

Renewable Energy Zones Consultation
REZ@transpower.co.nz

Tēnā koe,

Re: Transpower Renewable Energy Zone Consultation

Thank you for the opportunity to comment on your Renewable Energy Zones consultation. The Energy Efficiency and Conservation Authority (EECA) has a keen interest in this work, and we welcome the chance to remain closely involved as it progresses. EECA has a mandate to promote the use of renewable energy sources, and this also strongly impacts the businesses we work with.

This letter sets out our responses to the questions posed in your consultation document.

Do you agree that the first mover disadvantage and high connection costs can be challenges for connecting new renewable generation and/or large electricity loads to the electricity network?

Yes. EECA co-funds and supports industry to implement decarbonisation projects, some of which require fuel switching from fossil fuels to electricity, in turn creating large new electricity loads. We know from working with these businesses that the first mover disadvantage and high connection costs are significant barriers to implementing decarbonisation projects that may otherwise be technically and economically feasible. Some of our co-funding has gone towards these costs where it would enable the project, however in many cases it is still a barrier.

Do you think the concept of a Renewable Energy Zone could be beneficial in a New Zealand context?

Yes. This would bring together potential electricity generators, transmission, distribution, and users to lessen infrastructure challenges. EECA is keen to work closely with Transpower and others to further develop, pilot and implement this concept. We also would like to be involved to maximise value where our programmes overlap, and to avoid duplication.

However, the design of the REZ process needs to be sufficiently flexible to avoid creating a barrier in itself. It is unclear to us whether the current proposal provides a high degree of certainty for business customers who are pursuing rapid and deep decarbonisation. To be optimally effective, the process may need to take more chances to get things done faster.

What region(s) do you think would be suited to Renewable Energy Zones?

EECA's Southland Regional Heat Demand Database project is all about mapping regional demand to inform potential joint solutions. Naturally that would inform future discussions around a potential REZ for Southland, and the database project is planned to be rolled out nationally in the future. This is also feeding into a Regional Energy Transition Accelerator (RETA) pilot, providing strategic decarbonisation options at a regional level for industry. Selecting regions for a REZ should include consideration of the potential emission savings of electrifying industry in that region alongside generation potential and other factors.

What benefits do you think should be considered in the decision-making process for Renewable Energy Zones in New Zealand?

The most significant benefit of this approach would be in reducing the funding gap for first movers. There may also be benefits in unlocking renewable generation, providing clarity for investors, and reducing overall impacts (costs and environment) of transmission infrastructure by concentrating build in particular regions and corridors. A key benefit of REZ's is enabling decarbonisation investment to occur more quickly, and this should be recognised in the REZ process design.

Do you agree with the proposed guiding principles? Are there any that you would change or add?

The guiding principles are inherently reasonable from a 'status quo' perspective, for example ensuring cost efficiency and net economic benefits. It's also worth considering, however, that to deliver decarbonisation at the pace and scale required, some compromises may be needed (such as to pure economic efficiency and universal stakeholder agreement).

Do you agree with the proposed criteria for selecting suitable regions for REZ development? Are there any that you would change or add?

The current criteria are overly weighted towards generation activities.

We suggest that the criteria for choosing zones also gives significant weighting to the current and future demand to enable fuel switching, and the potential decarbonisation opportunities in a region. This could be informed by some of our work as mentioned above.

Do you agree with using a tender process for committing projects in a REZ? Are there alternative processes that could be considered?

The proposed tender process is suitable for a REZ process that operates within current regulatory and economic settings.

Additional benefits are likely to be unlocked if the process can operate more flexibly and relate to broader objectives and goals. For example, the proposed tender process is likely to favour established, well-financed companies with strong balance sheets and risk appetites.

Many potential projects will not be able to commit to a tender process at the stage required, particularly those led by community groups, overseas investors, and many potential load customers.

The process as described is also strongly asymmetric, in that parties willing to tender carry all the risk and little benefit.

The tender and allocation process as described does not seem to consider broader decarbonisation goals and is more concerned with an 'economic optimum'. Ideally an REZ connection project would be sized to capture all generation and load necessary to deliver on required (or optimal) decarbonisation potential.

An alternate process would be to use a more exploratory approach, combining technical assessments with a less formal registration of interest process, followed by something analogous to a 'book-build' process used in financial markets to solidify commitment and thereby determine overall REZ sizing and configuration.

Who should be involved with co-ordinating and undertaking the various steps within a REZ development process?

Again, EECA is keen to work closely with Transpower on the REZ development process. We think there are benefits to be gained from thinking about the decarbonisation potential in regions and how to overcome barriers that businesses are facing in addition to reducing the funding gap that a REZ will contribute to. We see there is an opportunity to collaborate and synergy with EECA's RETA pilot, aimed at matching regional electricity supply with future demand, and it is essential we work together as we help create more demand for renewable electricity through fuel switching.

The complexity of the regulatory environment in this area is itself a potential barrier. Effective participation from all relevant decision-makers will be necessary to make the REZ concept work.

Do you agree with the proposed project criteria? Are there any that you would change or add?

The proposed project selection criteria reflects a traditional view of potential REZ participants and focusses heavily on project implementation.

A more open approach might be based on willingness and capability to commit, and likely carbon mitigation benefits arising from participation. For example, if tender participants receive some form of capacity rights, and are willing to commit financially to receive these, then the overall status of the project is less relevant, since the transmission investment will be suitably funded regardless.

Do you agree with the challenges we have identified?

The identified challenges are all relevant and significant. We suggest adding a further challenge which is how the transmission network intersects with necessary carbon mitigation (and other, broader, policy goals such as just transition). This would help balance the design of the REZ to include broader objectives.

What are some of the ways to overcome these challenges and who should be involved?

Financial capacity rights could be implemented relatively easily via small changes to the design of the Financial Transmission Rights (FTR) system. Allocation of capacity to transmission investors is a feature that was included in the original FTR design. This would go some way to incentivising participation in the REZ process, and balance out some of the risks of doing so.

The challenges of right-sizing and oversizing could be addressed by taking a less economically strict approach to grid investment, for example by incorporating potential carbon benefits of network “oversizing” (or conversely the potential carbon costs of ‘undersizing’ of ‘latesizing’). Integrating REZ design with, for example, Climate Change Commission emissions reduction pathways could help provide parties with more confidence to invest appropriately in electricity networks.

Similarly, the identified challenge of consent co-ordination is only problematic if the goal of absolute economic efficiency is retained. If transmission consents are obtained in a timely manner, delays to consenting of other projects are likely to be much less problematic, particularly given that a given transmission corridor can carry a wide range of capacities.

Do you see any other potential challenges that need to be considered?

The creation of zones only gets us so far.

A lot of the infrastructure challenges are in the distribution network. REZ's are a start to overcoming the first mover disadvantage but there is more to be done to get all network players on the same page, recognising the barriers and using a model that takes a full supply chain approach across EDB regions. This requires a focus on the customer as well, where EECA can add value through our work with businesses.

Implementation of the concept to the point at which it has impact will still require financing for these potential generators to get over the remaining (reduced) first mover disadvantage. Transpower should consider work on this remaining financial risk and the gap/need for a potential funding mechanism or PPAs.

The challenges that we are facing also need urgent attention. For the Government to meet its emissions targets, particularly in Emissions Budget Period 1 (2022-25), rapid decarbonisation is required. These decarbonisation projects take time to implement alongside any network upgrades, so barriers need to be removed quickly.

Thank you again for the opportunity to comment. We welcome the opportunity to discuss any of the above in more detail and look forward to working with Transpower on development of the REZ proposals.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'M. Bell', is positioned below the closing text.

Murray Bell
Group Manager, Strategy Insights and Regulation