2 November 2023

Ministry of Business, Innovation and Employment

15 Stout Street

PO Box 1473, Wellington 6140

Attention: Offshore Renewable Energy Submissions, Interim Hydrogen Roadmap Submissions and Electricity Market Measures Submissions

By Email: offshorerenewables@mbie.govt.nz, hydrogen@mbie.govt.nz, electricitymarkets@mbie.govt.nz

Tēnā koe

We thank the Ministry for Business, Innovation and Employment for the opportunity to provide this submission on the following discussion papers:

- Developing a regulatory framework for offshore renewable energy
- Interim Hydrogen Roadmap
- Measures for an expanded and highly renewable energy system

We support the Ministry's work to establish an energy strategy for New Zealand. Whilst New Zealand's electricity system has been effective in achieving high degrees of sustainability, reliability and affordability in the past, we are embarking on a period of significant change. Going forward, there is a need to rapidly decarbonise our economy which will require significant infrastructure investment. In many cases, these investments will require costs to be incurred in the near-term, in order to achieve broad societal benefits in the long-term. No longer can these investment decisions be weighed up based on purely economic outcomes, with emissions reduction, energy security, supply chain constraints and workforce shortages all being key challenges to overcome. It is in this context that we see a greater role for government in long-term planning for the energy sector in order to attract and activate private capital for investment.

New Zealand's highly renewable electricity system will play a key role in decarbonising other parts of our economy, resulting in a rapid expansion in generation and transmission/distribution assets. When the increased demand from electrification is added to the anticipated electrical demand to produce green molecules for hard to abate sectors, New Zealand's electricity demand is projected to increase from 42TWh to 111TWh by 2050[1]. To meet this demand, New Zealand will require 800-1,000 MW of new renewable generation capacity to be developed each and every year.

We believe that offshore wind can play a significant role in meeting this need. By developing projects at large scale, with higher capacity factors and further away from local communities, New Zealand will have greater opportunities to ensure that supply keeps up with demand. If we fail to develop enough new renewable generation, prices will rise and reliability will fall resulting in disincentives to move away from carbon intensive fuels, or significant disruption to economic activity and everyday lives.

We largely support the proposed permitting framework for offshore wind, adopting best practice from mature markets which have come before us. Whilst we have raised concerns on specific matters we see as problematic and unnecessary (such as comparison of projects at commercial permit stage and trailing liabilities for decommissioning obligations), the majority of the proposed permitting framework appears fit for purpose.

In addition to the permitting framework, we wish to emphasise the importance of the broader ecosystem of reforms which are necessary to enable a successful offshore wind industry for New Zealand. In our view, the five key priorities are:

[1] Based on the lowest scenario for green hydrogen demand in the Interim Hydrogen Roadmap.

- Set stable and long-term targets for generation capacity to support investment – an incremental approach will not be sufficient to make sufficient progress to net zero in the coming decades. The scale of development requires greater long-term planning. New generation capacity targets will provide greater certainty for investors to incentivize project development, would encourage enabling infrastructure to be built in time and help to secure New Zealand's position in international supply chains for critical equipment.
- Implement the enabling regulatory framework and streamline consenting – we support the progress being made to establish a fit-for-purpose permitting regime for offshore renewables in addition to the efforts being undertaken to help streamline consenting approvals for new renewable generation. We encourage the government to follow through on this good progress and ensure implementation timetables are met.
- Enable timely infrastructure development to de-risk generation investment – large renewable generation projects rely on supporting infrastructure to enable delivery and provide route to market, including ports and transmission assets. These supporting assets can have delivery timetables as long as (if not longer than) the renewable generation assets themselves. Therefore, it's critical that strategic planning and proactive investment in supporting infrastructure is undertaken to ensure that it doesn't become a bottleneck, holding back new generation assets.
- Develop and implement a workforce and supply chain strategy to deliver on the infrastructure requirements of the transition – delivering on the energy transition will require the development and construction of significant new infrastructure, including generation capacity. This will require a material uplift in supply chain and workforce capability compared to what exists in New Zealand today.
- Support route to market for new projects through a CFD auction scheme – long term targets for generation capacity can be systematically supported and delivered through the implementation of revenue stabilisation mechanisms such as a CfD framework. To address the lack of credit-worthy large electricity consumers capable of committing to long-term offtake contracts, we encourage the government to implement a CfD framework as further described below.

To enable the quantities of new generation capacity required to deliver the energy transition, government needs to ensure an attractive investment environment which promotes competition in the generation sector and facilitates the timely development of new projects. A key factor in any new generation project's development is securing the necessary offtake arrangements to make a project bankable. In order to promote competition in generation markets, developers without existing retail portfolios must be enabled. Whilst we acknowledge that corporate PPAs could play a significant role in enabling new generation investment, New Zealand lacks the deep and liquid corporate and industrial market to underwrite the volume of new generation required.

In this context, we see a clear opportunity for government to play a role in providing revenue stabilisation mechanisms to support new investment. These are not subsidies. The futures market for electricity in New Zealand currently points to a wholesale price of approximately NZD150/MWh for 2024, 2025 and 2026. This is significantly higher than the accepted LCOE for new renewable generation projects. Yet, according to MBIE's EDGS consultation earlier in 2023, there is over 2.5GW of consented onshore renewable projects which have not yet started construction.

The lack of market solutions to make projects bankable is holding back investment in new generation. If we allow this barrier to persist, supply will fall behind demand with the result of higher prices, lower reliability and slower decarbonisation – consequences that we can ill afford.

CFDs can support effective long-term planning, lower project costs and potentially even generate new revenue for the Government. Our modelling shows that a NZD105/MWh CFD for a 900MW South Taranaki offshore wind farm for the four year period from 2018-2021 would have generated >NZD150M in revenue for the government based on historical market prices and wind data. The contract would have provided much needed revenue stability to the developer in order to secure cost effective project financing to proceed with project construction. Structures like this reduce financing

costs and encourage more generation (onshore and offshore) to be built. Both of these factors will increase the supply of new generation and lower wholesale electricity prices. A more affordable and reliable electricity system would promote broader economic development, resulting in a more prosperous future economy for New Zealand.

We support the conclusion from the Interim Hydrogen Roadmap that green molecules will play a critical role in decarbonising hard to abate sectors and meeting New Zealand's net zero goals. Whilst we acknowledge that electrification will be the primary decarbonisation tool in this decade, we believe it is critical to start our green hydrogen journey now in order to ensure that the workforce and supply chain develops locally to adopt large scale green hydrogen in the longer term. This will require difficult economic decisions to be made when green hydrogen applications fail to beat traditional fuels on cost today, but we believe these short-term trade-offs are important to ensure long-term success.

Here again we see a key role for offshore wind in supporting the growth of green hydrogen production. Without large scale new renewables, electrolyser demand can place upward pressure on wholesale power prices, thereby challenging near-term electrification. By developing large scale offshore wind projects in parallel with a green hydrogen strategy, New Zealand can ensure that hard to abate sectors are able to decarbonise without placing undue pressure on New Zealand's electricity system.

We also support the review of electricity market measures to facilitate New Zealand's decarbonised future. We believe it will be critical to enable proactive and strategic investments in transmission / distribution networks to ensure that this infrastructure does not become a barrier to new generation development. We support the introduction of new ancillary services markets to enable greater uptake of demand response and new technologies, such as grid scale batteries, to mitigate the risks of a more intermittent generation mix. We also support the introduction of sustainability and decarbonisation goals into regulated investment tests.

In the past, New Zealand has attracted large industrial developments by leveraging abundant hydro and gas assets (largely constructed by the NZ Government in the last century). In the future, we will need to develop large volumes of new renewables to attract ongoing investment in existing and new sectors to ensure our economic growth. By leveraging our already highly renewable electricity system, we can more rapidly decarbonise other parts of our economy to retain New Zealand's leadership position in attracting sustainable business development. However, other countries are investing heavily in new renewables and green hydrogen projects to attract industry to their own jurisdictions. If we do not act quickly, investment opportunities will be lost and New Zealand will fall behind its competitors.

We encourage the Government to move quickly in adopting an energy strategy and supporting regulations that promote investment in both decarbonisation initiatives and renewable generation. Our planet and our economy depend on it.

Best Regards

Submission on *Developing a Regulatory Framework for Offshore Renewable Energy*

Name	
Organisation (if applicable)	BlueFloat Energy & Elemental Group Limited
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

Chapter 4: Further detail on feasibility permits	
	Following an initial feasibility permit application round, should there be both an open-door policy and the ability for government to run subsequent rounds? If not, why not?
1	We support the proposal to run an initial round of feasibility permit applications. Following this, we consider that the preferred structure would be to run regular, periodic application rounds at defined intervals (ie every 1-2 years). Given the size of New Zealand's electricity market and the stated 7 year duration for feasibility permits, we encourage the Government to consider an overall limit on the total volume of feasibility permits awarded in each round. For example, there is little value in awarding 10GW of feasibility permits in 2025 if there is only likely to be 3GW of projects capable of taking FID in the next 7 years. Over-allocation of permits would devalue them, create high degrees of uncertainty for developers and ultimately discourage investment during the feasibility permit period. Long-term generation targets and regular permit rounds with capacity allocations to match those targets would be a preferred outcome. In the longer-term, we support the aspiration of taking an approach which more proactively integrates broader marine spatial planning. In principle, we support the proposal to cap the number and/or size of permits per developer in each zone in order to promote competition. However, we encourage the government to ensure that zones are not defined too broadly (ie South Taranaki and Waikato should be separate zones). We also recommend that the cap is limited in time. For example, a single developer should not be awarded two feasibility permits in the same zone in a single application round. However, a developer should not be prevented from applying for a second permit in a future application round because they already hold an existing permit in that zone. In the longer term, there are likely to be efficiencies of scale to be realised from developers who are able to extend an existing project into future phases and the regulatory framework should not impose limitations which restrict this.
2	**What size of offshore renewable energy projects do you think are appropriate for a New Zealand context?**
	For bottom-fixed acreage, we believe that projects up to 1GW should be supported in the New Zealand context to manage competition for limited space. Whilst this is large in the context of today's electricity market, demand growth over the next 30 years will dictate a significant increase in generation. Project scale is important to ensure that sufficient new generation can be built to meet this demand in addition to bringing down prices through efficiencies of scale. In the longer-term, when floating offshore wind is likely to play a more material role, we don't see any significant benefit in limiting permits to 1GW in size. New Zealand is blessed with a very large

	EEZ meaning that there will be less competition for floating offshore wind acreage. Developers are naturally incentivized to size projects based on anticipated market demand.
	Do you think the maximum area of a project should be put forward by developers and set out in guidance material, rather than prescribed in legislation? If not, why not?
3	We encourage the Government to establish a clear maximum area prior to inviting feasibility permit applications. This maximum could be set out in guidance material or regulations to allow flexibility as opposed to being defined in legislation. We do not support the alternative of having no stipulated maximum size, with applications to be considered on a case by case basis. Developers will invest significant capital in maturing projects through the pre-feasibility stage, prior to a feasibility permit application being made. It is not appropriate to expect developers to make these early investments with the risk of having their project being assessed as too large. In addition to stipulating a maximum area for each permit, we also recommend imposing a minimum density to ensure efficient development of available space. We recommend 3MW/km2 as being an appropriate minimum density.
Chapter 5: Commercial permits	
	Should there be a mechanism for government to be able to compare projects at the commercial stage in certain circumstances? If yes, would the approach outlined in Option 2 be appropriate or would there be other ways to achieve this same effect?
4	We strongly oppose the introduction of a mechanism which would allow the government to compare projects at the stage of awarding commercial permits. Commercial permit applications should be considered on a pass/fail basis against defined criteria. We recommend option 1 (developer led, non-comparative). In circumstances where there are more projects with commercial permits than are needed by the market, successful projects should be determined based on who is able to secure offtake contracts to underwrite final investment decisions. In this regard, we strongly encourage the government to implement an auction framework for contracts-for-difference (CFD). As is common in some other jurisdictions, this auction framework could incorporate both price and non-price elements to ensure that successful projects are selected based on a range of outcomes beyond simply which is the cheapest. If the government chooses not to implement a CFD framework and projects are expected to secure long-term offtake contracts from the market, a comparative process for commercial permits would create a high-degree of uncertainty. Potential power purchasers would be highly unlikely to enter into firm offtake discussions until commercial permits were awarded. This would create long-term uncertainty for developers through the feasibility period and likely result in delayed investment programmes. This extended uncertainty would create a clear disadvantage for offshore projects compared to onshore projects, which have no exposure to a “picking winners” process.
5	**Are the proposed criteria appropriate and complete? If not, what are we missing?**

A project's financing arrangements are only likely to be finalised once a commercial permit is granted and power offtake contracts secured. Therefore, an applicant should not be required to demonstrate that financing is already in place, but could be required to demonstrate that they will be able to put financing in place. Similarly, there is a distinct likelihood that power offtake arrangements will only be finalised after commercial permits are awarded. Therefore, permit applicants could be required to demonstrate potential routes to market but should not be required to demonstrate firm, committed offtake contracts.

Through the feasibility stage, developers will be progressing various activities with Transpower as part of the formal grid connection process. We encourage the government to ensure that activities in that process are not duplicated in the commercial permit application. Unless a project is intending to connect directly to a large consumer (behind the meter), we believe it would be reasonable to:

- Require a permit applicant to have made a compliant connection application to Transpower and have completed an investigation study before a permit is awarded; and
- Make commercial permits conditional upon the permit holder also entering into a Transpower Works Agreement to activate the necessary grid connection.

Beyond this, it should not be necessary for applicants to provide separate evidence of grid connection plans or electricity system impacts.

We recommend that applicants should have completed their environmental impact assessment prior to making a commercial permit application, but the consenting process and permit application should be able to run in parallel. Permit holders should not have to secure a consent before being awarded a commercial permit. We would support commercial permits being conditional upon the grant of a consent within a stipulated timeframe.

As stated above, we recommend that commercial permit applications are considered on a pass/fail basis in a non-comparative process. In this context, it is difficult to see the value of including economic development criteria. As an alternative, we recommend the Government introduces a CFD auction scheme which includes some non-price elements in the scoring matrix.

In order to avoid duplication, we encourage the government to consider a streamlined national interest test for applicants who have already secured overseas investment office approval. Given that onshore generation developers have no such requirement to demonstrate their alignment to the national interest, we recommend that any criteria is limited to ensuring that a project is not clearly contrary to the national interest.

In addition to the criteria set-out in the discussion document, we recommend that the government considers the introduction of criteria to assess the developer's compliance with permit conditions during the feasibility stage.

Should there be mechanisms to ensure developers deliver on the commitments of their application over the life of the project? If yes, what should these mechanisms be?

Yes, key commitments should be captured as permit conditions. Reporting obligations and consequences for non-compliance should apply.

	Is 40 years an appropriate maximum commercial permit duration? If not, what would be an appropriate duration?
7	We agree that 40 years is an appropriate permit duration, subject to two caveats. Depending on overall sequencing, commercial permits may be awarded sometime prior to final investment decisions being taken (ie financing and offtake secured after permit award). In that scenario, the 40 year period should commence once permits become unconditional and FID is taken by the developer. Secondly, project owners should have an ability to apply for an extension to the project term. Where existing infrastructure is able to be safely and efficiently operated for a longer period of time, it is not in New Zealand's interest to require the project to be decommissioned before the end of its useful life.
	Should a developer that wishes to geographically extend their development be required to lodge new feasibility permit and commercial permit applications? Why or why not?
8	We agree that project extensions could be treated as a greenfield permit application, however, the cap on number of projects per developer per zone should not apply to these extensions.
9	**Would the structure of the feasibility and commercial permit process as described enable research and development and demonstration projects to go ahead? If not, why not?**
	We agree that offshore transmission infrastructure should be included in the permit scope, however, consideration should be given to: • The fact that transmission infrastructure may be transferred to a third party (for example, Transpower) after commissioning and thus a partial permit transfer should be possible to facilitate this; and • The final export cable route is only likely to be finalised late in the feasibility process, after detailed geological and environment surveys are completed. Thus, the feasibility permit should allow investigation of cable routes in a wide zone, with a narrower cable route to be identified at or after the commercial permit is awarded. At this time, we do not see any need for separate permit structures for demonstration projects.
Chapter 6: Economics of the regime	
	Is there an interdependency between the case for revenue support mechanisms and the decision as to whether to gather revenue from the regime? What is the nature of this interdependency?
1	Yes, there is an interdependency. Revenue gathering mechanisms increase project costs and disadvantages them compared to onshore projects. Discriminating against offshore projects in this manner would result in developers requiring higher prices under CFDs or PPAs to ensure a commercially viable project which can proceed to the construction phase.

Is there a risk in offering support mechanisms for offshore renewables without offering equivalent support to onshore renewables? Are there any characteristics of offshore renewables which mean they require support that onshore renewables do not?

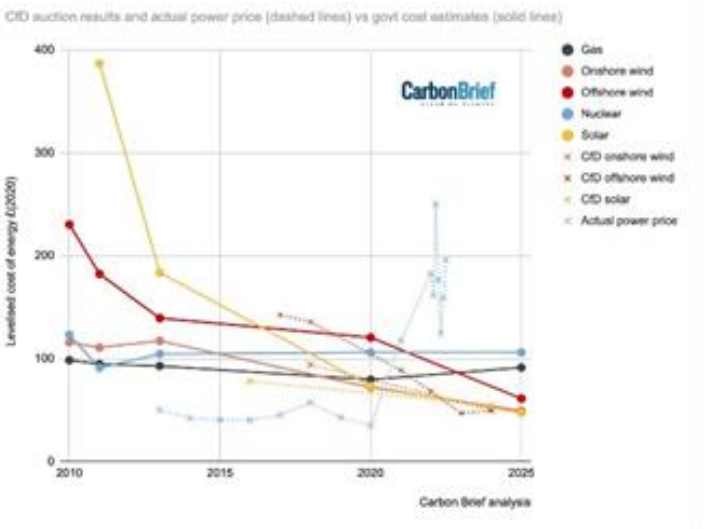
We believe there is a case for offering support mechanisms for both onshore and offshore technologies. Projects require credit-worthy, firm and long-term offtake in order to be bankable and move to construction. New Zealand's electricity market lacks a deep, liquid market of corporate offtakers who are able to sign the contracts needed to make new generation projects financeable. Common issues include:

- Lack of large buyers, meaning that large generation projects require contracts with many offtakers resulting in high project risks and transactional costs.
- Lack of buyers willing to commit to power purchase agreements of sufficient duration.
- Lack of buyers willing to commit to "as-generated" production profiles (ie most buyers looking for firm supply to match demand profile).
- Lack of public information to support price discovery.

1 These challenges are common across both onshore and offshore renewable generation projects. We would support the implementation of a CFD framework which provides access to multiple generation technologies, similar to the UK structure. The volumes made available under this CFD framework should be linked to long-term government targets and net-zero commitments and should ensure a diversity of supply. Such a regime would also provider longer term certainty to support necessary infrastructure upgrades in areas such as transmission and ports.

Whilst we support a CFD regime for all new renewables (and storage/peaking) as described above, there are specific challenges for offshore wind arising from a pure market-based approach. Offshore wind projects are generally larger in scale than onshore projects and have higher upfront capex costs. Whilst these factors are outweighed in the long-term by higher levels of production, the increased upfront costs lead to a higher reliance on project finance mechanisms to support construction. In turn, this increases the importance of firm offtake contracts being in place compared to small onshore projects which may be able to proceed on an equity funding basis, exposed to higher levels of merchant risk. Whilst those small projects are also important and should not be penalised, we cannot rely on small projects alone to meet the electricity demands of New Zealand's decarbonised future.

It is important to recognise that CFD structures operate as revenue stabilisation mechanisms rather than subsidies. In the UK, CFD strike prices for renewables (including offshore wind) are now generally well below market prices (see graph below).



Whilst these CFDs are now resulting in revenue flows from developers to the Government, developers see value in these contracts due to the revenue stabilisation effect that they have. By providing a long-term, creditworthy counterparty who can bring revenue stability to a project, a project developer is in a much stronger position to secure cost-effective financing to move to the project's build phase. Lower financing costs result in a lower LCOE for the project and, therefore, lower wholesale power prices for consumers. The following table published in WindEurope analysis[2] shows how secure offtake mechanisms can drive down realised power prices.

Figure 2 – Indicative comparison of offtake regime impact on the LCOE[1]

Scenario	2-sided CfD	2-sided CfD	Merchant*
	20 years	15 years	25 years
Cost of equity	8%	9%	13%
Actual gearing	80%	76.7%	25.5%
Minimum debt service cover ratio	1.20x	1.20x	1.25x
Merchant debt service cover ratio	n/a	n/a	1.60x
Senior debt margin (construction)	1.90%	1.85%	2.10%
Senior debt margin (operation)	1.75%	1.70%	2.00%
Electricity price curve	central-low	central-low	central-low
LCOE/required strike price	€50.5/ MWh	€59.0/ MWh	€92.1/ MWh

**fully merchant revenues over the lifetime of the project*

In New Zealand, long-dated electricity futures contracts have recently traded in the range of NZD100-200/MWh, more recently settling around the NZD150/MWh price point. These prices are significantly higher than the accepted LCOE for developing new renewable generation assets in New Zealand and are a clear demonstration that the market expects that insufficient generation will be built in the near term to meet growing demand.

According to MBIE's consultation material in early 2023 on the EDGS refresh, over 2.5GW of onshore renewables projects are consented yet have not moved to the build phase despite high market prices (see rising prices in chart below). A well-structured CFD programme providing offtake certainty for independent developers would go a long way to bringing these new projects to market,

[2] Two-sided contracts-for-difference: The best way to finance wind energy | WindEurope

introducing greater competition in the generation market and lowering wholesale power prices to encourage electrification and broader economic activity.

Should there be a revenue flow back to government? And if yes, do you have views on how this should be structured? For comments on potential flows to iwi and hapū please refer to Questions 14 and 15.

1 Establishing a revenue flow to Government from offshore wind projects would unnecessarily discriminate against offshore projects compared to onshore renewables and result in higher electricity prices for consumers. We oppose the creation of such a government revenue gathering mechanism.

However, we are committed to ensuring that the offshore wind industry can create enduring benefits for local communities. We would support the establishment of a modest royalty-type fee, provided that such cashflows are directed to local communities, including mana whenua.

Do you agree with the proposed approach to cost recovery? If not, why not?

1 Yes, we agree with the proposed approach. We recommend that the fees recovered are sufficient to ensure iwi are adequately resourced to participate in the permitting process.

Chapter 7: Māori Rights and Interests and Enabling Iwi and Hapū involvement

Is there anything you would like us to consider as we engage with iwi and hapū on Māori involvement in the permitting regime?

14 We agree that impacted iwi/hapū should be included in decision making process. In this context, we would support the establishment of a committee to review permit applications with iwi/hapū representation on this committee.

15	**Have we identified the key design opportunities to work collaboratively with iwi and hapū alongside consultation? Is there anything we have missed?**
	We support the opportunities identified.
16	**Are there any Māori groups we should engage with (who may not have already engaged)?**
	We encourage the government to ensure that South Auckland iwi are engaged as key stakeholders for the broader potential offshore wind zone on the west coast of Waikato / South Auckland. We also encourage the government to ensure that coastal hapū in the relevant zones of interest are engaged.
Chapter 8: Interaction with the environmental consenting processes	
	For each individual development, should a single consent authority be responsible for environmental consents under the Resource Management Act 1991 and the and Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012? Why or why not?
17	For the primary consent for the build/construction phase, we agree that a single consenting authority for the entire project makes sense. We understand that a mechanism of this nature exists today through the call-in process under existing legislation. However, it is also important to acknowledge that a number of minor consents may be required throughout the project (including in development and operations phase) and it may be appropriate that some (or all) of these should be able to proceed in the normal manner where the activity is only being undertaken in the EEZ or the coastal marine area (not both).
	Do environmental consenting processes adequately consider environmental effects such that it is not necessary to duplicate an assessment of environmental effects in the offshore renewables permitting regime?
18	We agree that the environmental consenting process adequately considers environmental effects and should not be duplicated in the permitting process which would unnecessarily increase project risk, cost and timetable.
	Should the offshore permitting regime assess the capability of a developer to obtain the necessary environmental consents? If not, why not?
19	No, we do not believe the commercial permit regime should make this assessment. We would support commercial permits being conditional upon the award of the necessary environmental consents. We would also support a requirement for developers to have completed their environmental impact assessment prior to lodging a commercial permit application. Together, these two requirements would provide the necessary protections. It would not be in a developer's interest to incur the cost of a commercial permit application unless the developer had a high degree of confidence in receiving the necessary environmental permits.

	What is the optimum sequencing between obtaining feasibility permits, commercial permits and relevant environmental consent(s)?
20	Feasibility permits should clearly come first, to ensure that the necessary investigations can be conducted to prepare an environmental impact assessment. We strongly encourage the government to allow the commercial permit process and consent application process to run in parallel. Projects should have a clear understanding of environmental risk before lodging a commercial permit application (ie complete environmental impact assessment) but should not be required to secure a consent before lodging a permit application process. Establishing a system by which permits/consents must be secured in sequence would result in unnecessary project delays. Any commercial permits awarded prior to a consent being granted should be conditional upon that consent being issued before becoming active.
21	**Are there are any other matters about the environmental consent regimes that you think need to be considered in the context of the offshore renewable energy permitting regime?**
	Policy guidance supporting the development of renewable generation and transmission assets has now been issued to guide consenting decisions under the RMA (NPS-REG and NPS-ET). Unfortunately, that policy guidance does not currently extend to projects being developed in the EEZ (including projects, like ours, which have elements in both the EEZ and territorial waters). We encourage the government to ensure that supportive policy guidance applies equally in both jurisdictions. We acknowledge the importance of undertaking appropriate environmental impact assessments as part of each project's consenting process. We also acknowledge the difficult in adequately assessing impacts in the absence of robust baseline data. New Zealand currently faces a lack of robust data sets relating to offshore environmental conditions and populations which creates uncertainty for the level of baseline surveys required in order to prepare an environmental impact assessment. To mitigate this uncertainty, we encourage the government to consider publishing guidance to clarify expectations for baseline data gathering and environmental impact assessment reports. Such guidance would ensure that developers are undertaking the right studies from the beginning, avoiding potential delays to consenting processes and therefore project delivery which could ultimately restrict New Zealand's ability to achieve net zero targets.
22	**How should the factors outlined influence decisions to pursue offshore renewable energy developments in the Exclusive Economic Zone or the Territorial Sea? Are there other factors that may drive development in the Exclusive Economic Zone versus the Territorial Sea?**
	Optimal project sites are driven by a broad variety of factors as identified in the discussion paper. One additional factor is wind speeds, which are often stronger further from the coast. Ultimately, there will not be one clear answer for whether development within or outside territorial waters is appropriate. In South Taranaki and the Waikato, we believe that development outside of the marine mammal protection sanctuary is most appropriate. In other parts of New Zealand, development within territorial waters may also be appropriate if impacts on the local environment and coastal communities are balanced.
Chapter 9: Enabling transmission and other infrastructure	

23	**Are the trade-offs between a developer-led and a TSO-led approach, set out above, correct? Is there anything missing? What could we learn from international models?**
	We agree with the trade-offs noted.
24	**Which party do you think should build offshore connection assets? Can existing processes already provide the flexibility for this to be carried out by the developer?**

We support Transpower building onshore connection assets, including the potential for common onshore connection assets servicing multiple projects.

We believe that existing processes already provide this flexibility and we understand that a number of onshore renewable project developers are already pursuing a model to develop their own connection assets.

We believe that project developers are best placed to build offshore connection assets as part of the overall project delivery. We would support consideration of a model in which offshore connection assets are transferred to Transpower to own and operate following commissioning, in which case we offer the following suggestions:

1. **Standards**: if the developers are to design and build the offshore infrastructure, we would expect that Transpower (or other appropriate regulator) would define minimum standards to which the infrastructure would be designed and built.
2. **Transfer**: the appropriate time for the asset transfer would be sometime shortly after commissioning. In the UK model, there is a competitive bid process to determine the commercial aspects of the transfer, so in the absence of that a transfer price would need to be pre-determined somehow. We would recommend that a small premium to book value (to represent development risk) would be appropriate for the transfer value of the assets from developer to Transpower.
3. **Utilisation Charges**: similarly, in the absence of a competitive process, the ongoing charges to the developer to utilise the infrastructure would need to be established. We would recommend that Transpower earns a defined rate of return on the transfer value of the assets. We suggest that the rate of return should differ from Transpower's normal return on its asset base in some ways:
    a. It is preferable for the charges for utilisation of the infrastructure to be fixed for the ~35 year term of the project, rather than being reset every 5 years as part of an RCP process. This will provide greater certainty of revenue streams, which will in turn reduce financing costs and therefore bring down the LCOE;
    b. The UK model is successful in attracting infrastructure investors who bring a very low cost of capital and highly leveraged business model to reduce ongoing opex costs to the developer. If the assets are to be transferred to Transpower in the NZ framework, the rate of return calculation should similarly assume a high degree of debt financing. If this wasn't applied, and a high rate of equity funding assumed, the WACC would likely be higher than if the developer continued to own the assets and therefore result in a financial penalty to the project.
4. **Performance standards**: we would expect that performance / availability standards are guaranteed for the offshore infrastructure like other connection assets.

25 **What are the potential benefits and opportunities for joint connection infrastructure? Do you agree with the barriers set out and how could these be addressed?**

We support common onshore connection infrastructure. In the absence of a marine spatial planning approach for offshore wind, with firm regional targets for offshore wind capacity, common offshore connection infrastructure is likely to be difficult, with limited benefits. These benefits will become more relevant as development moves further offshore.

We believe that the primary barrier to common onshore infrastructure is a regulatory one, with Transpower prevented from investing proactively for future projects which are not yet committed. For example, if one project is committed in the short term and a second project is potentially expected nearby in the longer term, current regulations may prevent Transpower from developing infrastructure immediately to serve both potential projects.

Whilst regulatory change to permit proactive and strategic investments by Transpower is one option, we also believe there is a strong case for the Government to developer a clearer energy strategy with regional targets for new generation. This could include specific goals for offshore wind development in Taranaki and Waikato (amongst other regions) which would facilitate improved long-term planning by Transpower and other infrastructure developers.

26 **Do you agree with the representation of the timeline challenge for onshore interconnection assets? What opportunities might there be to front load planning work for interconnection upgrades? What role do you see for the developer in this?**

We agree with the stated timeline challenge for interconnection assets, but we note that this challenge is not unique to offshore wind. In fact, other technologies, such as solar can be developed much more quickly creating an even greater timeline challenge for interconnection upgrades.

Whilst we acknowledge that current regulations are designed to protect consumers against unnecessary costs, it is consumers who bear the risk of higher power prices which would result from lack of transmission capacity holding back new generation investment. We believe that there is a strong role for government in long-term system planning to send investment signals for renewables development. We agree that direct government participation in the market through generation investments is not appropriate. However, a clear energy strategy with greater regional planning would provide strong benefits to enabling the transition, including through mechanisms such as renewable energy zones.

We strongly oppose individual developers being required to pre-fund engineering/planning for interconnection upgrades. By their nature, interconnection upgrades will ultimately benefit a large pool of consumers and will support delivery of energy from many different generation projects. It is not appropriate for one party to bear the cost of such upgrades when the benefits are shared by many others. Requiring developers to bear such interconnection costs would create a first mover disadvantage and would disincentive investment in new renewable generation.

27 **What changes might be needed in order to deliver the types of port infrastructure upgrades needed to support offshore renewables?**

Significant port upgrades are likely to be required to support offshore wind development in New Zealand, particularly if two or more projects are to proceed in parallel. With highly capable local ports, New Zealand will have a greater opportunity for local supply chain participation in the fabrication and assembly stages of offshore wind projects.

Necessary port upgrades could include reclamation of land to create more space, strengthening existing quaysides and relocation of existing port customers. Port upgrades of this nature will create long-term assets for port owners which will create commercial opportunities with respect to future renewables development, power-to-x exports or oil & gas decommissioning projects. The enabling value of these infrastructure assets (and consequential employment and supply chain opportunities) in the future should not be underestimated. However, we acknowledge the difficulty for these infrastructure owners to justify such capital spend without firm commercialisation opportunities already in place. Here again, we see an enabling role for Government. This could include the direct application of financial support (including through entities like Crown Infrastructure Partners) or by providing greater certainty about future users of the proposed infrastructure (ie firm regional targets for development of offshore wind or power-to-x projects).

Chapter 10: Decommissioning

28 **Should developers be required to submit a decommissioning plan, cost estimate and provide a financial security for the cost estimate? If not, why not?**

Yes, we agree that it is appropriate for developers to provide a plan, estimate and financial security at the commercial permit stage.

29 **Should the permit decommissioning plan, cost estimate and financial security be based on the assumption of full removal? If not, why not?**

For the purposes of the cost-estimate and financial security, we agree that it would be appropriate for the decommissioning plan to initially assume full removal of assets above a specified depth (ie it is common for the portion of a monopile foundation which is greater than 2 metres below the seabed to be left in situ).

From a technical viewpoint we recommend that the plan be required to demonstrate that full removal would be feasible with existing and proven technology and also outline any alternatives to full removal that might be considered in the future. It is also recommended the plan's feasibility be required to consider the local environmental conditions and available port and marine infrastructure to ensure it is not just technically feasible, but also deliverable in New Zealand conditions.

It is also important to acknowledge that full removal may not result in the best environmental outcome in some circumstances. Therefore, the regulatory regime should have the flexibility

for developers to seek approval for decommissioning plans that represent the best option for the environment, which may not necessarily include full removal. It may be appropriate that such a change is only permitted sometime closer to the decommissioning stage (ie 10 years out). If accepted by the relevant regulator, the cost estimate and financial security should be updated accordingly.

30 **What are your views on the considerations set out in relation to the calculation of the cost estimate and financial security value or suggested approach for financial security vehicle?**

We do not support developers being required to provide a financial security for the full decommissioning value from day 1. We agree that it would be more appropriate for the financial security value to build up over time as decommissioning approaches. This would provide an appropriate balance of risk and cost.

In terms of estimating the decommissioning cost, we support an approach which assumes that decommissioning services are procured by a developer from third parties on an arms' length basis.

We support the inclusion of government debt securities and bank securities as acceptable forms of providing financial security.

31 **What should the developer be required to provide in relation to decommissioning at the feasibility application stage?**

We acknowledge the importance of addressing decommissioning risk, however, assessing capability at feasibility application stage will be very challenging. At this stage of the process, it is likely that key issues such as foundation choice, will not yet have been finalised resulting in a high degree of uncertainty about the actual decommissioning requirements.

We support a general assessment of a developers understanding of potential decommissioning requirements and risks along with a strategy for how a decommissioning plan would be developed during the feasibility stage and incorporated into the design process.

32 **What ongoing monitoring approach do you think is appropriate for the decommissioning plan, cost estimate and financial security?**

We propose that decommissioning plans (and cost estimates) are reviewed initially on a 5 yearly basis. As the decommissioning phase approaches, these reviews could be shortened to every 2 years.

We support that any transfer of a commercial permit is conditional upon the transferee providing a sufficient financial security. However, we object to any trailing liability for the original permit holder once that new financial security is in place. Such a trailing liability would be a strong disincentive to investment for potential developers. We acknowledge that such a trailing liability regime applies in New Zealand's offshore oil and gas sector, however, our view is that offshore wind projects do not pose the same environmental risk profile as hydrocarbon projects. Our understanding of the offshore wind regulatory regime in Australia is that the Minister is permitted to return the original permit holder's financial security upon receipt of an

acceptable security from the transferee. Once the original security is released, there is no trailing liability for the original permit holder. We support that approach.

Propose 5 yearly review of decommissioning plan and cost estimate (shorter when right at end of permit term - O&G is similar)? Agree that commercial permit transfers should only occur if transferee accepts decommissioning plan obligations and submits financial security.

As noted above, we expect that there could be circumstances in which full removal of assets is not the best environmental outcome at the end of project life. In the event that the appropriate regulator approves a decommissioning plan without full removal, we do not agree that ongoing monitoring in perpetuity would be acceptable. The resulting ongoing cost would act as a deterrent to pursuing this outcome, incentivizing full removal, which could result in suboptimal environmental outcomes.

If ownership of the offshore transmission infrastructure has been transferred to Transpower during the project's operational life, we consider that the decommissioning obligation should sit with Transpower as the entity who has owned and maintained that asset. It would not be appropriate for ownership to be separate from decommissioning obligations.

33 **Are there any other ways in which the regulatory regime could encourage the refurbishment of infrastructure or the recycling of materials?**

Developers will be inherently incentivized to extend a project's useful life through appropriate maintenance and asset refurbishment. With a significant majority of a wind turbine's components made of steel (up to 90% by mass), recycling of most project components is already available and commercially viable without the need for further regulatory intervention.

Technology is advancing to allow for a higher degree of recycling of other project components, such as blades. We expect that technological advancements over a project's lifetime will continue to increase the scope for reuse and recycling but it is difficult to predict now what the exact opportunities and best outcomes will be at the decommissioning stage.

34 **Should offshore renewable energy projects applying for a consent to decommission be required to provide a detailed decommissioning plan related to environmental effects for approval by consent authorities? If not, why not?**

We expect that the environmental effects of the decommissioning operation would be approved by the relevant consenting authority (ie EPA). We would encourage the government to ensure that the review of environmental effects is not duplicated through the commercial permitting framework also.

Chapter 11: Compliance

35 **How can the design of the regulatory regime encourage compliance so as to reduce instances of non-compliance?**

36	**Is the compliance approach and toolbox in Chapter 11 appropriate for dealing with non-compliance within the regulatory regime?**
	We agree with adopting the VADE model for dealing with non-compliance.
Chapter 12: Other regulatory matters	
37	**Should the decision maker within the regime be the regulator but with an option for the Minister to become the decision maker in a specific set of circumstances? If not, why not?**
	We support the regulator being appointed as the ultimate decision maker, subject to our earlier comments about Māori participation in the decision making process, potentially through a panel structure. We don't see any rationale for an option to escalate decisions to the Minister for overlapping applications. These types of decisions should be depoliticised and made objectively by a regulator with appropriate expertise.
38	**Should there be an opportunity for public submissions on the commercial permitting decision? What would this capture that the environmental consent decision does not? If not, why not?**
	Public consultation on the commercial permit application is not necessary. We support developers committing to a high degree of public and community engagement, however, we consider that the public's opportunity to submit on the consenting application is sufficient and need not be duplicated in the permit process.
39	**Should permitting decisions be able to be appealed and if so which ones? Which body should determine such appeals?**
	We consider that New Zealand's judicial review mechanism would provide sufficient legal avenues for applicants aggrieved by an unfavourable permit decision. We do not agree that a change of control event should be treated in the same manner as a new permit application. The permit application process will consider many aspects which are unique to the project rather than the project's ultimate owner. At most, a change of control review could consider the new holding company's technical and financial capability to comply with permit conditions.
40	**What early information would potential participants of the regime need to know about health and safety regulations to inform decisions about whether to enter the market?**
	In the absence of further guidance, developers are likely to take queues from New Zealand's existing health and safety regulations, particularly those currently in place for offshore activities. Early information about areas of likely change would be helpful to share with developers.
41	**What are your views on the approach to safety zones including the trade-offs between the different options presented?**

We encourage the government to establish a clear and stable approach to safety zones, rather than establishing a regime in which safety zones are considered on a case by case basis. Broad stakeholder groups such as fishing and tourism companies will be looking for certainty about the potential impact on their future operations and this will not be possible if safety zones are only determined on a project specific basis late in the approval process.

We support narrow safety zones around infrastructure in the operations phase (with wider safety zones appropriate during the construction phase) in order to maximise opportunities for safe co-existence between offshore wind and other activities. In some cases, there may be opportunities for aquaculture operations to co-exist with offshore wind farms, in which case there may be physical attachment to offshore wind structures. Certain types of fishing may also be safe to permit within the wind farm, depending on it's final design. Safety zone regulations should be flexible enough to permit these and other types of close interaction where it can be proven safe to do so.

We recommend that any safety zones are determined with input from a range of relevant stakeholders including maritime regulators and the fishing industry.

42	**Do you have any views or concerns with the application of these proposals to other offshore renewable energy technologies?**

General comments