Submission on Developing a Regulatory Framework for Offshore Renewable Energy

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Developing a Regulatory Framework for Offshore Renewable Energy

Introduction:

This is the submission of Parkwind NV (*Parkwind*) on the Discussion Document entitled Developing a Regulatory Framework for Offshore Renewable Energy (*Second Discussion Document*), published by Ministry for Business, Innovation and Employment (*MBIE*) in August 2023.

We would like to express our appreciation to the New Zealand Government for its ongoing commitment to establishing the complete regulatory framework for offshore renewable energy by 2024. The Government's commitment to this workstream is critical to achievement of its net carbon zero goals for Aotearoa New Zealand. We see the Discussion Document as a useful step in this process and we welcome the opportunity to make a submission on it.

We appreciate the transparency of the New Zealand Government around the options being considered for the regulatory framework and the process being followed, including its recognition of potential developers' need for some security of tenure as they progress the costly feasibility work involved at early stages. At Parkwind, we feel encouraged to further pursue offshore wind opportunities in Aotearoa New Zealand.

We acknowledge those iwi and hapū representatives we have been privileged to meet in these early stages. We look forward to widening and deepening these relationships as we see iwi and hapū as central participants in this process. Our submission assumes that investment in, and development of, offshore renewable energy will occur in partnership with iwi and hapū, and so their views and interests will be critical in determining the way forward.

Parkwind is a Belgian-based company that develops, finances and operates offshore wind farms. Our submission is made from the perspective of an experienced offshore wind developer who has developed, financed and operated offshore for over 10 years. Parkwind and its parent company JERA have built and operate seven offshore wind farms off the Belgian, German, UK and Taiwanese coasts, with one of Japan's first offshore wind farms (Ishikari Bay) currently under construction.

Parkwind was recently acquired by Jera, one of the world's largest power generation companies, which operates an entire supply chain, from upstream fuel and procurement to project development and power generation. Parkwind sees exciting export opportunities for offshore wind resources to be used in the generation of electricity and/or production of low-carbon fuels.

Parkwind aspires to build 500MW to 1GW of offshore wind in New Zealand operational by 2032, acting in partnership with relevant iwi, hapū, local communities and selected experienced energy sector participants. As Parkwind progresses its preliminary discussions and investigations, it is conceiving of a range of strategic alliances that will benefit the eventual offshore project or projects in which it invests for the long-term benefit of Aotearoa New Zealand. An example is the memorandum of understanding (MOU) Parkwind signed with Meridian Energy to explore offshore wind generation in New Zealand waters. Efforts will focus principally on the Taranaki coast and build on work already undertaken by Parkwind, including engagement with stakeholders as well as the iwi of Taranaki.

Responses to questions

Chapter 4: Further Detail on Feasibility Permits

1. 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?

The view of Parkwind is that a process of running set (rather than ad hoc) periodic application rounds following the initial feasibility permit round will deliver the best results for New Zealand and the market.

Set application rounds benefit the market by sending clear signals to the developers, giving oversight and transparency of timeframe, encouraging participation as well as competitive and robust applications pursued in a planned and orderly timeframe. This will benefit New Zealand because applications can then be compared, and where overlaps exist, the best proposals for the given site can be selected. It will also give authorities and other interested parties such as iwi and hapū the ability to plan resources to properly access, engage with and/or process applications in a timely manner.

Our view is that the above benefits would not be achieved following an ad-hoc, open door approach.

In the Crown Minerals Act (CMA) context, we understand that the open door "first in time" approach was seen to deliver sub-optimal results, with permits being secured by applicants who might not necessarily have had the technical or financial capability to meet all of their obligations when due.

2. What size of offshore renewable energy projects do you think are appropriate for a New Zealand context?

We agree for the reasons mentioned in the Second Discussion Document that developments of between 500MW and 1GW are most appropriate in the New Zealand context.
This may change in the future but that would be consistent with having multiple application/auction rounds beyond the initial rounds.

3. Do you think the maximum size of a project should be put forward by developers and set out in guidance material, rather than prescribed in legislation? If not, why not?

Setting guidance on maximum project size whilst leaving flexibility for regulators to consider deviations is a practical approach. Some guidance from MBIE is needed to set the broad parameters.

The key objective must be to avoid developers locking up excessive areas in optimal offshore wind locations, either as a means of landbanking for subsequent transactional opportunities or, as a tactic to stifle competition. This is important for the most competitive sites for offshore wind in New Zealand which are for example areas suitable for bottom fixed turbines in the EEZ.

Our advice is to set guidance on limits in terms of maximum seabed area and name plate capacity which are appropriate in the New Zealand context. Whilst it may be tempting for developers to submit applications with a low energy yield density (<5MW/km^2) as an easy way to reduce internal wake losses of their wind farm proposal, that would not make the most efficient use of the seabed area, meaning that New Zealand's best areas are not utilised to their full energy generation potential. It would also reduce the acreage available for other projects in the area - competition between projects is a major driver in lowering LCOE for New Zealand electricity consumers. In Parkwind's view an energy yield density of between 5-8MW/km^2 is optimal, translating to a size of between 125km^2 and 200km^2 for a 1GW offshore wind farm.

Beyond energy yield density there are many factors which determine the total efficiency of the wind farm, including turbine layout and performance, as well as percentage availability (availability factor) of plant (turbines, offshore substations, array/export cables etc). Availability is largely dependent on the quality of the plant installed as well as how well it is maintained and managed.

As the feasibility permit holder would receive the exclusive right to apply for a commercial licence for the given area, we recommend that the applicant's technical capability as well as track record in operation (historic plant availability record) be considered at the feasibility stage.

Chapter 5: Commercial Permits

4. 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?

We agree that it does not generally make sense in principle to run application rounds for commercial permits given the exclusive rights conferred by the feasibility licence. Yet we do see the advantage of having the option for authorities to compare applications for commercial licences for the reasons identified in Chapter 5, such as onshore grid connection constraints.

The proposal in option 2 looks reasonable, care though would need to be taken to ensure that "Project B" were informed with enough notice so they could reasonably submit a quality application, also that "Project A" were not delayed to an extent that project timelines were seriously affected.

This would likely require that "Project A" notify regulators of their intent to apply for a commercial licence on a certain date with sufficient notice time for "Project B" to prepare. The time limits built into this process need to be reasonable.

5. Are the proposed criteria appropriate and complete?

Yes, the proposed criteria are appropriate and comprehensive, our comment would be that the applicant's track record in delivering similar projects should already be considered at the feasibility stage. The track record should be relevant and cover planning, development, construction, O&M experience of offshore wind farms.

This is necessary because the feasibility permit holder then holds the exclusive right to apply for a commercial license for the given area.

Developing and operating offshore wind projects in Aotearoa will be challenging and hazardous due to the extreme environmental conditions and distance from established supply chains. New Zealand would be a very risky market for inexperienced developers and operators to work in.

Our advice would be to expand the Health and Safety credentials criteria to include environmental credentials as well (i.e. HSE management)
Protection of the workers and the marine environment is very important, it is common for offshore infrastructure (i.e. offshore substations) to contain a number of hazardous substances which need to be carefully handled and managed. An example of these are as follows:

- Large volumes of oil in HV transformers and shunt reactors
- Diesel for backup generators (often refilled through bunkering from supply vessels)
- Hydraulic fluid used to drive platform mounted cranes
- Active fire suppressant systems (e.g. foam, aragonite), internally and also externally if there is a helideck

All of these have the potential to cause harm to people and the marine ecosystem if they are not managed correctly.

Our advice would be to check that applicants have a relevant and proven track record in HSE management. Again, this should be considered at the feasibility stage as the feasibility permit holder gets the exclusive right to apply for a commercial license for the given area.

6. 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, and mechanisms could include the ability to impose compliance notices, infringement notices or fines/other penalties. Bonds could be required for specific major performance obligations, and the ultimate sanction would be revocation of the permit. The performance bond must of course be well defined in the sense that the government can only draw upon the performance bonds for reasons that are under control of the developer, not external factors.

We do not believe specific enforcement orders (as in, specific performance of a statutory obligation) are appropriate. This is instead where the revocation backstop comes in, as it does in the Crown Minerals Act.

We discuss decommissioning enforcement below.

7. Is 40 years an appropriate maximum commercial permit duration? If not, what would be an appropriate duration?

Yes, 40 years is likely to be appropriate for a commercial permit however a repowering option is preferred. As such, a type of extension clause for repowering, allowing ultimately for 60 years of operations would be appreciated.

8. 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?

We agree that if a developer wishes to extend their development, then this application should be assessed in a similar manner to the original feasibility permit, but having regard also to any added or enhanced benefits in terms of the original development. It's important to check the merits of the proposal and assess whether it is in the best interests of New Zealand. A developer should not be able to extend into an area held by another feasibility permit holder.

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?

The approach described seems reasonable.

Chapter 6: Economics of the Regime

10. 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?

The typical trend internationally is that early-stage markets offer support/stabilisation mechanisms (i.e. CfDs) to help de-risk initial projects if the objective is to kick-start the local industry. This is most pertinent where the overall policy setting is to encourage (a) renewable generation and (b) economic development and wealth creation, across generations.

As a market matures the level of support reduces to "zero bids" where wind farms bid to sell their electricity at the wholesale price.
From there the market may move towards a revenue gathering mechanism (i.e. financial auction) where developers pay royalties, the cost of the revenue gathering is ultimately passed on to electricity consumers through higher long term power prices.

There can be a degree of interdependency but in our view it is about the levels that revenue support and revenue gathering are set at. Interdependency is not a given, and the need for any interdependency flows from the policy objectives. We expect that revenue generation should be secondary to supporting the development of a whole new industry, and associated industries (e.g. Hydrogen and its derivatives).

11. 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?

Parkwind is in principle open to either commercial (merchant) models such as PPAs to provide the revenue stability or a government backed mechanism such as a CfD.

We believe it is too early to make a call on whether any support at all is justified for offshore wind, until a number of market factors become clearer, these include for example if there an expectation (or requirement) for local content, and potentially other qualitative criteria in the permit allocation process which would de facto impose higher costs for the early stage projects. If so, it is not unreasonable to expect some type of support in return. The government should consider this together with wider social and systemic benefits which offshore wind can deliver, and whether support should be offered to bring it to New Zealand sooner than it otherwise would following a purely merchant model.

We acknowledge the pipeline of new onshore renewable projects, and we can understand that, all things being equal, a level playing field should exist. In principle, we see some key differences between offshore and onshore renewables - particularly the sheer scale and necessary investment for the endeavour. With offshore renewables (and hydrogen production, if that becomes viable), we are effectively talking about the establishment of a whole new industry for New Zealand - one which can deliver numerous social and systemic benefits intergenerationally, and at scale, including:

- getting New Zealand to a net zero position quicker than in reliance on numerous on-shore projects
- potential to generate large amounts of power close to load centres, with high capacity factors, requiring less firming and less dependence on long distance transmission.
- allow for renewable power generation to be moved offshore minimising visual and noise effects onshore, and freeing up land to be used for other purposes
- creator of good long-term jobs and a transition option for people currently working in New Zealand's offshore energy industry
- an enabler of vast new green export opportunities for NZ, with all associated jobs and indirect economic benefits.

It is challenging to establish a new industry, especially one of the scale and CAPEX of offshore wind and in a market distant from established supply chains, particularly when global competition for supply and people in the offshore wind industry is intense. We are aware that competition for components and specialised supply vessels with bigger and less remote markets will be tight this decade. It will encourage investment in offshore wind if a degree of support/stabilisation is offered, at least initially, to provide a predictable revenue stream to allow project financing, reduce risk on early projects, reducing the cost of capital and the resulting LCOE.

But none of this really needs to be decided on now, until we know just how the various market factors stack up. It would be better to wait for a regional supply chain to establish (ANZ/APAC) and then target early to mid-2030s for the first offshore wind projects to become operational in New Zealand.

12. Should there be a revenue flow back to government? And, if yes, do you have views on how this should optimally be structured? For comments on potential flows to iwi and hapū please refer to Chapter 7.

Any costs imposed on projects are typically paid for by electricity consumers through higher long term energy prices. As such our advice would be for the government initially to focus on supporting the industry to establish, and minimising the cost of energy for consumers. This can be reassessed in the longer term as the market matures.

In particular hefty upfront fees for seabed leases/financial auctions should be avoided as this effectively skews competition in favour of large utilities/ oil and gas companies. Lack of competition can also drive up the cost of energy for consumers.

Considering developers are spending millions on pre-development work, and can be held accountable for progress (e.g. through a performance bond), there is no need to impose additional fees or financial criteria. Tenders should focus also on qualitative criteria, such as innovation, grid integration, environmental compliance, etc.

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

Yes, we agree with the proposed approach to cost recovery through an application and annual fee. Also that commercial fees are set higher than fees for feasibility licences.

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

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

We consider iwi and hapū should be centrally involved from now (pre-feasibility) in the development and implementation of the framework for offshore windfarm development. They should be involved in all relevant aspects of the feasibility stage: from the development and measurement of environmental baselines, to establishing and measuring cultural indicators and measuring baselines; to participating in the exploration of social and economic impacts and opportunities; and the co-development of meaningful commercial models for their participation in the market to ensure that iwi are benefitting from this partnership and the development of renewable energy.

We believe offshore wind represents a very real opportunity for iwi and hapū to share as commercial partners in the economic benefits that will flow from projects. Iwi involvement is therefore much more than just the usual engagement and consultation.

We urge MBIE to be open and transparent about its development of options for Māori involvement in the regime, and to make sure that all parties are brought along, as many developers are already in quite close communications with iwi and hapū.

MBIE will also need to consider carefully how it can frame a regime that enables Māori interests, iwi and hapū, to have meaningful input into matters such as feasibility assessment and enforcement of standards, without unduly compromising their ability to participate

commercially with developers, through joint ventures, investment opportunities or otherwise. Transparency will be key to this.

15. Have we identified the key design opportunities to work collaboratively with iwi and hapū alongside consultation? Is there anything we have missed?

Please refer to our response to question 14.

16. Are there any Māori groups we should engage with (who may not have already engaged)?

In principle all iwi with coastline interests should have the opportunity to participate in the design of the regime, although we think the focus to date on Taranaki has been sensible given that is the location most of interest at the moment. However, other parts of the country may turn out to be suitable for this technology and so a mechanism to allow wider participation– e.g an invitation through the Iwi Leaders Group for a regional roadshow – may be sensible. It is our expectation that iwi with a stronger interest will naturally gravitate and engage more intensively with the issues, and once those iwi and hapū self-identify that is where the primary focus of iwi engagement should lie.

Chapter 8: Interaction with Environmental Consenting Processes

17. For each individual development, should a single consent authority be responsible for environmental consents under the RMA and the EEZ Act? Why or why not?

A one-stop shop offering a streamlined and efficient process, coordinating all consent processes is preferable – we expect for submitters/stakeholders as well as developers. This reduces risk for developers which ultimately reduces cost of the energy for consumers.

18. 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?

We consider the environmental consenting process can adequately consider environmental effects but we suggest that the EEZ Act approach will need some reassessment to ensure that it does not become an unreasonable barrier to offshore wind projects.

In particular, we have some concern that the purpose provision in section 10 of the EEZ Act, with its central concept of "sustainable management" that denotes compromise between economic and environmental needs, does not necessarily align with an offshore wind regime clearly focussing on facilitating offshore renewable generation in the best interests of New Zealand. We are concerned that the application of the decision-making criteria and information principles is framed in such a way that the sustainable management purpose of the Act must be achieved. This is not to say that project delivery should outweigh environmental factors – absolutely not. But it seems that the EEZ Act does tend to favour environmental outcomes.

We suggest there needs to be scope for some sort of National Policy Statement on offshore renewable energy generation and infrastructure, as can be published under the RMA, is required. The Act may need amending to recognise that this needs to be taken into account.

Equally, we have concerns about the project uncertainty that may be introduced through the need to observe adaptive management. This, according to the EEZ Act, will arise where there is any uncertainty or inadequacy of information, meaning that caution and environmental protection must be favoured. The adaptive management approach outlined in section 64 of the EEZ Act will not work well for the establishment of a new offshore industry that needs certainty and scale for projects to be bankable and that depends on significant fixed forward supply chain commitments. Consideration needs to be given to how this will be accommodated for, say, seabird effects, particularly given the lack of baseline data.

We agree that duplication between the permitting and consenting regimes needs to be avoided. We would not duplicate assessments in the renewables permitting regime but instead cross-refer to relevant consenting legislation, in much the same way as does the CMA. This would leave the environmental assessments and consenting to be carried out by the environmental experts, and the licensing to be determined by MBIE.

We support recognition being given to Treaty of Waitangi principles and Māori tikanga-based customary rights and interests, as given effect in the Supreme Court's decision in Trans-Tasman Resources Limited v. The Taranaki-Whanganui Conservation Board ([2021] NZSC 127).

19. Should the offshore permitting regime assess the capability of a developer to obtain the necessary environmental consents? If not, why not?

We support the ability of the offshore permitting regime to assess the capability of the developer to obtain the necessary environmental consents, but recognising that this by definition can only be at a high level and cannot pre-empt the proper consenting processes. It is important to target robust applications, by proven developers, to ensure timely execution and to avoid land grabbing strategies/speculation.

20. What is the optimum sequencing between obtaining feasibility permits, commercial permits and relevant environmental consent(s)?

We agree with option 1 as the preferred approach. In addition to the reasons given it means that less of the commercial license period is taken by obtaining consents. It may mean however that some flexibility in the maximum feasibility licence duration should be added to cover consenting delays beyond the developer's reasonable control.

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?

In our view the environmental consents regime needs to be more tailored to renewable energy, particularly in the EEZ, and the potential for conflict between environmental values and economic interests needs to be assessed and understood. It is for this reason that we say above that the EEZ Act principles and balancing approach require careful consideration.

The EEZ Act stipulates a maximum duration of 35 years for a marine consent. Ideally this would align with the term of a commercial permit.

The other area to consider is the interaction with other existing infrastructure in the marine environment, for example, petroleum infrastructure such as the Kupe platform.

22. How should the factors outlined influence decisions to pursue offshore renewable energy developments in the EEZ or the Territorial Sea? Are there other factors that may drive development in the EEZ versus the Territorial Sea?

Regarding project economics another couple of factors to note:

1) The quality of the wind resource tends to improve with distance offshore – higher wind speed, more consistent, less wind shear (turbulence) etc.
To an extent, this upside can compensate for the additional costs associated with being further offshore i.e. longer cable, larger foundations, longer maintenance vessel transit time etc.

2) Another factor driving optimal location of an offshore wind farm includes distance from a suitable O&M Port (one which is safe and accessible). For the lowest cost operations by CTV (crew transfer vessel), the maximum one-way transit time is around 1.5hrs (lower OPEX). Beyond this larger and more expensive SOVs (Service Operation Vessels) are typically required (higher OPEX).

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?

One important trade off to add is the ability to control quality and durability.

When building offshore transmission assets (Cables and the Offshore Substation) it is very important that what you install is fit for purpose and durable. If something is not fit for purpose (i.e. not rated for the offshore environment) and needs to be replaced, or significantly repaired, this can be very expensive, especially if is a large piece of equipment (i.e. HV transformer or Main Platform Crane) and a large crane vessel is needed to do the job. This will be expensive in mobilisation costs and could take a long time due to New Zealand's distance from established supply chain. This time delay could also be expensive in terms of production losses from the wind farm.

In our experience as a developer who builds to own and operate our offshore wind farms we see it as much better in the long run to invest in quality up front (CAPEX) to improve the wind farm performance (plant availability) and reduce the operation costs (OPEX).

Another offshore grid delivery model to add is long-term co-ownership between the developer and the TSO. An example of this our latest project Arcadis Ost 1 in Germany which became operational this year, the TSO is 50Hertz. This worked as follows:

Parkwind was responsible for medium voltage (MV) offshore infrastructure, and 50Hertz (the TSO) was responsible for the export cable. Ownership of the offshore substation was split 50/50 between Parkwind and the TSO, with Parkwind leading the design and delivery of the asset, and the TSO provided design input for HV systems.

We are happy to provide more information on the different ways we have built offshore transmission on our 5 previous projects and how we plan to in the future.

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?

As an experienced developer, owner and operator of offshore wind farms our preference would be to take the responsibility for supplying the offshore connection assets ourselves. This is so we control the quality, functionality, durability and timely delivery of the assets.

That said we are happy to work with Transpower to ensure that the offshore assets are built in accordance with their requirements. We are also happy to explore various ownership models such as: we own the offshore substation exclusively; we transfer ownership to Transpower after commissioning or we co-own it with Transpower. We have experience with all of these models from our previous projects in Europe.

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 agree that a co-ordinated and joint approach to onshore connection infrastructure makes sense. The benefits and barriers listed are valid.

Given the large potential for low-cost offshore wind and convergence of developers to the South Taranaki and Waikato regions we think there are clear benefits in efficiency and coordination if Transpower plays a role. Here are some recommendations we have for this:

1) Transpower facilitate a common transmission corridor(s) from the coast to a common grid connection point. This means multiple developers are not cutting multiple corridors, disturbing communities, potentially exacerbating any environment and cultural impacts – best to avoid the spaghetti effect.

2) Common cable landfall area(s).

3) If/where underground cables are used, a series of ducts could be laid along this corridor which developers could pull their cables through when their wind farms are ready. This would allow for different project timelines whilst minimising disturbance – developers not digging up a corridor every couple of years.

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 representation of the timeline challenge for onshore interconnection assets.

We are very supportive of working with Transpower to undertake some early preparatory work and provide technical input to help meet this challenge. We are keen to do this already, ahead of the regulatory framework being legislated and feasibility permits being issued.

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

The answer to this depends largely on the characteristics of the project proposed, i.e. size of the project, the type of technology deployed, the procurement and maintenance strategy for the project. It also depends on what existing infrastructure you have.

Construction Ports:

- The lightest requirements for construction port infrastructure would be for a small bottom fixed project (say 500 MW) comprising of monopiles or jackets which are shipped in and shipped out (marshalling only - no major local manufacturing). What it would cost to make the port ready would depend on the state of the existing infrastructure (lay down area space, quay length and load capacity). It also depends on what other industry the port serves and thereby how much space it could free up. In New Zealand, the ports are generally busy with their existing clients such as log, fuel and container imports/exports.
- Adding local manufacturing of significant structures (i.e. turbine foundations, offshore substations, etc) to the mix will be expensive as these require large facilities close to the quayside. Most NZ ports are space constrained.
- The heaviest requirement construction infrastructure would be to facilitate floating wind structures. These require significantly more port space and much higher bearing capacities.

Maintenance Ports:

- To support maintenance of offshore wind you require ports and heliports preferably close to the offshore windfarm to minimise transit time and fuel costs.
- The port requirements for O&M are typically much less than for construction and most established ports in NZ could host this. The lightest option here is to run a fleet of small crew transfer vessels (CTVs); the main thing is that the port is safe and accessible. The boats must be able to get offshore to maintain the turbines whenever the conditions out there are suitable, they leave early morning and return at the end of the day. They must not be held back by constraints at the port, i.e. things like waiting for tides. So whilst the upfront costs of establishing an O&M port might not be large, the ongoing cost of keeping it “safe and accessible” might be. This would be the case if, for example, you are the only user of the port and regular dredging of the access channel is required.
- If your wind farm is more than 60km from Port you will then typically use a service operational vessel (SOV). These are much bigger boats and tend to stay offshore for days/weeks at a time with rotating crews. They require a deeper channel than CTVs.

In both cases, CTV or SOV, you need an operations base building close to the quayside containing the marine operations control centre, offices, equipment/parts storage, changing rooms etc.

We are happy to provide MBIE with specific details on the Port Infrastructure we envisage being required to deliver the type of projects we are considering for New Zealand.

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?

Parkwind regards decommissioning as an integral part of our responsible and sustainable approach to offshore wind farm management. It aligns with our core values and objectives, as we are committed to promoting long-term environmental stewardship. This is also, we understand, an important consideration for iwi considering partnering opportunities.

Yes, we are supportive of developers being required to submit a decommissioning plan, cost estimate and provide a financial security for the cost estimate in order to get a permit.

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

Yes, full removal should be the base case, other options can be assessed during the pre-decommissioning phase to determine whether they are better for the environment.

Pre-decommissioning phase: this phase encompasses the extensive evaluation of the wind turbine park's condition, including structural assessments, geophysical surveys, and environmental monitoring. The continuous collection of data into the Digital Twin model during the O&M phase. This information helps to determine the most suitable decommissioning approach and identify potential risks.

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?

Our preference is a build-up of guarantees starting from when the project becomes operational (Commercial Operation Date, COD). The only mechanism we'd advise against is cash deposits on a blocked account.

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

We agree that applicants should provide the following as part of their feasibility license application:

- an understanding of the decommissioning requirements,
- relevant knowledge, capability and experience to execute them when the time comes,
- an outline of their plans to work towards a full decommissioning plan during feasibility,
- in addition, the financial capability assessment should extend to include a review of how decommissioning obligations will be funded and what security will be available.

For your information, we do not expect to install any fixed infrastructure during feasibility phase of the project.

We urge MBIE to consider carefully whether a trailing liability regime, coupled with uninsurable and indemnifiable personal responsibility of directors, is really necessary compared to the petroleum decommissioning regime, and whether double-up in protections arises given the co-existence of financial securities. We support a regime that ensures

decommissioning obligations are met but do not believe a straight transposing of the Crown Minerals Act regime is necessarily justified given the different risks posed. Trailing liability in particular presents a major issue for any transactional possibilities around an offshore wind farm.

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

Firstly, we want to note that by the time offshore wind develops in New Zealand (next decade), there is likely to be quite some additional experience in decommissioning of assets currently operational globally. As such the coming years may provide more clarity and perhaps the regulatory framework should allow for some flexibility for government to pivot based on the learnings and best practice from overseas experience.

As of today, we recommend the following monitoring approach for the decommissioning plan, cost estimate and financial security:

- Initial strategy as delivered by the contractors (part of the design and installation scope) at the stage of commercial permit application/ financial close - this includes a best estimate of financing.
- Nearing the end-of life a detailed engineered proposal (as it will be tendered) with pricing coming from the market
- Given the high degree of uncertainty and effects of such volatility on the financing and profitability of the project, we would advise against frequent decommissioning re-assessments, but it is important to monitor residual lifetime capacity of the wind farm closely

The reasoning for the above is given below:

Predicting decommissioning costs is a very difficult exercise as there are so many unknowns:

- Technologies for decommissioning - although there are technologies today which are known and documented (like from O&G)
- Price of resources (vessels and tools) at that moment in the market due to availability, which fluctuates with time
- The price (taxation / residual value) of the materials recuperated and re-introduced via the waste cycles into raw material flows

It is extremely hard for a windfarm developer to be able to manage changing financial requirements. The business case is very end-loaded and any reviews of budgets not agreed at the start at financial close can be detrimental to the financing and profitability of the project:

- This can be driven by interim assessments coming to different conclusions
- This can be driven by governments changing the rules of the game (e.g. new technologies would allow to retrieve a full monopile rather then cutting at -2m below seabed, but these technologies could potentially cost a multiple. The permit requirements are clear at time of tender and form a core part of the permit and underpin its financing; changes should not just be pushed onto the permit holder unilaterally. Of course, also on the wind farmer's side there might be a push to avoid early permit obligations where seen unjustifiable (why would one want to remove the scour protection while such artificial reefs have become a critical source of life).

It is as such most relevant to use the “profit” of the final years to build-up the decommissioning warranty, (following bank financing being repaid) to assure that “when the time comes” there is sufficient budget. It is not useful to frequently revise the strategy during the first years - half or 2/3rds of the intended lifetime of the windfarm. Decommissioning budget exercises are highly uncertain and that will not change until closer to the end of the windfarm lifetime, which itself may be unclear given future repowering possibilities.

In our operational windfarms in Europe we report yearly (both to banks/lenders and the government) on the general status of the windfarm and any potential major concerns.
We undertake standard lifetime asset monitoring in which we aim to predict a number of remaining lifetime parameters (i.e. residual fatigue life following monitoring of foundation structures, subsea cables and turbines). It is prudent for the government to follow-up on these lifetime indicators to potentially capture early abandonment of a no longer viable project.

Do consider lifetime extension and repowering scenarios.

- Some windfarms are overengineered and have a longer economical viable lifetime
- Re-powering a windfarm with a new (lengthened) lifetime is optimal as it can be done during operations as an improvement trajectory without the large gap and uncertainties that come with retendering the concession. A correct economical frame will need to be decided upon to consider repowering as an option for both state and windfarm owner
- Option to repower can have significant carbon reduction benefits, with a lower life cycle cost of carbon to the power generated.

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

We agree with the approach to allow the decommissioning plan to be adjusted over time in discussion with government to facilitate such extensions to economic life.

Please refer to our response to question 7 regarding a repowering extension clause in the commercial permit.

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?

Yes.

Chapter 11: Compliance

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

We support use of the VADE model as an appropriate and measured approach to compliance. Ultimately the regime has to include the ability for the government to revoke the permit but a more appropriate and balanced approach, and one which better achieves the government's overall objectives, is to encourage developer rectification of issues including potentially through the ability to impose infringement notices or fines/other penalties. Potentially reporting scope and frequencies should be altered in appropriate cases, as determined by MBIE.

36. Is the compliance approach and toolbox, described above, appropriate for dealing with non-compliance within the regulatory regime?

Yes.

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 are supportive of this approach but believe it is important to have Ministerial input into the decision-making process where, say, any national interest or foreign policy considerations might need to be considered. A useful model here is contained within the Overseas Investment Act 2005.

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?

It is preferable to avoid duplication of consultation processes. We believe it best to have a single robust public submission process as part of the environment consenting, and not repeat at the commercial permit application stage.

39. Should permitting decisions be able to be appealed and if so which ones? Which body should determine such appeals?

No, we do not recommend that permit decisions be appealable. Judicial review will always be available if a Ministerial discretion has been wrongly exercised.

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?

We agree with the government position that health and safety is of essential importance. Health, Safety & Environment (HSE) is the n^{o} 1 priority for us and it should be for anyone given license to operate in the hazardous and sensitive offshore environment.

We operate our offshore wind farms with the following HSE philosophy/policy: **"No one gets hurt, nothing gets damaged and all risks are controlled and managed".** This is a shared

responsibility, it applies not only to Parkwind employees, but from our contractors and is translated via our Employer Requirements for HSSE Assurance.

Our advice is to require a strong and relevant track record in HSE management from feasibility license applicants through the merit criteria. This will encourage the most experienced global developers to enter the New Zealand market and they can help establish the nascent industry in New Zealand successfully drawing on their expertise and best practice.

It is good to signal the relevant New Zealand health and safety legislation from an early stage, this should however be reviewed to ensure it is fit for purpose for the unique offshore wind industry and update where necessary. New Zealand can look to examples from mature offshore wind markets such as Europe.

New Zealand can state a preference for feasibility permit applicants to have relevant international certification such as: ISO 9001, 45001 (Health & Safety), 14001 (environment).

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

We have no concerns to add.

Any other comments?

Finally, we wish to draw to MBIE's attention another area that we think is highly relevant to consider in development of the regulatory framework offshore renewable energy:

1. *Transitional provisions:* The first point is that it has become evident that any regulatory regime adopted will need to include robust commencement or staged commencement provisions that deal with any premature filing of applications for offshore renewable energy consents under the Resource Management Act that may have been submitted such as to avoid application of the new regulatory regime even after the Minister announced that work on such a regime was commencing. It would be both inappropriate and unfair for any such RMA application to be granted consents in a way that avoids the application of the Act, assuming any such application if filed met the RMA and Council requirements. We are aware of one such possible application in South Taranaki.