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

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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	Yes, it is good to have both mechanisms. The set application rounds could be based around central planning and limited to certain locations – this can focus investment in infrastructure/transmission, and enable better regional and national planning - but open applications could be anywhere. The set application rounds could also lay out a defined schedule for industry, with a known capacity at different times, which will help both supply chain development and investment due to increased certainty of future developments.
2	**What size of offshore renewable energy projects do you think are appropriate for a New Zealand context?**
	Internationally, sizes of 1+ GW are becoming a standard size for leasing, and the proposals so far in New Zealand are up to 1.25 GW. If smaller developments are proposed then it is hard to order components, as manufacturers have so much competition and will go with the larger orders. If lease areas are smaller than 1 GW then put in place a mechanism for collaboration between developers to do joint orders. A government enabled mechanism could remove sensitivities and rivalry between developers, while enabling them to make orders. (See recent Memorandum of Understanding between three US states[1] that enables projects to work across states – this was partially to increase component order size, amongst other things, as it has been identified as an issue globally.) Another consideration for suitable size is what fits with the existing/upgraded transmission system and connection points? This includes any technological constraints for supplying above a certain amount.
	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	There should be an upper limit, so that there is the opportunity for competition and one developer doesn't take the whole of a particularly good area, but this has to be reasonable amount that makes each development economically feasible. Given the current proposals, an upper limit of 1.25GW or 1.5GW per development seems reasonable. It is still possible for developers to put in multiple submissions, but this reduces the likelihood of a complete monopoly.
Chapter 5: Commercial permits	

[1] https://portal.ct.gov/DEEP/News-Releases/News-Releases---2023/CT-MA-and-RI-Sign-First-Time-Agreement-for-Multi-State-Offshore-Wind-Procurement

	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	Yes. Option 2 is reasonable - the submission should include a cumulative assessment that includes any project with a feasibility permit within given geographic boundaries (where there might be overlapping interests for whatever reason). This is already included in environmental legislation, but it would extend this cumulative assessment to other factors as well and would need to demonstrate consultation with the other developers and stakeholders within the commercial permit application.
	Are the proposed criteria appropriate and complete? If not, what are we missing?
5	These criteria are appropriate. Within the readiness of the project, in addition to environmental consents, it would be useful to demonstrate community consultation (beyond iwi and hapū) and any community benefits that have been agreed. This should include investment in local communities for supply chain, infrastructure development, research, labour and any community investment as compensation for disruption. The 'route to market' should include details of the power purchase and any associated variations over the lifetime of the project. It might also be useful to include an Innovation section, where applicants could describe any innovation within the project itself, or any research that is associated with the deployment – this could include sharing data with organisations related to the environment, turbine performance, or development interactions to improve future planning and design. For additional information, in the USA, the Loan Programs Office issues loans to developers, and they have screening criteria which assess the readiness of the project and the status of the developer. Although some of this is specific to the USA, some could be useful background material when putting together the detailed criteria[2].
	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?
6	Yes, tracking through the management plan should be used as a minimum, which should lay out the commitments clearly. There should be penalties if the commitments are not achieved (and this is preventable). The penalties could be through fines, reduced tax benefits, or higher charges dependent on the mechanism chosen for revenue sharing if there is one.
7	**Is 40 years an appropriate maximum commercial permit duration? If not, what would be an appropriate duration?**
	Yes, but it should have an option for renewal if relevant information is submitted.
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?**

[2] https://www.energy.gov/lpo/articles/title-17-clean-energy-financing-program-part-i-application-instructions

	Yes, unless surveys and the assessment has covered a larger area (covering the extension) for an appropriate amount of time, or there is collaboration with the permit holder for an adjacent area, so the relevant data and information is already available. If the required information can be provided, then a permit extension could be made.
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?**
	Yes, an exemption for demonstration and research and development projects is more practical. Depending on the nature of the research, it is also worth considering setting up a test site, or having the ability to nominate part of a commercial development as a test/research site to enable continued innovation. Given the state of the industry, this could be particularly useful for operations and maintenance technologies/procedures.
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?
10	There is often an interdependency between these two factors, and sometimes the structure changes over time - so revenue support is needed at the beginning to give developers the certainty of income for investment and financing, whereas once the infrastructure in a country is established, revenue can go back to the government. Consequently, the support is only needed at the beginning of setting up an industry, but without this support the uncertainty is too high for any action by companies to be taken. Conversely, having revenue to the government in the early stages enables the government to pay for broader infrastructure (e.g., transmission, ports) that supports the development of the industry as a whole. The mechanism for revenue therefore depends heavily on how much infrastructure is needed to support offshore renewables, and the likelihood of private investment to do this. If payment is made to the government in the early stages to enable infrastructure development, it may be possible to compensate the developer for this later in the process in some way.
	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?
11	Onshore renewables often face more community opposition and reach a threshold where development slows down considerably, so while there might be more initial opportunity onshore this might not be sustainable. Trying to design an incentive mechanism that applies to all renewables is extremely difficult as making criteria that are appropriate to immature industries (like wave and tidal, or floating offshore wind) make it too easy for solar or onshore wind to meet the criteria. This has been seen in the USA's Inflation Reduction Act that applies

	to all renewables, but makes it very hard for offshore wind to meet some of the criteria, even though that is where the incentives are most needed to kickstart the industry. The immaturity of the offshore renewable industry in New Zealand does add complications that mean offshore renewables need more support, particularly with providing certainty to long-term development and setting up the infrastructure (that in itself takes a long time to develop) that can support offshore activities. This includes fabrication facilities, vessels, ports and transmission infrastructure.
12	**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.** Given the importance of building large scale renewable generation, it would be better to not have large upfront fees to provide revenue flow back to government as this increases costs for the developer, which ultimately increases costs back to the consumer[3]. However, if some form of revenue is earned this should be put back into the acceleration of the industry. This could be through paying for upgraded transmission, building shoreside infrastructure at ports, or helping other ocean users adapt to the presence of offshore wind farms and therefore improve acceptability. Early revenue could be used to set up the later government-led process for development (undertaking environmental surveys and transmission configuration assessments), so could be helpful to set up a system that streamlines the industry later on. The long-term success of the industry is important, so taking a percentage of the revenue is a more sustainable form of revenue to government (as the developers have lower costs before the developments are providing income). However, this delays the revenue until developments are operational.
13	**Do you agree with the proposed approach to cost recovery? If not, why not?** Yes.
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?** It would be good to involve iwi and hapū in research for offshore renewable energy as their maritime experience could add valuable insights into nature-based solutions for various types of offshore infrastructure.
15	**Have we identified the key design opportunities to work collaboratively with iwi and hapū alongside consultation? Is there anything we have missed?**

[3] https://windeurope.org/newsroom/press-releases/german-offshore-auctions-award-7-gw-of-new-wind-future-auctions-must-avoid-negative-bidding/

	Agreed that it is better not to dictate the nature of direct economic involvement. However, iwi and hapū could enable this through working with developers and targeting specific training and employment opportunities to focus on iwi and hapū benefits from developments. This would be more than the indirect economic involvement, as there could be targeted mechanisms put in place, but it is not a required function.
16	**Are there any Māori groups we should engage with (who may not have already engaged)?**
	No comment.
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	Yes, definitely. It is much simpler for an applicant to deal with one consent authority, it streamlines the process[4], and will probably produce a better and more comprehensive application as duplication is not required, and gaps will be avoided. It would also be useful for this authority to manage the whole permitting process, or have an intermediary that manages all permit and consent interaction with the applicants. The 'one-stop-shop' mechanism has been shown to be more effective and efficient than applicants dealing with multiple agencies through the process, and it can lead to greater efficiency for the government as well, so reducing the time to deployment.
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?**
	Yes.
	Should the offshore permitting regime assess the capability of a developer to obtain the necessary environmental consents? If not, why not?
19	Yes, as this demonstrates the developer has the knowledge to complete the process. It is also useful to have regional assessments, and a collaborative approach between developers and local stakeholders is the most effective way to take measurements, do assessments, and agree potential impacts and mitigation. The structure of such regional collaboration tends not to happen organically and therefore could be encouraged/proposed by government.
20	**What is the optimum sequencing between obtaining feasibility permits, commercial permits and relevant environmental consent(s)?**

[4] https://brochures.hoganlovells.com/?pid=MjM237874&p=227&v=3.1

	Option 1. The commercial permit should only be awarded when the project is ready to move into construction and having environmental consents outstanding could produce confusion and undue pressure on the environmental process. Therefore, it should be feasibility permit, environmental consent, commercial permit. A digitised system for there permits and applications would streamline the process and make sure all aspects are fulfilled to the necessary standard.
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?**
	There needs to be consideration of permitting timelines for supporting infrastructure such as ports. The need for this infrastructure is early in the process and also takes several years to complete. If this is not started until the permits for the developments are issued then the timeline for development will be pushed back significantly. Permits for supporting infrastructure need to be streamlined and 'fast-tracked' where possible.
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?**
	Marine spatial planning of all relevant aspects is key, and should be done first to the degree it can be. In the Territorial Sea there may be additional navigation, aviation and defence issues that encourage development further offshore.
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?**
	While the statements are true, Denmark is currently moving towards the model of energy islands where the TSO, Energinet, would have control over the connection to shore, enabling better coordination. Germany has an approach where the TSO builds out the offshore transmission infrastructure and has an agreed date by which to do it. If it fails to do this, it compensates the developer. This enables the more efficient centralized planning process while also enabling a faster approach that suits the developer. The most appropriate approach also depends on whether there is going to be offshore transmission linking different projects, either through an offshore backbone or mesh system. This can add resilience and aid congestion in the onshore system, but requires regional planning and operation. This regional approach also limits the number of landfall points which simplified environmental assessment and future maintenance, so has distinct advantages.
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?**
	The proposed solution makes sense, where Transpower owns and operates the offshore system, but in the near-term, the developer builds it. It would be useful to engage Transpower

staff in this process (on secondment or as part of the permit requirements) so that Transpower gains the knowledge and capability in the early projects to undertake the whole process after the first few installations.

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?**

Joint offshore infrastructure has the advantage of backup systems and greater resilience. Combined offshore transmission is easier to facilitate through the TSO as this avoids commercial sensitivities and time issues.

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?**

Onshore interconnection upgrades are definitely a risk and timelines are much longer than for the offshore infrastructure. One solution is to have an offshore transmission system directly to centres of high load, especially as the demand is in coastal cities.

For upgrading the onshore infrastructure, this could be partially funded through an initial permit fee, related to the capacity of the proposed project. Potentially, this fee could then be offset against future connection costs, so it is not seen as 'lost' money.

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

The scale of development needed for port upgrades related to different uses of ports is summarized well in a recent USA report[5]. The degree of upgrades really depends on the amount of work to be done within New Zealand and how much of the manufacturing is likely to be domestic. If components are being imported then it is important to focus on assembly ports, with sufficient storage capacity, and then operations and maintenance support. If manufacturing is anticipated, then additional port infrastructure is needed for fabrication facilities. Given the market size in New Zealand, if manufacturing ports are set up they should be designed in a flexible way to support other forms of offshore renewable energy and exports, and not just domestic offshore wind. The balance between fixed bottom and floating offshore wind is also important, with floating offshore wind being a larger market, but also requiring much more space, and at this time, much higher uncertainty regarding design and needs. Given New Zealand is likely to focus on floating offshore wind, large extensions to ports will be needed. As an example of needs, the Port of Long Beach in California recently published a concept report for developing a floating offshore wind manufacturing and assembly port[6].

[5] https://www.nrel.gov/docs/fy22osti/81602.pdf - Chapter 3
With additional information: https://www.nrel.gov/wind/offshore-supply-chain-road-map.html
[6] https://polb.com/port-info/news-and-press/port-of-long-beach-releases-pier-wind-project-concept-05-09-2023/ The article includes a link to the actual concept report.

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, they should. They should also provide plans for replacement if there is a major fault at any particular turbine that makes it inoperable.
29	**Should the permit decommissioning plan, cost estimate and financial security be based on the assumption of full removal? If not, why not?**
	Yes, Option 1 is preferred. If Option 2 were used then the assessing authority is likely to take a conservative viewpoint and still require the financial guarantee for full removal so while the options have been presented (and may be more likely in the end) the cost would still be the same as Option 1, and additional work based on lots of uncertainty will need to be undertaken unnecessarily.
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?**
	The most reasonable basis seems to be the cost based on the developer undertaking decommissioning, but highlighting any areas where they have savings that the government wouldn't.
31	**What should the developer be required to provide in relation to decommissioning at the feasibility application stage?**
	A full decommissioning plan should not be required at this stage as the level of uncertainty in the design of the development and the potential impacts is too high. However, demonstration of an understanding of the decommissioning requirements and what considerations would go into a decommissioning plan should be included.
32	**What ongoing monitoring approach do you think is appropriate for the decommissioning plan, cost estimate and financial security?**
	Five year review seems appropriate, but with the option to have ad hoc assessments and to increase the frequency if the operation of the wind farm is having problems.
33	**Are there any other ways in which the regulatory regime could encourage the refurbishment of infrastructure or the recycling of materials?**
	If a revenue to government model is going to be used, then if the wind farm is refurbished/material is recycled, then the percentage revenue could be reduced for that second phase. Alternatively, there could be government incentives/grants to set up recycling facilities or investment in a circular economy. Relating to cables, there could be a requirement to remove them unless the operator finds other uses of the cables and then the maintenance of those cables would switch to the new

	operator (for whatever the new purpose is, e.g., different form of energy generation or offshore development).
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?**
	Yes. This will highlight whether partial decommissioning is the best option.
Chapter 11: Compliance	
35	**How can the design of the regulatory regime encourage compliance so as to reduce instances of non-compliance?**
	If there is a revenue payment each year to the government, this could be reduced periodically based on 'good behaviour' and compliance. Similarly, developers who are consistently compliant or have well managed projects could have this factored into future bids for sites, so they are more likely to win a future site if they have a good history of compliance.
36	**Is the compliance approach and toolbox in Chapter 11 appropriate for dealing with non-compliance within the regulatory regime?**
	Yes, it is a good range of tools.
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?**
	Yes, this is a good compromise to maintain consistency, but also enable nationally important considerations to be included by a senior decision maker when necessary.
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 would be useful to have consultation as per Option 2. This would not affect the feasibility permit, but would enable a broader range of comments, which may not be environmentally linked, for the commercial permit. As mentioned previously, if there is one government agency that manages a 'portal'/communication link for all permits and consents then the process can still be highly efficient and not duplicate the environmental process. It should also be made clear that all environmental concerns must go through the environmental consent consultation process, and the commercial consultation is for other factors. This could include financial concerns, technological concerns, or site conflicts.
39	**Should permitting decisions be able to be appealed and if so which ones? Which body should determine such appeals?**

	Yes, appeals should be allowed for key decisions such as a permit being declined. As with other aspects, what is currently done for other offshore projects? Maintaining consistency and transparency is important.
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?**
	Guidance on differences between the health and safety regulations in New Zealand to those in Europe that apply to offshore renewable developments would be useful.
41	**What are your views on the approach to safety zones including the trade-offs between the different options presented?**
	Safety zones are good to have to maintain public and infrastructure safety and integrity. A further option is the UK model (as described) where the zone is 500m during critical times, and then 50m during regular operation. This means the maximum value is included for safety when needed, but a smaller zone is the norm for regular operation, with less disruption to other users. This is much clearer for other sea users to understand than having a variable zone decided on a case-by-case basis. Having different size zones for different developments of the same technology is likely to cause confusion and may lead to more infringements. Therefore, I would propose Option 5 where the 500m zone is during critical periods and a smaller consistently defined zone is applied during normal operations. It is also important to make sure these zones are enforceable so considering how these will be monitored may factor into the final size chosen for normal operations.
42	**Do you have any views or concerns with the application of these proposals to other offshore renewable energy technologies?**
	When considering differences for research or demonstration projects, it should be clear that the definition of a research/demonstration project changes with the type of technology (if the definition is relation to capacity or area).

General comments

In the 'readiness plans', in Chapter 5, it describes having a route to market. What are the proposed plans for enabling the power purchase agreements? The PPAs are critical for certainty in planning and investment and need to be aligned with any set leasing schedules if those are done.

Consider how offshore renewables could be developed in conjunction with other offshore uses, such as aquaculture or liquid fuel production.

With the use of existing environmental regulations, it would be useful to provide guidance on what environmental surveys/analysis/assessments are required for different types of offshore renewable energy. How a survey is conducted and analysed affects the comparability between sites, and having a standard approach, with flexibility for unique attributes related to the site, will help inform the bigger picture and cumulative assessment. This will give clarity to the whole process and enable more streamlined applications.

With transfer of control, this may occur once the feasibility and environmental consents are in place, immediately before the commercial permit, so the system should allow for the commercial permit to be held by a different entity, as long as the criteria are met. It is quite common for one company to do all the preparation, and then sell the project on for construction.