk of projects being delayed or not proceeding, and carriage of costs before connection assets are actually in use. These are valid concerns.

In our view, the urgency of bringing new renewable generation to market now justifies some risk of unnecessary costs associated with transmission overbuild. Naturally, appropriate prudence and rigour should still be applied to transmission investment decisions. But we consider that given the pressing need for action on climate change, rapid decarbonisation is preferable to perfect efficiency of transmission investment.

Genesis considers there is merit in the Government underwriting investment in REZs to ensure timely delivery. Similarly, Transpower may propose that Government carries the costs in the interim between infrastructure being built and being in use, with cost recovery from the eventual beneficiary or beneficiaries being smoothed over the life of an asset.

Planning rules and resource consents are also rightly identified as potential obstacles. The challenges associated with securing consent for large renewable developments and transmission infrastructure are well known. This is compounded where multiple developments may be seeking consents for the same region at the same time.

Genesis and other sector participants, including Transpower, continue to work constructively with the government on Resource Management Act reforms. We support stronger national direction for consenting authorities to apply consistent approaches that enable renewable electricity investment, in recognition of the national benefits it offers.

### Next steps

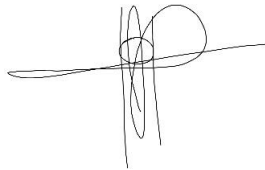
In summary, Genesis strongly supports Transpower developing a mechanism for implementing REZs. Longer term, we would support evaluating a mechanism for socialising the costs of assets that enable renewable electricity generation, in recognition of the national benefits that accrue.

The criteria and process Transpower has outlined are reasonable. We would urge Transpower to apply these in evaluating the highest-value regions so REZs can be developed in the most efficient order. Accordingly, Genesis supports commencing a process to determine which REZ or REZs should be the first to be developed. While Northland may prove to be the best prospect, the appropriate analysis should be done to establish this.

We acknowledge Transpower's proposal to partner and collaborate with various stakeholders as the REZ concept develops. Genesis is eager to be part of these discussions, and we are happy to share our plans with the grid owner where commercial arrangements allow.

Please do not hesitate to contact me with any questions in respect of this submission, or to arrange a discussion with our team.

Yours faithfully

A handwritten signature in black ink, consisting of a horizontal line that loops back and then forms a large, stylized 'M' shape.

**Matt Ritchie**  
**Senior Advisor, Regulatory Affairs and Government Relations**