Submission on *Measures for Transition to an Expanded and Highly Renewable Electricity System*

Name	
Organisation (if applicable)	BlueFloat Energy and Elemental Group
Contact details	

Release of information

Please let us know if you would like any part of your submission to be kept confidential.

☐ I would like to be contacted before the release or use of my submission in the summary of submissions that will be published by MBIE after the consultation.

☐ I would like my submission (or identified parts of my submission) to be kept confidential, and **have stated below** my reasons and grounds under the Official Information Act that I believe apply, for consideration by MBIE.

I would like my submission (or identified parts of my submission) to be kept confidential because [Insert text]

[To check the boxes above: Double click on box, then select 'checked']

Responses to questions

Part 1: Growing Renewable Generation

	Are any extra measures needed to support new renewable generation during the transition?
1.	Please keep in mind existing investment incentives through the energy-only market and the ETS, and also available risk management products. Any new measures should add to (and not undermine or distort) investment that could occur without the measures.

Yes. Whilst we acknowledge that the falling cost of renewables and rising carbon price will make renewable generation increasingly competitive against thermal alternatives, we believe that government has a strong role to play in supporting the increased development of new generation projects.

Whilst large integrated energy companies with existing customer bases have a unique ability to develop new generation projects without project finance (ie gentailers), independent developers are largely reliant on project finance structures to enable projects to move to the construction phase. In turn, securing project finance is dependent on demonstrating long-term, stable and credit-worthy offtake arrangements are in place to ensure a sufficient revenue stream to underwrite debt obligations.

Whilst corporate PPAs will play a role in supporting some new projects to come to market, New Zealand lacks a large pool of heavy electricity consumers who are able to provide the long-term, credit-worthy offtake required. Today, New Zealand has over 2.5GW of consented renewable projects which are NOT being built. This is largely because these projects lack the necessary offtake arrangement to move to a financial investment decision.

We believe there is a strong case in New Zealand for government to help to fill this market gap by providing revenue stabilisation mechanisms for new renewable generation and firming/storage products. We believe that establishing long-term renewable generation targets with a regular programme of government-run auctions for CFD contracts would ensure that New Zealand develops the quantities of new generation required to support the energy transition. With futures electricity prices in New Zealand now trading >$150/MWh, it is clear that the market expects demand to outgrow supply without some kind of new intervention. With decarbonisation goals heavily dependent on a high degree of electrification, it is critical that New Zealand develops enough new generation to bring power prices down, thereby supporting the economics of electrification projects.

Further, we believe that such government-facilitated CFD contracts would increase competition in the power generation market, putting further downward pressure on prices for the benefit of consumers and to encourage a greater rate of electrification to support decarbonisation. As a highly creditworthy counterparty, government-backed CFDs would also act to de-risk generation investments, resulting in lower financing costs and therefore lower power prices for consumers.

In establishing a programme of CFD auctions, we encourage government to implement a design which facilitates the development of a diverse range of new generation projects. These projects should be diverse in both technology and geography to ensure a resilient fleet of generation assets. In this respect, we note the regime implemented in the UK in which each auction round allocates generation capacity into different technology categories (ie onshore wind, solar, fixed offshore wind, floating offshore wind) and invites bids for CFD contracts into each of those categories.

4.	Do you think measures could be needed to support new firming/dispatchable capacity (resources reliably available when called on to generate)? If yes, which kind of measures? What needs do you think those measures could meet and why?
	We refer to our response to question 1 and note that government-facilitated price stabilisation measures could be used to support firming / storage assets in the same way as they could be used to support new renewable generation. As with generation assets, we believe that New Zealand consumers would benefit from strong competition on the market for energy storage and firming generation. Without government-facilitated offtake measures, energy sector incumbents will continue having a significant advantage in the development of new storage/firming assets which will continue to limit competition and lead to higher prices.
5.	Are any measures needed to support storage (such as battery energy storage systems or BESS) during the transition? If yes, what types of measures do you think should be considered and why?
	Yes, as noted above we believe that further measures to support storage development (including both BESS and green molecule based storage) are warranted. This could include government based CFD schemes or an expanded ancillary services market to support investment. We also note that simple changes, such as changing the settlement period for electricity prices from 30 minutes to 5 minutes could improve the economics of BESS investments which have the ability to ramp very quickly.
8.	Are any measure(s) needed to support existing or new fossil gas fired peaking generation, so as to help keep consumer prices affordable and support new renewable investment?
	We support increased long-term planning for the energy sector as part of New Zealand's energy strategy to ensure that the right incentives exist to avoid thermal peaking assets being decommissioned too early.
16.	What new measures could be developed to encourage large industrial users, distributors and/or retailers to support large-scale flexibility?
	We strongly encourage government to implement a more advanced suite of ancillary services products in the electricity market as a means of encouraging demand response, storage and flexibility services. Short term ancillary services, such as those required to manage frequency and voltage in a highly renewable energy market, could be contracted by Transpower in its role as System Operator. Enabling a clear market mechanism for these services would allow industrial users to commercially assess how they can operate their facility to participate in this market. Such a market would also provide an additional revenue stream for energy storage project developers to support a greater rate of development of those assets.
Part 2: Competitive Markets	
18.	Do you agree that the key competition issue in the electricity market is the prospect of increased market concentration in flexible generation, as the role of fossil fuel generation reduces over time?
	We agree that market concentration in generation is a key risk which is particularly acute for flexible generation. We encourage the government to ensure an attractive investment

environment in new generation and storage assets to maintain a healthy level of competition in these critical markets.

Part 3: Networks for the Future

27. Do you consider that the balance of risks between investing too late and too early in electricity transmission may have changed, compared to historically? If so, why?

Yes, we believe this has changed for two key reasons:

1. the pace at which new generation assets can be constructed compared to historical norms; and
2. the importance of the electricity system in supporting decarbonisation.

In the past, new generation was primarily added to the system with large hydro or thermal generation assets and it was therefore possible for transmission upgrades to largely be planned and developed in parallel with these generation assets. Since then, transmission assets have become harder to build (ie consent) whilst generation assets (ie renewables) can now be built very quickly and in a much more dispersed fashion.

Further, avoiding climate change has become the key challenge for society to address. It is widely accepted that electrification of transport and industry (along with renewable generation for production of green molecules) will be critical to decarbonising our economy. Having a reliable, sustainable and affordable supply of electricity will be critical to achieving our net zero targets.

In this context, we strongly encourage government to adopt a more proactive approach to long term energy system planning, including the use of proactive transmission system upgrades to send positive signals to encourage greater renewables development. We acknowledge that consumers ultimately bear the cost of transmission system costs and thus bear the risk of investing too early. However, customers also bear the risk of investing too late, in the form of higher energy prices when new generation is unable to keep up with demand.

As at 6 October 2023, Transpower is managing 362 new connection enquiries to the network. Many of these will be opportunistic applications seeking to utilise remaining capacity in the existing system. Further, many of these will be projects competing for the same spare capacity as other projects in the queue, meaning that Transpower is actively working on a far higher number of connection applications than will ultimately go ahead. In the context of New Zealand's capacity constrained labour market, this is highly inefficient and results in delays for new projects (both demand and supply) being connected. The current waiting time to commence engineering after lodgement of a connection application with Transpower is over 12 months.

28. Are there any additional actions needed to ensure enough focus and investment on maintaining a resilient national grid?

Under existing regulations (and the Benchmark Agreement), Transpower has no liability in the event that generation is constrained because of insufficient transmission capacity. Whilst Transpower agrees to performance targets related to availability at connection points, there is no tangible incentive on Transpower to ensure interconnection assets are sufficient to move electrons from supply sources to demand centres.

This places a significant risk on generators who have no control over the downstream investments by Transpower in the interconnection assets. This increased risk on generators results in higher financing costs and therefore higher power prices for consumers. We recommend that regulations (and the Benchmark Agreement) are updated to place a responsibility on Transpower (and associated liability) to minimise curtailment of generation.

30. Are there pressing issues related to the electricity distribution system where you think new measures should be looked at, aside from those highlighted in this document? How would you prioritise resolving these issues to best enable the energy transition?

We note recent policy guidance implemented which seeks to support the more efficient consenting of renewable energy and electricity transmission assets. Given the scope for renewable generation, electrification projects and battery storage assets to be connected to distribution networks, we would encourage that this policy guidance is also extended to distribution assets.

40. Will the existing statutory objectives of the Electricity Authority and Commerce Commission adequately support key objectives for the energy transition?

We consider it appropriate to incorporate themes relating to sustainability, decarbonisation and climate change into the statutory objectives of these bodies.

41. Should the Electricity Authority and/or the Commerce Commission have explicit objectives relating to emissions reduction targets and plans set out in law? If so,

- should those objectives be required to have equal weight to their existing objectives set in law?

Why and how might those objectives affect the regulators' activities?

We support sustainability, decarbonisation and climate change resilience becoming express objectives in relation to investment decisions.

59. Are there significant advantages in adopting a REZ model, or a central planning model (like the NSW EnergyCo), to coordinate electricity transmission investment in New Zealand?

Would a REZ model for local electricity distribution be an effective means of addressing first mover disadvantage with connecting to electricity distribution networks?

Related to our response at question 27 above, we support more proactive long-term planning in the energy system. We believe that a REZ model in New Zealand could provide an effective means of identifying high priority areas for new renewable generation, fit for purpose infrastructure development and more efficient use of limited resources to deliver the upgrades required for the energy transition. Such a REZ model should:

1. be linked to long-term renewable generation and decarbonisation targets;
2. ensure geographic diversity, through the development of multiples REZs; and
3. ensure technology diversity by facilitating a range of generation types including solar, onshore wind, offshore wind and storage.