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

Name	
Organisation (if applicable)	Taranaki Offshore Partnership
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.

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Consultation: Advancing New Zealand's energy transition

Energy and Resource Markets

Building, Resources and Markets

Ministry of Business, Innovation and Employment

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Attention: Electricity Markets Submissions

Submission on 'Measures for Transition to an Expanded and Highly Renewable Electricity System' discussion document

Taranaki Offshore Partnership (*TOP*) is a Joint Venture between NZ Super Fund (*NZSF*) and Copenhagen Infrastructure Partners (*CIP*) that is investigating offshore wind generation opportunities in Aotearoa New Zealand.

Founded in 2012, Copenhagen Infrastructure Partners P/S today is the world's largest dedicated fund manager within greenfield renewable energy investments and a global leader in offshore wind. The funds managed by CIP focuses on investments in offshore and onshore wind, solar PV, biomass and energy-from-waste, transmission and distribution, reserve capacity, storage, advanced bioenergy, and Power-to-X. CIP manages ten funds and has to date raised approximately EUR 19 billion for investments in energy and associated infrastructure from more than 140 international institutional investors. CIP will accelerate its role in the global energy transition and aim to have EUR 100 billion under management in green energy investments in 2030. CIP has approximately 400 employees and 11 offices around the world. For more information, visit www.cip.dk

The NZ Super Fund was set up to help the Government meet the future costs of national superannuation. The Fund's assets, which are currently worth more than $NZ60 billion and include some $NZ7.5 billion invested in Aotearoa New Zealand, are owned by the Crown on behalf of all New Zealanders, but the fund manager operates on a commercial basis, independently of the Government. The Fund's partnership with CIP on the South Taranaki Project reflects its commitment to exploring commercially attractive investment opportunities in New Zealand infrastructure and sits alongside its existing €125 million commitment to CIP's globally-focused Energy Transition Fund. For more information, visit https://nzsuperfund.nz/

Copenhagen Offshore Partners (COP) is the exclusive global offshore wind development partner to CIP, including for projects in Aotearoa New Zealand.

We appreciate the opportunity to provide a submission on the Ministry of Business, Innovation and Employment's (*MBIE*) discussion document '*Measures for Transition to an Expanded and Highly Renewable Electricity System*'.

We believe that offshore wind generation is a valuable resource that can help support a successful electricity system transition and help promote MBIE's energy strategy objectives. Offshore wind generation will provide significant benefits to New Zealand, including:

- Creating highly skilled job opportunities and supporting local industry
- Adding diversity to the renewable generation mix
- Supporting large scale industrial decarbonisation (because of the scale of offshore wind developments , typically 1,000 MW or more)
- Supporting the move away from fossil-fuelled generation (because it is expected to have a higher capacity factor than onshore wind and slightly higher generation during the spring and winter months when electricity demand is higher).

However, offshore wind development has some unique challenges, particularly long development lead times and large-scale developments (typically 1,000 MW or more). This means that offshore wind developers require substantial certainty around revenue streams, the form of the regulatory framework, and that the infrastructure required to support an offshore wind farm (such as transmission and port facilities) will be in constructed in time before financial close can occur.

Our submission on the discussion document is **attached** using MBIE's provided submission template. The submission is based on global experience in developing new markets, maturing projects to an investable stage and delivering offshore wind projects. Where relevant, responses have included experience and examples from other jurisdictions with offshore wind regimes and permitting regimes comparable to New Zealand law.

Our Submission

The attached submission provides our views on the questions raised in the Discussion Document. Contact details for our team (as well as confirmations regarding the release of information) are included in the submission.

We are available to assist in any way with MBIE's work and would be happy to provide further information and/or meet with officials to discuss the matters covered in this submission.

Responses to questions

Part 1: Growing Renewable Generation

1. Are any extra measures needed to support new renewable generation during the transition?

   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.

We believe that Aotearoa New Zealand's transition to a low carbon future will require a buildout of renewable generation unlike what has been experienced to date, including innovative technologies and large-scale developments.

Future support should be directed towards projects that promote MBIE's energy strategy objectives: energy affordability and equity, security and reliability, a timely renewable transition and economic development.

We believe that offshore wind is one of the main technologies that should be added to our renewable generation portfolio. The development of offshore wind farms in Aotearoa New Zealand might require extra measures for support, as we explain in Q2 below.

2. If you think extra measures are needed to support renewable generation, which ones should the government prioritise developing and where and when should they be used? What are the issues and risks that should be considered in relation to such measures?

Aotearoa New Zealand offers ideal locations for offshore wind development due to strong offshore winds, relatively shallow water and close proximity to existing grid infrastructure. We expect these strong fundamentals will support the opportunity for offshore wind.

Irrespective of these strong fundamentals, offshore wind projects in new and developing markets have a significant upfront capital investment that need to be recouped across the life of the project.

Making offshore wind projects bankable is particularly crucial, and existing wholesale market contracting mechanisms may not be adequate and/or have sufficient forward-looking timescales to provide the revenue certainty required.

In other jurisdictions, governments have designed revenue stabilisation to provide revenue certainty and bridge the gap between the levelized cost of electricity (LCOE) and the market price (referred to as the viability gap). The decision by governments globally to support offshore wind projects is underscored by the technology's capacity to support a broad range of market and non-market outcomes.

In Aotearoa New Zealand, offshore wind has a unique value proposition:

- **De-risks the build out of required generation to meet Aotearoa New Zealand electricity needs**

  Based on our assessment of the market need for generation in Aotearoa New Zealand, we believe there is significant risk in attempting to achieve the generation requirements with onshore sources alone.

  Offshore wind has a higher capacity factor than onshore wind, requiring less land to deliver more generation for consumers. We expect a net capacity factor of >50 percent in the South Taranaki Bight, 1.5 times higher than the onshore portfolio average.

As a result, we estimate that producing the same output as a 1GW offshore wind farm would require around 1.5GW of onshore wind (approx. 150km2 or 15,000 hectares) or 3.9GW of large-scale solar (approx. 100km2 or 10,000 hectares).

- **Generation patterns will align with periods of elevated demand, lowering the cost of electricity for consumers**

  Our modelling suggests that the generation from a South Taranaki offshore wind farm would be marginally higher during the spring and winter months, when demand in the country tends to be higher. Given the projects near zero short run marginal cost, generating at periods of high demand will have the effect of increasing supply and energy security whilst reducing prices for consumers.

- **Provides diversification benefits for Aotearoa New Zealand's grid, supporting energy security**

  A key benefit of the Project is that it will provide diversification benefits to the New Zealand grid. Diversification refers to the benefits of having complementary generation sources across the country. Projects that are not co-located are exposed to different weather patterns, such as wind patterns and cloud cover, which means that when one project is experiencing low output due to unfavourable weather conditions, another project in a different location may be producing at a high level. Co-location also increases the risk of dependent failures, thereby posing risks to energy reliability, security, and price stability.

  Our analysis suggests there will be a relatively low degree of correlation (less than 50 percent on average) with the onshore portfolio, providing energy security benefits for the system. Our modelling also shows the correlation with onshore wind appearing to drop to around 40 percent during peak demand hours.

  Additionally, if there was a portfolio of offshore wind generation across the country, generation would be negatively correlated to hydro inflows.

- **Offers wider economic benefits for Aotearoa New Zealand, including the creation of highly skilled jobs and support of local industries**

  In particular, offshore wind can help to secure a just transition for Taranaki as it moves away from oil and gas production.

  Projects will deliver significant economic and social benefits to South Taranaki and Aotearoa New Zealand through long-term economic investment worth billions. This investment will continue the transformation of local industry profile.

  Projects will support new long-term, local jobs. Investment of this scale also support the development of capability in wind energy, enabling the growth of supply chains, businesses and renewable energy infrastructure.

- **Capacity and commitment to support impacted local stakeholders, including iwi/hapū and fishermen**

  We are committed to delivering value for local communities. We plan to continue implementing our extensive public and stakeholder engagement plan including with local communities, iwi/Māori and other stakeholders in the region.

  We have opened a local South Taranaki in Hāwera to enable day-to-day community engagement and presentations on offshore wind, which have been well-attended. We seek to share and, where appropriate, adapt global good practices to the Aotearoa context, in partnership with stakeholders.

Our approach to engagement with iwi and hapū is to identify specific principles that underpin a particular relationship during early partnership discussions. Inclusivity and transparency are fundamental to the relationship. We plan to hold regular stakeholder sessions with iwi to present reports/information and provide opportunities for questions/comments as appropriate (depending on the stakeholder's interest in participating). We have already been providing some South Taranaki iwi with regular updates on our FLiDAR wind measurement work, as agreed before the FLiDAR was deployed.

We have had initial conversations with Seafood NZ and will continue to progress this to understand potential impacts on fisheries. We will discuss coexistence with fishing customary rights with the likes of Te Ohu Kaimoana.

- **Positions Aotearoa New Zealand to support industrial electrification and take advantage of the Power-to-X opportunity**

  The scale of generation provided by offshore wind is sufficient to support and encourage large scale industrial decarbonisation. An Aotearoa New Zealand hydrogen or other Power-to-X industry would require multiple large scale renewable electricity generation as an input to producing green hydrogen. We consider it unlikely that this demand will be met without new generation, at the scale offshore wind can provide.

We encourage MBIE and other government departments to assess the value proposition for offshore wind and the role that it can play in the generation mix. We are currently progressing further detailed analysis and market modelling the issues and opportunities noted above and are open to sharing in confidence the outcomes of this work.

We acknowledge there are multiple potential pathways for offshore wind to address revenue certainty requirements, with an assessment of the available pathways impacted by windfarm fundamentals, maturity of the industry and corporate/retailer contracting suitability.

We also note that Transpower's independent assessment of 'Corporate Power Purchase Agreements' published October 2023 has identified several barriers to the use of corporate PPAs in Aotearoa New Zealand that will impact the market led build out of required generation for all generation types, including:

- The lack of long-term price visibility, which is required to support PPA negotiations. Developers seek longer contract durations than what most Aotearoa New Zealand businesses currently contract electricity for, and there is a lack of long-term price transparency of traded electricity contracts.
- Counterparties need to be sufficiently creditworthy for developers to be able to use a corporate PPA to successfully access funding. In Aotearoa New Zealand, there are a small number of companies which have a suitable credit rating and have high electricity-intensive operations.
- The long development timeframes of renewable electricity generation projects mean there is a mismatch in negotiating a PPA and when the electricity will actually be delivered. This is especially true given recent global supply chain issues.
- The need for suitable risk management products (e.g. firming-type, peak hedges and other shaped products) due to the intermittency that comes with renewable generation. The cost due to shaping can have a significant impact on the total PPA cost.
- Lack of corporate recognition of PPA sustainability benefits, due to Aotearoa New Zealand's highly renewable electricity grid.

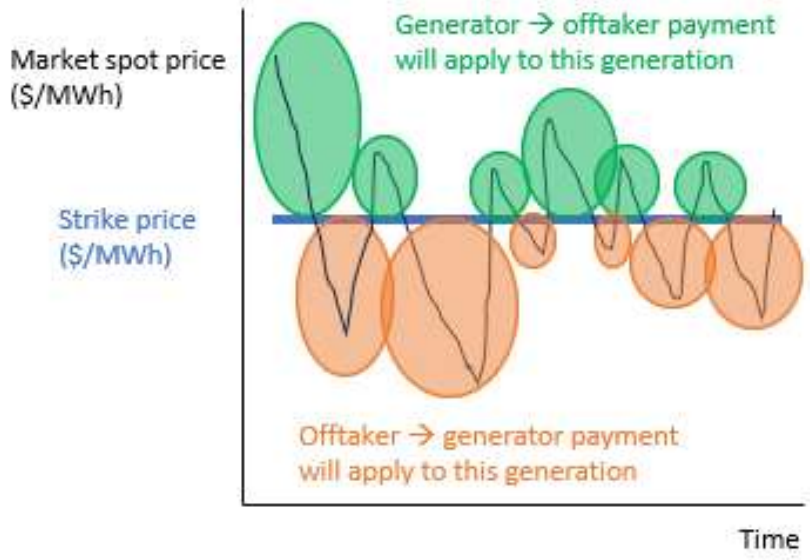
To support MBIE's internal assessment, we have provided below detail about how a two-way CfD, one of the most common revenue stabilisation mechanisms for offshore wind, would work in practice.

Two-way contracts for difference

CfDs are financial instruments used by governments worldwide to promote investment in renewable energy generation. Rather than subsidising renewable energy investment, contracts for difference increase offtake certainty, which increases investor confidence. A 'strike price' per MWh generated is agreed between the generator and offtaker (e.g. government). In a two-way CfD, when the market spot price is above or below the agreed strike price, payments flow between the parties.

As shown in Figure 1, if the market spot price was above the agreed strike price, payments would flow from the generator to the offtaker/government for those returns received above the strike price. In the opposite scenario, where the market spot price is below the agreed strike price the government offtaker makes payments to the generator up to the strike price. With an appropriately determined strike price, a two-way CfD ensures that generators do not make windfall gains but do have sufficient generation price certainty to support long term investment decisions.

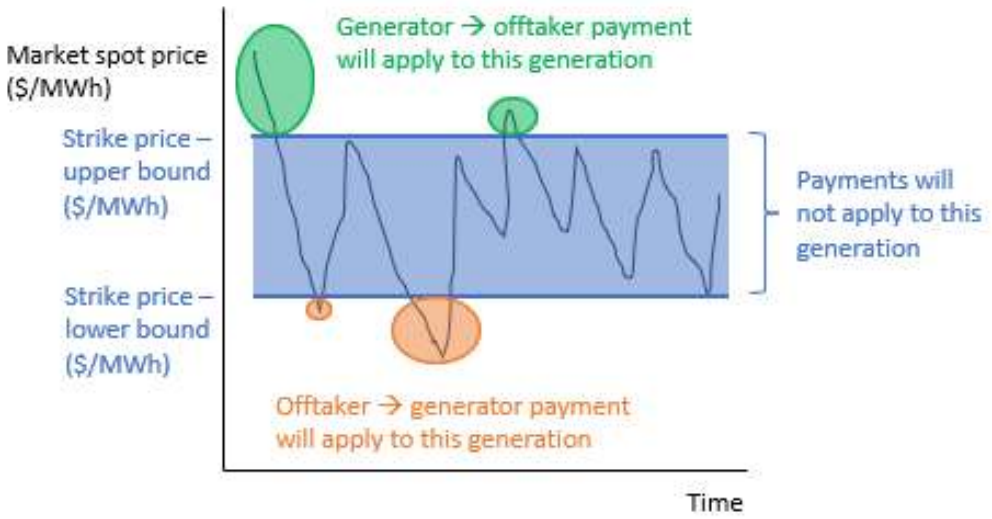
Figure 1: Two-way Contract for Difference showing payments made when the electricity market spot price is above or below the agreed strike price



To provide commercial efficiency and reduce complicated payment terms, the number of payments in a two-way CfD can be reduced by using a 'collared' strike price where upper and lower bounds are agreed.

This is shown in Figure 2 where the inner range (shown in blue) would not result in payments being made by either party.

Figure 2: Collared two-way Contract for Difference showing payments made when the electricity market spot price is above the agreed strike price upper bound or below the agreed strike price lower bound



CfDs are typically agreed for a long-term arrangement (e.g. 20 years). The extent of subsidy associated with a CfD is a factor of the difference between the strike price and the forecast wholesale electricity price. Strike prices consistent with the forecast long term wholesale price are considered revenue neutral, providing revenue stabilisation. This would assume that projects are viable at long range whole prices, but require revenue stabilisation to access required finance.

Benefits of two-way CfDs include:

- The increased certainty of offtake pricing allows project developers to access project finance at lower interest rates. This can both attract new players, increasing competition, and lower project costs.
- Supporting projects in addressing barriers in the corporate / retailer PPA market.
- Negotiating a two-way CfD agreement would give the Government a mechanism to agree other financial or non-financial commitments with developers that provide benefits to Aotearoa New Zealand, including for example supporting schemes for capacity firming. This would be reflected in the strike price of a possible revenue stabilisation mechanism.

3.	If you don't think further measures are needed now to support new renewable generation, are there any situations which might change your mind? When and why might this be?
	No response
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?
	No response

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?
	No response
6.	If you answered yes to question 4 or 5 above, should the support be limited to renewable generation and renewable storage technologies only or made available across a range of other technologies? Keep in mind that fossil fuels are generally the cheapest option for firming, though this may change over time as renewable options (particularly batteries) become more efficient and affordable.
	No response
7.	If you answered yes to question 6 above, what are the issues and risks with this approach? How could these risks and issues be addressed?
	No response
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?

The Aotearoa New Zealand energy market will require a combination of different technologies to deliver on its energy transition objectives. A diversified portfolio of renewable electricity generation sources will serve us well in future for much of our energy requirements.

Offshore wind has many benefits, and its characteristics mean that it can be considered as 'quasi-baseload':

- A higher capacity factor and wind speeds than onshore wind, requiring less geographic surface area and turbines to deliver more generation. We expect a capacity factor of over 50 percent in the South Taranaki Bight, 1.5 times higher than the onshore portfolio average.
- Generation patterns that will align with periods of elevated demand. Our modelling suggests that the generation from a South Taranaki offshore wind farm would be marginally higher during spring and winter months, when demand in the country tends higher.
- Power generation at scale to support and encourage large scale industrial decarbonisation as well as new energy-intensive energy vectors such as green hydrogen.
- Diversification benefits to the New Zealand grid. Our analysis suggests there will be a relatively low degree of correlation (less than 50 percent on average) with the onshore portfolio, providing energy security benefits for the system. Our modelling also shows the correlation with onshore wind appearing to drop to around 40 percent during peak demand hours. Additionally, if there was a portfolio of offshore wind generation across the country, generation would be negatively correlated to hydro inflows.

These 'quasi-baseload' characteristics mean that offshore wind would offer an alternative to fossil gas fired generation in many situations.

9.	If you answered yes to question 8 above, what measures should be considered and why? What are the possible risks and issues with these measures?
	n/a
10.	If you answered yes to question 8 above, what rules would be needed so that fossil gas generation remains in the electricity market only as long as needed for the transition, as part of phase down of fossil gas?
	n/a
11.	Are there any issues or potential issues relating to gas supply availability during electricity system transition that you would like to comment on?
	No response
12.	Do you agree that specific measures could be needed to support the managed phasedown of existing fossil fuel plants, for security of supply during the transition?
	We support the industry working with regulators to develop measures that encourage an orderly transition of baseload fossil plant as necessary. An orderly transition supports investor confidence to bring required renewable assets online.
13.	If you answered yes to question 12 above, what measures do you think could be appropriate and why? What conditions do think you should be placed on plant operation? For example, do you have any views on whether there should be a minimum notice period for reductions in plant capacity, and/or for placing older fossil fuel plant in a strategic reserve?
	No response
14.	If you answered yes to question 12 above, what are the issues and risks with these measures and how do you think these could be addressed?
	No response
15.	What types of commercial arrangements for demand response are you aware of that are working well to support industrial demand response?
	No response
16.	What new measures could be developed to encourage large industrial users, distributors and/or retailers to support large-scale flexibility?
	No response
17.	Do you have any views on additional mechanisms that could be developed to provide more information and certainty to industry participants?
	No response

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 increased market concentration in flexible generation could be a key issue in the future, particularly over longer periods when there have been extended periods of low hydro inflows. Over shorter periods, batteries and demand flexibility are likely to be viable alternatives for firming. However, we note that the Market Development Advisory Group's (MDAG's) competition analysis (which MBIE's consideration of competition issues draws on) is based on a 2035 portfolio of generation that does not include any offshore wind generation. We recommend that more modelling is done to consider what impact investment in offshore wind generation could have on the means and incentive of flexible generators to exercise market power. We consider that diversity of intermittent generation resources could help reduce dependence on flexible generation. If generation from different intermittent generation resources is reasonably uncorrelated, then there is less likely to be extended periods when intermittent generation is low because at least some of the intermittent generation resources are likely to be generating. While the benefits from uncorrelated generation (offshore wind farms generating when onshore wind farms are not) are not expected to be as pronounced in Aotearoa New Zealand as in other countries given geographical conditions (North-South aligned landmass, with winds mostly coming from the west), our analysis suggests there will be a valuable degree of uncorrelation (around 50%) with the onshore portfolio. Our modelling also shows the correlation with onshore wind appearing to drop to around 40% during peak demand hours. In addition, intermittent generation resources with higher capacity factors may reduce reliance on flexible generation because these resources will have fewer periods when they are not generating. One of the many unique benefits of offshore wind (refer Q2) is a higher capacity factor over onshore wind—we expect a capacity factor of above 50 percent in the South Taranaki Bight, 1.5 times higher than the onshore portfolio average.
19.	Aside from increased market concentration of flexible generation, what other competition issues should be considered and why?
	No response
20.	What extra measures should or could be used to know whether the wholesale electricity market reflects workable competition, and if necessary, to identify solutions?
	No response
21.	Should structural changes be looked at now to address competition issues, in case they are needed with urgency if conduct measures prove inadequate?
	No response

22.	Is there a case for either vertical separation measures (generation from retail) or horizontal market separation measures (amending the geographic footprint of any gentailer) and, if so, what is this?
	No response
23.	Are measures needed to improve liquidity in contract markets and/or to limit generator market power being used in retail markets? If yes, what measures do you have in mind, and what would be the costs and benefits?
	No response
24.	Should an access pricing regime be looked at more closely to improve retail competition (beyond the flexibility access code proposed by the Market Development Advisory Group or MDAG)?
	No response
25.	What extra measures around electricity market competition, if any, do you think the government should explore or develop?
	No response
26.	Do you think a single buyer model for the wholesale electricity market should be looked at further? If so, why? If not, why not?
	No response
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?
	The balance of risks between investing too late and too early in electricity transmission has changed. To support decarbonisation of the economy, electricity demand is expected to grow considerably, which will require substantial transmission investment to support growth in both electricity demand and generation. This means that the impact of investing too late in electricity transmission has increased significantly – if transmission investment occurs too late it will push up wholesale electricity prices, could delay needed generation investment occurring, and make it more difficult (or prevent) Aotearoa New Zealand from meeting its emission reduction targets. In addition, if businesses believe there is a risk of transmission investment occurring too late to meet electricity demand growth, this could discourage businesses from expanding their Aotearoa New Zealand footprint (or entering New Zealand) and could discourage potential investors from considering investment in electricity generation. We note also that a key draw for businesses entering or remaining in Aotearoa New Zealand is the highly renewable electricity system, which allows for the production of 'green products' that can attract a premium (e.g. Tiwai's production of 'green aluminium')—this pull is likely to remain as the world's focus on reducing carbon emissions gathers pace. Conversely, the impact of investing too early in electricity transmission has fallen. In recent history, when there has been little or no electricity demand growth, if transmission investment occurred too early it could be many years until the additional transmission investment was

	needed. However, with electricity demand (and consequently generation) expected to grow significantly in coming decades, the risk of investing in redundant transmission infrastructure is much lower than it has been. Offshore wind provides an opportunity to utilise existing grid capacity on the North Island, alleviating the reliance on the interconnector. We also expect large scale offshore wind will reduce the need for some transmission augmentation across Aotearoa New Zealand. We have been having ongoing and informative discussions with Transpower and are pleased with their willingness to engage with the offshore wind industry. Their recent scenario modelling considering addition of offshore wind project to the grid has been very helpful. Developers require certainty regarding the availability of transmission and grid connection to achieve final investment decision and there are significant costs associated with delays to transmission network upgrades or grid connection.
28.	Are there any additional actions needed to ensure enough focus and investment on maintaining a resilient national grid?
	No response
29.	Do you agree we have identified the biggest issues with existing regulation of electricity distribution networks?
	No response
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?
	No response
31.	Are the issues raised by electricity distributors in terms of how they are regulated real barriers to efficient network investment? Please give reasons for your answer. Is there enough scope to address these issues with the current ways distributors are regulated? If not, what steps would you suggest to address these issues?
	No response
32.	Are there other regulatory or practical barriers to efficient network investment by electricity distributors that should be thought about for the future?
	No response
33.	What are your views on the connection costs electricity distributors charge for accessing their networks? Are connection costs unnecessarily high and not reflective of underlying costs, or not? If they are, why do you think this is occurring?
	No response
34.	If you think there are issues with the cost of connecting to distribution networks, how can government deliver solutions to these issues?
	No response

35.	Would applying the pricing principles in Part 6 of the Code to new load connections help with any connection challenges faced by public EV chargers and process heat customers? Are there other approaches that could be better?
	No response
36.	Are there any challenges with connecting distributed generation (rather than load customers) to distribution networks?
	No response
37.	Are there different cost allocation models addressing first mover disadvantage (when connecting to distribution networks) which the Electricity Authority should explore, potentially in conjunction with the Commerce Commission?
	No response
38.	Should the Electricity Authority look at more prescriptive regulation of electricity distributors' pricing? What key things would need to be looked at and included in more prescriptive pricing regulation?
	No response
39.	Do current arrangements support enough co-ordination between the Electricity Authority and the Commerce Commission when regulating electricity distributors? If not, what actions do you think should be taken to provide appropriate co-ordination?
	No response
40.	Will the existing statutory objectives of the Electricity Authority and Commerce Commission adequately support key objectives for the energy transition?
	No. The statutory objectives of the Electricity Authority and Commerce Commission both refer to promoting the 'long-term benefit of consumers', which we believe includes considering the impact of decisions on climate change and decarbonisation. However, the existing statutory objectives are too subjective in terms of how much weighting climate change and decarbonisation are given. Therefore, we believe there is a significant risk that the Electricity Authority and Commerce Commission's statutory objectives, as they stand, will not adequately support an orderly and timely transition that meets our international obligations, emissions budgets and the ambition of the Zero Carbon Act. As outlined in our response to Q27, the risks associated with embarking on the transition too rapidly are now being outweighed by the risks of not doing so on numerous levels.
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?
	Yes. Electrification is essential to meeting Aotearoa New Zealand's emission reduction targets and plans. As noted in our response to Q40, the Electricity Authority and Commerce Commission's existing statutory objectives are too subjective in terms of how much weighting

climate change and decarbonisation are given. Therefore, we consider that the Electricity Authority and Commerce Commission should have explicit decarbonisation objectives to ensure that appropriate weighting is given to meeting emissions reduction targets.

While in general we would caution against changing the Electricity Authority and Commerce Commission's statutory objectives, we believe that climate change is such a big issue that it needs to be explicitly captured. We believe that if the Commerce Commission had an explicit objective relating to emissions reduction targets and plans this could make it easier for the Commerce Commission to approve building of transmission and distribution assets ahead of demand easier to approve when building of these assets will help support the transition away from fossil fuels.

42.	Should the Electricity Authority and/or the Commerce Commission have other new objectives set out in law and, if so, which and why?
	No response
43.	Is there a case for central government to direct the Commerce Commission, when dealing with Electricity Distributors and Transpower, to take account of climate change objectives by amending the Commerce Act and/or through a Government Policy Statement (GPS)?
	Yes, as discussed in our responses to Q40 and Q41 we believe that the Commerce Commission should be explicitly required to take account of climate change when making decisions. We support a Government Policy Statement, if this can be issued quicker than reviewing and amending the Commerce Commission's statutory objective and be effective in influencing the Commission's decision-making.
44.	If you answered yes to question 43, please explain why and indicate: • What measures should be used to provide direction to the Commerce Commission and what specific issues should be addressed? How would investment in electricity networks be impacted by a direction requiring more explicit consideration of climate change objectives? Please provide evidence.
	No response

Part 4: Responsive Demand and Smarter Systems

45.	Would government setting out the future structure of a common digital energy infrastructure (to allow trading of distributed flexibility) support co-ordinated action to increase use of distributed flexibility?
	No response
46.	Should central government see how demonstrations and innovation to help inform how trade of flexibility evolves in the New Zealand context, before providing direction to support trade of distributed flexibility? If yes, how else could government support the sector to collaborate and invest in digitalisation now?
	No response

47.	Aside from work already underway, are there other areas where government should support collaboration to help grow and develop flexibility markets and improve outcomes? If yes, what areas and actions are a priority?
	No response
48.	Could co-funding for procurement of non-network services help address barriers to uptake of non-network solutions (NNS) by electricity distributors?
	No response
49.	Would measures to maximise existing distribution network use and provide system reliability (such as dynamic operating envelopes) help in New Zealand? If yes, what actions should be taken to support this?
	No response
50.	What do you think of the approaches to smart device standards and cyber security outlined in this document? Are there other issues or options that should be looked at?
	No response
51.	Do you think government should provide innovation funding for automated device registration? If not, what would best ensure smart devices are made visible?
	No response
52.	Are extra measures needed to grow use of retail tariffs that reward flexibility, so as to support investment in CER and improved consumer choice and affordability?
	No response
53.	Should the government consider ways to create more investment certainty for local battery storage? If so, what technology should be looked at for this?
	No response
54.	Should further thought be given to making upfront money accessible to all household types, at all income levels, for household battery storage or other types of CER?
	No response
55.	Should government think about ways to reduce 'soft costs' (like the cost of regulations, sourcing products, and upskilling supplier staff) for installing local battery storage with solar and other forms of CER/DER storage? If so, what technology should be looked at?
	No response
56.	Is a regulatory review of critical data availability needed? If so, what issues should be looked at in the review?
	No response

Part 5: Whole-of-system considerations	
57.	What measures do you consider the government should prioritise to support the transition?
	Where market outcomes fall short of delivering the new renewable generation necessary to underpin Aotearoa New Zealand's decarbonisation, there is scope for targeted interventions, such as assistance for nationally significant and net beneficial offshore wind developments (refer our responses to Q1 and Q2) that are of a scale that may not be supported by existing market mechanisms.
58.	Are there gaps in terms of information co-ordination or direction for decision-making as we transition towards an expanded and more highly renewable electricity system and meeting our emissions goals? Please provide examples of what you'd like to see in this area.
	We support the inclusion of offshore wind development in planning and decision-making processes across the energy system.
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?
	We see the REZ concept as having a wider reach than just the transmission-centric model proposed by Transpower. While efficiency in and sharing of grid connection costs is useful, much of the success of large energy infrastructure projects such as offshore wind depends on a clear regulatory framework with coordinated access to government agencies working together. In order to meet Aotearoa New Zealand's decarbonization objectives, regions labelled as Renewable Energy Zones could be subject to a streamlined consenting process dealing with just one or few agencies (one-stop-shop) which could also coordinate the grid connection cost-sharing process with Transpower and support development of other enabling onshore infrastructure such as ports.
60.	Should MBIE regularly publish opportunities for generation investment to enable informed market decision-making?
	No objections, subject to our response to Q58.
61.	How should the government balance the aims of sustainability, reliability and affordability as we transition to a renewable electricity system?
	No response
62.	To what extent should wholesale, transmission, distribution or retail electricity pricing be influenced by objectives beyond the (affordability-related) efficiencies achieved by cost-reflective pricing, such as sustainability, or equity?
	No response

63.	Are the current objectives for the system's regulators set in law (generally focusing on economic efficiency) appropriate, or should these also include more focussed objectives of equity and/or affordability?
	No response

General Comments: