

November 26, 2022

RE: Submission to Impact Assessment Agency of Canada re Regional Assessment of Offshore Wind Development Draft Terms of Reference

The Ecology Action Centre (EAC) is submitting this letter in response to the invitation for public comment on the *Draft Agreements and Draft Terms of Reference for the Regional Assessments of Offshore Wind development in Nova Scotia and Newfoundland and Labrador*. We appreciate the opportunity to provide input into this process. As the Draft Agreements for the two provinces are substantially the same, EAC is providing specific comments and recommendations on the Draft Agreement for Nova Scotia, intending for those comments and recommendations to be understood as applying to both Draft Agreements.

The EAC is one of Atlantic Canada's oldest and largest environmental charities. We have over 6,000 members across Canada whose voices we represent as we engage in public policy development and have more than fifty years of experience taking leadership on critical environmental issues such as climate change, biodiversity protection, and environmental justice. Over the past decade, we have been actively working on a full spectrum of energy issues, both provincially and federally, including the phase-out of coal-fired electricity, transition to renewable electricity, and strong energy efficiency policies and programming. We have similarly engaged with several offshore energy developments and associated environmental assessment processes across the Atlantic region to advocate for the protection of marine ecosystems.

The energy transition is a key part of the transition to climate neutrality by 2050. To achieve a just transition, we must rapidly reduce carbon emissions while creating sustainable opportunities for workers and communities, and while avoiding, minimizing, and mitigating negative effects on the environment. If developed in an appropriate way, offshore wind could be an important part of Atlantic Canada's renewable energy future. Rather than repeating historical patterns of social conflict and environmental damage often associated with large energy projects, offshore wind development and assessment processes should include, benefit, and empower Indigenous and local communities, fishers, and other marine users.

The Offshore Wind Regional Assessment ("RA") will act as a foundation for the development of the offshore wind industry, and thus must be conducted with a thoughtful, inclusive, and evidence-based approach. This Regional Assessment should ensure adequate precautions while taking account of emerging evidence related to the impact of offshore wind infrastructure and approach the impacts of offshore wind development on biodiversity from a holistic ecosystem perspective.

Our response raises several issues that EAC has with the Draft Agreements and the Draft Terms of Reference. This submission consists of two sections. The first section provides key issues and recommendations on solving or mitigating these issues. The second section provides

suggested drafting language to be used in the Terms of Reference and the Agreement. This language is based on our recommendations.

Sincerely,

Dr. Sebastián Pardo
Sustainable Fisheries Coordinator
Ecology Action Centre

Summary of Issues and Recommendations

We believe that the Draft Agreements and the Draft Terms of Reference (“ToR”) do not provide the requisite level of detail on the makeup or engagement with the Advisory Groups, do not provide for an adequate time frame to conduct a detailed Regional Assessment, do not adequately account for environmental impacts of offshore wind farms, do not recommend creating new studies for cumulative impact assessments or decommissioning studies, and do not include provisions for a circular economy or a ecosystem approach.

The comments below detail these concerns, along with our specific recommendations on the wording of the Draft Agreements and ToR for dealing with these.

A. Clarity on the makeup of and engagement with Advisory Groups

Advisory Groups are key players in a Regional Assessment. They provide the necessary scientific and public input necessary for meaningful participation. The current language is overly prescriptive in some areas, while overly vague in others.

We recommend that the final ToR describe the purpose and goal of the Advisory Groups and how its recommendations will be considered by the Committee. The ToR should include a process for engaging with Advisory Groups, including guidance on appropriate timelines for the communication and review of information. Recommended language is contained below. A separate terms of reference should be created for the Advisory Groups.

B. Adequate time frame for Committee to conduct Regional Assessment

This Regional Assessment must be conducted fairly, and the study must be thorough and comprehensive. The composition of the Regional Assessment Committee is ambiguous. The Draft Agreements do not provide information on how the committee will be selected, nor do they provide for public input on their composition. We recommend that language be added to the Draft Agreements to include public and Indigenous consultations on the composition of the Committee.

Further, we do not believe that these goals can be achieved within the 18-month timeline proposed, which is not enough time to conduct the required studies and review the information identified and generated by the Advisory Groups and the Committee. EAC does acknowledge our early participation and the participation of other groups in this stage of the process.

As such, we propose that the process be extended by a minimum of six months or until such time that meaningful cumulative effects analysis studies can be undertaken (or at least started). This will put the RA from 12-18 months to a minimum 18-24 months. However, EAC does not want to be overly prescriptive on timing. EAC recognizes that offshore wind is potentially an important way to transition to a low carbon economy. We ask though, that if additional time is needed by the RA committee to complete the Regional Assessment, they will be granted this additional time.

C. Environmental Impacts of Offshore Wind

The development of large-scale offshore wind projects in our region raises environmental concerns about their individual impacts of each project as well as the cumulative effect of these projects and the associated anthropogenic maritime activities. Environmental concerns related to offshore wind projects include potential impacts on fish, marine mammals, birds and bats, pollution risks from increased marine operations around the offshore facility and changes to marine habitats, to name a few. The environmental impact of producing wind turbines can be significant, with the prominent production impact emanating from the significant levels of energy expended in the production process and the use of critical and rare minerals and polymers. Offshore wind has a relatively high environmental impact due to its material usage (water, human and eco-toxicity of metal processing) compared to other power generation technologies.¹

The quality of project-level environmental impact assessments (EIAs) has been criticized, including in Canada, partly due to an inability to assess ecological impacts across differing spatial and temporal scales inherent in ecological data.² Thus, a life cycle analysis is required. Assessing and monitoring the impact of offshore wind farms on marine fauna is vital if we want to achieve ecologically sustainable development. Given the complexity of the marine environment, a method capable of accounting for the spatio-temporal diversity of species and their relationships with the marine environment is an essential prerequisite for investigating whether or not there has been any measurable impact. Assessment of the impact of offshore

¹ Paul Jensen, Phil Purnell & Anne Velenturf, "Highlighting the need to embed circular economy in low carbon infrastructure decommissioning: The case of offshore wind" (2020) 24 *Sustain Prod Consum* 266–280, Bridget Durning & Martin Broderick, "Development of cumulative impact assessment guidelines for offshore wind farms and evaluation of use in project making" (2019) 37:2 *Impact Assess Proj Appraisal* 124–138, Julia Koeller, Johann Koepfel & Wolfgang Peters, *Offshore wind energy research on environmental impacts*, 1st ed. ed (New York: Springer, 2006), Edward Willstedt et al, "Obligations and aspirations: A critical evaluation of offshore wind farm cumulative impact assessments" (2018) 82 *Renew Sustain Energy Rev* 2332–2345.

² Kendra Ryan, Andy Danylchuk & Adrian Jordaan, "Consideration of scales in offshore wind environmental impact assessments" (2019) 75 *Environ Impact Assess Rev* 59–66, James Miller et al., "Environmental Assessment of Offshore Wind Power Generation: Effect on a Noise Budget" (2012) 730 *Advances in experimental medicine and biology* (*Advances in Experimental Medicine and Biology*) 519–522

wind farms through comparisons of pre- and post-construction species counts at impact and control areas is not sufficient.

Importantly for this Regional Assessment, and despite an increasing evidence base from post-construction monitoring of offshore wind farms, published research on effects on species remains sparse and sometimes contradictory.³ For example, low encounter rates of seabird species during site-specific surveys and small numbers of independent samples may impede reliable statistical conclusions. Using project-level results as part of a regional assessment must be treated with caution given these constraints. A flexible and adjustable tool for presenting the full range of potential ecological consequences is required at the regional assessment level.⁴

We recommend that a stronger collection of information and scientific study be undertaken. The Regional Assessment should meaningfully engage with the scientific community on the social and environmental effects of offshore wind.

D. Cumulative Impact Assessment of Offshore Wind

Cumulative impacts, which are the accumulation of changes in environmental systems over time and across space in an additive or interactive manner, are also largely unknown for offshore wind development.⁵ Cumulative impacts can result from multiple impacts from the same project or the combined impact of multiple developments giving rise to multiple impacts. While the impacts from a single development may not be significant, the resultant effect could be significant when combined with others. The cumulative effects of multiple environmental stressors can augment environmental challenges, including climate change, biodiversity loss, air pollution, marine plastic contamination, and declining fish stocks.⁶

Meaningful cumulative effects assessments require a regional assessment. Cumulative impact assessments for individual developments or activities typically apply narrow spatio-temporal boundaries relative to project-related stressors, but assessing the likelihood, magnitude and thus significance of probable environmental change as a result of a proposed development requires the predicted effects to be placed in the context of the receiving environment more broadly. The timescales, spatial extents, and ranges of pressures that collectively affect change may not lend themselves to assessments by individual projects.

Following a standardized and rigorous assessment methodology, with a transparent and careful formulation of objectives and scenarios, is required. Because the outcome of assessments is scale and scope-dependent, it is advisable to adopt a risk-based (rather than fully deterministic)

³ Variation in the data could result from several processes, e.g., changes in population size, species' seasonal rhythms, location of breeding colonies, meteorological conditions on the day of the survey, water temperature and salinity, water transparency, food availability, fishing activity and the observer and time of the day, for example.

⁴ Julia Koeller, Johann Koeppel & Wolfgang Peters, *Offshore wind energy research on environmental impacts*, 1st ed. ed (New York: Springer, 2006).

⁵ Durning, Bridget & Martin Broderick, "Development of cumulative impact assessment guidelines for offshore wind farms and evaluation of use in project making" (2019) 37:2 *Impact assessment and project appraisal* 124–138.

⁶ Edward Willsteed et al, "Obligations and aspirations: A critical evaluation of offshore wind farm cumulative impact assessments" (2018) 82 *Renew Sustain Energy Rev* 2332–2345.

approach.⁷ Risk-based assessment, which relies on describing the probability of adverse effects, is useful when high uncertainty and lack of knowledge make predictions difficult.⁸ An effects-based assessment looks at the effects of a project, rather than its risks or precautions. A move towards an effects-based assessment approach is recommended and would require a significant shift in thinking among EIA practitioners, away from a comparatively narrow, easier-to-assess approach towards a broader approach with greater uncertainties attached. The Draft ToR should be amended to require effects-based impact assessments.

The RA is problematic because no new studies are being proposed. This is problematic because of the difficulties of data collection in large areas far offshore, the uncertainties in the project-level assessment of environmental impacts, and the challenges in assessing cumulative impacts and achieving effective monitoring without baseline data. A shared regional baseline, supplemented by the focussed, site-specific studies conducted by developers, would seem a logical development to support cumulative impact analysis practice. A compilation of existing information into a GIS will be insufficient as the data does not currently exist.

This will require a new, full cumulative impact analysis study, which is currently not the mandate of this Regional Assessment. As such, the language used in the Agreement and the ToR should require a cumulative impact study to be commissioned by the RA committee.

E. Decommissioning

Wind farms are temporary installations that require decommissioning at the end of their operational life. Decommissioning can negatively impact the environment, from disturbing the seabed to materials going to landfills.⁹ The effect of offshore wind farm decommissioning on physical and oceanographic processes might include changes to seabed morphology, sediment movements, wave and current action, and water quality. New marine habitats can be established around the structures, which are then destroyed upon removal.¹⁰ Similar to benthic species and fish, migratory birds may be affected by the removal of structures and associated foraging areas, with a loss of prey species; these effects might be minimized or avoided by retaining structures of importance to the species in question. The removal of substructures, including different foundation types, cables, scour protection, and cable protection, has the potential to cause

⁷ Macrander, A Michael et al., "Convergence of emerging technologies: Development of a risk-based paradigm for marine mammal monitoring for offshore wind energy operations" (2022) 18:4 Integrated environmental assessment and management 939–949.

⁸ Jean-Marc Brignon et al, "A risk-based method to prioritize cumulative impacts assessment on marine biodiversity and research policy for offshore wind farms in France" (2022) 128 Environ Sci Policy 264–276.

⁹ Rebecca Hall, Elsa João & Charles Knapp, "Environmental impacts of decommissioning: Onshore versus offshore wind farms" (2020) 83 Environmental impact assessment review 106404–18.

¹⁰ Rebecca Hall, E. Topham E & E. João, "Environmental Impact Assessment for the decommissioning of offshore wind farms" (2022) 165 Renew Sustain Energy Rev 112580. Malte Busch & Stefan Garthe, "Approaching population thresholds in presence of uncertainty: Assessing displacement of seabirds from offshore wind farms" (2016) 56 Environ Impact Assess Rev 31–42, Bridget Durning & Martin Broderick, "Development of cumulative impact assessment guidelines for offshore wind farms and evaluation of use in project making" (2019) 37:2 Impact Assess Proj Appraisal 124–138, Lena Bergström et al, "Effects of offshore wind farms on marine wildlife-a generalized impact assessment" (2014) 9:3 Environ Res Lett 34012.

changes in the movement of sediments, mobilize contaminants, fluidize sediments which may travel and subsequently be deposited potentially smothering habitats, and increase turbidity. There is evidence that a disturbed environment may not fully recover to its pre-disturbed state, even where active recovery is implemented. Therefore, it is debatable whether the requirement to remove structures will restore the environment to its pre-construction state.

The impact of materials generated due to decommissioning activities also needs to be considered. For instance, reusing or recycling materials is especially important when composite material is used, often in the nacelle and cables. But reusing and recycling is not the full story. When planning to decommission, a Zero Waste Hierarchy should be considered. The Zero Waste Hierarchy is a set of priorities for the efficient use of resources.¹¹ Most of the material used to manufacture a wind turbine is recyclable — 85-90% by weight (metal, fibreglass, and resin components). The Offshore Wind RA ToR should set guidance for decommissioning analysis of offshore wind in NS and NL.

The lack of current scientific evidence base for offshore Nova Scotia and Newfoundland is problematic. A good environmental baseline is required to predict effects and make informed choices over decommissioning activities, not just at an individual species level but also encompassing ecosystem effects. The current wording of the ToR minimizes collection of data.

Like the argument we made concerning the lack of a cumulative effects analysis, the lack of a decommissioning study is problematic. We recommend that decommissioning studies be undertaken as part of the ToR.

F. Sustainability Issues to Consider in the Regional Assessment

Other approaches should also be considered and added to the Agreement and the Terms of Reference.¹² The current drafting language is sustainability, while potentially encouraging, does not go far enough to protect the environment. There is a current focus on sustainability only in the context of sustainable economic development. While economic development is one element, it is not the only element. Instead, we recommend three additional criteria that the Draft Terms of Reference and the Draft Agreements include in the regional assessment. These criteria include a circular economy, climate change, and a focus on an ecosystem approach.

a. Circular Economy

By definition of being components of a low carbon economy, materials used in offshore wind farms must be extracted, deployed, managed, reintegrated into society at their end-of-life in the most socially, environmentally and materially efficient manner possible.¹³ As such, the circular economy should be made a priority in the regional assessment. Offshore wind farms should be

¹¹ Katie Smyth et al, "Renewables-to-reefs? – Decommissioning options for the offshore wind power industry" (2015) 90:1–2 Mar Pollut Bull 247–258.

¹² Celia Le Lievre, "Sustainably reconciling offshore renewable energy with Natura 2000 sites: An interim adaptive management framework" (2019) 129 Energy Policy 491–501.

¹³ A. Buchmayr et al., "Exploring the global and local social sustainability of wind energy technologies: An application of a social impact assessment framework" (2022) 312 Applied energy 118808

designed for durability, reparability, disassembly, and recyclability (designed for circularity) to extend component lifetime, repair, reuse, refurbishment, and remanufacturing. This should be completed before recycling, energy recovery, and controlled storage. Offshore wind procurement should prioritize projects designed with circular economy outcomes and “second-life” potential in mind for associated infrastructure.

An entire system approach should be adopted to access the benefits of a circular economy. This will require the RA process to expand the minimum number of stakeholders to be engaged, including organizations with knowledge of decommissioning logistics, project management, and waste management solutions and costs. It will also require the RA committee to consider life cycle thinking, which is key for assessing sustainability as it goes beyond immediately observed impacts and aims at incorporating all the associated impacts along the life cycle stages into the decision-making process. The ToR can be amended to ensure that the circular economy is considered. Further social life cycle analysis should also be added to the ToR.

One suggestion is to add language on the common interest of humankind. The wording in the ToR should be expanded upon and compared to the "common heritage of mankind" used in the *United Nations Convention on the Law of the Sea*. Good environmental status should be a defined term and included in the language of sustainability.

b. Climate Change

Considerations for the effects of climate change on wind energy availability must also be considered. The availability and reliability of wind power depend on current and future climatic conditions, which need to be viewed in light of increasing greenhouse gas emissions in the atmosphere. Coarse grid wind projections in climate models are not suitable for impact assessment at regional scales.¹⁴ The impact of climate change can be felt differently at global and regional levels; thus, station-specific studies are needed.

c. The Ecosystem Approach

Evaluating the impacts of offshore wind on ecosystems requires a mapping process to allow assessments of biophysical metrics to be considered.¹⁵ The Ecosystem Approach considers four main categories including provisioning, regulating, cultural, and support.¹⁶

The ToR should note that the Ecosystem Approach will be considered part of the RA. This will require an update to the definitions section.

The robustness and comparability of this Regional Assessment would be enhanced by consistency in the assumptions that link ecological and cultural change to ecosystem impacts.

¹⁴ Sumeet Kulkarni, M Deo & Subimal Ghosh, “Framework for assessment of climate change impact on offshore wind energy” (2018) 25:1 Meteorol Appl 94–104.

¹⁵ Katie Smyth et al., "Renewables-to-reefs? – Decommissioning options for the offshore wind power industry" (2015) 90:1–2 Marine pollution bulletin 247–258.

¹⁶ Tara Hooper, Nicola Beaumont & Caroline Hattam, “The implications of energy systems for ecosystem services: A detailed case study of offshore wind” (2017) 70 Renew Sustain Energy Rev 230–241.

The Regional Assessment should develop formalized principles (based on consensus between a large group of recognized experts) to facilitate linking the outcomes of environmental changes from offshore wind development activities.

The foundation for this framework exists in the Ecosystem Approach, which connects a selection of ecosystem services with a series of ecological principles that describe the key elements of the underlying ecosystem functioning.¹⁷ As such, the Advisory Groups should be more than participants and information sharers. Rather, the Advisory Groups must be seen as partners in the development of environmental requirements in a regional assessment. The ToR and the Agreement need to be amended to ensure that the Advisory Groups functions are mapped out and inclusive of the key role that it should function.

We recommend that the Draft ToR and the Draft Agreements be amended to include a holistic sustainability approach, with an emphasis on the circular economy, using an Ecosystem Approach. As such, references to alternative measures considered only if economically feasible

G. Data Requirements

Offshore wind impact assessments require extensive data from various sources, including published studies, numerical models, field studies, expert judgment, and traditional knowledge. Collecting these data may be resource-intensive and challenging, especially when conducting field studies in remote locations and inhospitable seasons. However, fewer than ten offshore wind farms have been decommissioned worldwide as of 2021; thus, there is limited standardization or protocols to follow. Thus, a simple review of current studies is insufficient.

Further, what studies have been conducted have flaws.¹⁸ Most research on the environmental and cultural implications of offshore wind farms has focused on marine mammals, birds, public attitudes, benthic communities, and fish populations, with some consideration of abiotic factors and non-native species. The vast majority (95%) of the assessments occurred in the northeast Atlantic, with over half originating from the United Kingdom and Denmark alone. The spatial scale of impacts considered by most studies is limited: two-thirds assessed site-level impacts, with a further 18% evaluating local changes (i.e., extending up to tens of kilometres beyond the boundary of the site). Few studies evaluate impacts at a national level. Regarding life cycle stages, two-thirds of the publications considered operation only. Only a few studies investigate construction and operation. Additionally, impacts were measured in biophysical metrics and not in terms of societal implications. Evaluation of corresponding direct ecosystem indicators, the effects on catch potential (and hence food supplies), the public's response to any impacts on charismatic species, and rates of waste/toxin filtration, sequestration, storage or accumulation

¹⁷ Tara Hooper, Nicola Beaumont & Caroline Hattam, "The implications of energy systems for ecosystem services: A detailed case study of offshore wind" (2017) 70 *Renew Sustain Energy Rev* 230–241.

¹⁸ A. Abramic, V Cordero-Penin & R Haroun, "Environmental impact assessment framework for offshore wind energy developments based on the marine Good Environmental Status" (2022) 97 *Environmental impact assessment review*.

were not undertaken. In other words, there are too many gaps in the literature to serve as the sole basis for the Regional Assessment Report. Innovative studies are required.

A follow up program is required. The ToR must clarify that additional terms of reference for follow up programs will be completed. This work should incorporate best-available science and other sources of knowledge from communities and Indigenous nations. Canada, Nova Scotia, and Newfoundland and Labrador have the opportunity, through this RA, to emerge as a sustainability leader in offshore wind development. New scientific information that changes the Committee's recommendations and findings with respect to adverse effects and risks in the study area, particularly sensitive ocean areas and protected areas, should be immediately flagged for consideration. As such, additional language for the follow up program has been provided.

H. Licensing and Financial Issues for a Regional Assessment

Licensing is currently the primary focus on the Regional Assessment. While we agree that a licensing system that incorporates sustainable finance principles is important, it should not be the primary focus of the assessment. The licensing process should incorporate environmental externalities into the licensing assessment process. Other schemes include offtake agreements to sell the electricity. Key recommendations include mobilizing revenue streams through carbon pricing and other measures, including green bonds, and devising revenue recycling schemes to achieve a just transition.¹⁹ Revenues can support strategic investments to build new infrastructure and reallocate and recycle budgets to benefit education, health care and other sectors. Carbon taxation revenues can foster new employment creation and limit the financial burdens of carbon pricing on low-income families and small businesses. Sustainable finance initiatives and programs can enlarge the fiscal space and foster sector diversification to finance the energy transition process in the medium and long term. The ToR and Agreement could be amended to ensure that green pricing mechanisms are mandated considerations in the RA process.

Conclusion

The RA committee will need to be explicit about how risk-based decisions are made, with criteria made publicly available. It can also provide environmental managers with information about the design of optimal monitoring procedures at a given site.²⁰ This will lead to transparent decision-making for developers in the offshore wind industry and policymakers who have to balance the need to reach targets for renewable energy at sea against the need to protect the environment.²¹

More considerations of social requirements are necessary for the ToR. The focus on wellbeing, as opposed to economic, social and environmental impacts, emphasizes a holistic approach to

¹⁹ IRENA, *Future of wind: Deployment, investment, technology, grid integration and socio-economic aspects* (A Global Energy Transformation paper), International Renewable Energy Agency, Abu Dhabi 2019.

²⁰ Buchmayr et al, *supra*.

²¹ Blanca Pérez Lapeña et al, "Environmental impact assessment of offshore wind farms: a simulation-based approach: Impact assessment and offshore wind farms" (2010) 47:5 J Appl Ecol 1110–1118.

impact evaluation. Sectoral divisions are rejected, and the multiplicity of factors impacting the individual and society and how they are interconnected is recognized.²² Incorporating something like the Canadian Index of Wellbeing into the ToR could ensure that licensing and regulatory considerations move beyond financial and manufactured capital.

Below is specific drafting language we recommend, with our suggested changes highlighted in yellow:

DRAFT AGREEMENT TO CONDUCT A REGIONAL ASSESSMENT OF OFFSHORE WIND DEVELOPMENT IN NOVA SCOTIA/NEWFOUNDLAND AND LABRADOR

Preamble

ADD: Whereas the Governments of Canada and Nova Scotia/Newfoundland and Labrador acknowledge that there are potential negative impacts, including cumulative impacts of wind development offshore,

ADD: Whereas the Governments of Canada, Nova Scotia/Newfoundland and Labrador strive to be global leaders in sustainability and the Circular Economy.

Definitions

ADD: "**Ecosystem Approach**" means moving beyond evaluating impacts only in terms of harm caused by human activity. It considers the integrated socio-ecological system holistically, potentially providing an enhanced framework for impact assessment.

"**Offshore wind development activities**" means the physical activities associated with the construction, including expansion, operation and decommissioning of an offshore wind generation facility and the associated offshore components and activities that support it, are specific to that facility, and are proposed as part of that offshore facility for the purposes of its development and impact assessment. These physical activities include the transmission of electricity to shore and potential offshore production of activities from this electricity.

1.0 Regional Assessment Goal, Objectives and Scope

1.6 Should the Regional Assessment Committee determine that an area is particularly sensitive to development, they shall recommend that this area be excluded from any offshore wind development activities.

2.0 Establishment, Purpose and Composition of the Committee

²² Caroline Hattam, Tara Hooper & Eleni Papathanasopoulou, "A well-being framework for impact evaluation: The case of the UK offshore wind industry" (2017) 78 Mar Policy 122–131.

2.1 A Committee will be established pursuant to subsection 93(1) of the IAA. The Committee will conduct the Regional Assessment in accordance with the IAA, this Agreement, and its Terms of Reference contained in Appendix A of this Agreement.

ADD: 2.1.1 The public will be invited to provide input on the composition of the RA committee.

4.0 Advisory Groups

4.1 Advisory groups will be established by the Committee to provide it with information and advice during the conduct of the Regional Assessment, as follows:

- 1) Indigenous Knowledge and Perspectives Advisory Group
- 2) Scientific and Technical Information and Analysis Advisory Group
- 3) Fisheries Advisory Group

4. Other Groups as Required or the Integration of the Three Above Groups

6.0 Report and Records

6.2 The Committee will complete its work and submit its Report (all components) to the Ministers within 24 [DELETE – 18] months of the public announcement of the appointment of its members. Further information on the timing of particular aspects of the Committee's work and associated reporting on these is provided in Appendix A.

6.3 Upon receiving the Committee's Report, the Ministers will make it available to the public and Indigenous groups and will advise the public and Indigenous groups that it is available on the Canadian Impact Assessment Registry Internet site.

6.3.1. This Draft public report shall be subject to a 45-day review period in which the public will be invited to provide comments and feedback.

REGIONAL ASSESSMENT OF OFFSHORE WIND DEVELOPMENT IN NEWFOUNDLAND AND LABRADOR AND NOVA SCOTIA

APPENDIX A Draft Terms of Reference

A1: MANDATE AND ACTIVITIES OF THE COMMITTEE

A1.1 The Committee will conduct a Regional Assessment in accordance with the IAA, the Agreement, the Terms of Reference, using an Ecosystem Approach and the Precautionary Approach.

Committee Activities and Requirements

A1.6 In conducting the Regional Assessment, the Committee will:

Indigenous, Public, and Stakeholder Participation

c) Develop and implement a scientific, technical, environmental, Public, Fisheries and Stakeholder Participation Plan and an Indigenous Participation Plan, with advice from the advisory groups referred to in Section 4.0 of the Agreement and described below, if these advisory groups are in place at that time. The Committee will further collaborate with

Indigenous peoples on the development and implementation of the Indigenous Participation Plan. Once completed these Participation Plans will be posted to the Registry and updated regularly by the Committee, with advice from the advisory groups, to ensure that participants are aware of planned participation approaches and upcoming activities.

Advisory Groups

e) These advisory groups will be comprised of individuals or organizations from within or outside of government, including Indigenous peoples, who have knowledge or experience deemed relevant to the Regional Assessment by the Committee. They will be identified by the Committee, including by way of a public call for interest through which interested persons will provide information on their relevant interests, qualifications and affiliations to the Committee. The composition and activities of these advisory groups may vary from time to time in relation to the needs, work or expertise required and requested by the Committee during the course of the Regional Assessment.

f) The role of these advisory groups will include assisting the Committee in identifying, accessing, analyzing and using information and knowledge that is relevant to the Regional Assessment, as well as in identifying and evaluating information and knowledge gaps and recommending approaches to address any knowledge gaps.

g. These advisory groups will identify, provide and support the use and weaving together of Indigenous knowledge and scientific and technical information in the conduct of the Regional Assessment, as appropriate.

ADD g.1 – The Advisory Groups will be formed via a separate Terms of Reference which will outline the formation, role, meeting requirements, literature reviews and other duties and responsibilities of the Advisory Groups

h) Each of the advisory groups described below will provide information and advice to the Committee on the topics outlined below, as required, requested **or received**:

- a. Environmental, health, social and economic conditions in the Study Area;
- b. Future offshore wind development activities in the Study Area, including their:
 - i. Purpose;
 - ii. Associated physical activities;
 - iii. Key areas of interest for future offshore wind development activities in the Study Area (to help focus the Committee’s work on locations which are most likely to see future development interest, based on technical and economic factors);
 - iv. Regulatory requirements;
 - v. Potential positive and adverse effects, including cumulative effects;
 - vi. Mitigation measures and follow-up, and other approaches for avoiding or reducing potential adverse effects and creating and maximizing potential positive effects;
 - ADD: vii. Decommissioning;**

and other topics relevant to the Regional Assessment, as requested by the Committee **and/or suggested by the Advisory Group.**

Advisory Group: Scientific and Technical Information and Analysis

n) This Advisory Group will assist the Committee in gathering and analyzing relevant data and information and in conducting scientific and technical analysis and will provide expertise in relation to the Regional Assessment. This will include sharing information and expertise on some or all of the topics listed above [DELETE, as requested by the Committee during the conduct of the Regional Assessment].

ADD: This group will meet regularly and provide updated analysis on an ongoing basis.

ADD: The Advisory Groups may develop new studies to overcome deficiencies in data and information on the marine environment.

Advisory Group: Fisheries Information and Analysis

o) This Advisory Group will seek knowledge, information and advice from fishing industry representatives, fishery advisory committees, and fishers regarding current and potential fishing activity, as well as potential interactions between fishing activity and offshore wind development activities in the Study Area and approaches for avoiding or minimizing adverse effects and creating or maximizing opportunities for positive effects.

Information and Analysis

Description of Existing Conditions

p) Identify, compile, review and present information on existing environmental, health, social and economic conditions within the Study Area.

As noted in Section 3.5 of the Agreement, this will include information contained in any past or ongoing impact or environmental assessments (including strategic environmental assessments) and information provided by government, industry, academia, Indigenous peoples or the public.

Identification of Information and Knowledge Gaps

q) Identify and evaluate information and knowledge gaps, with a focus on any associated gaps with relevance to, and implications for, future planning, licencing and impact assessments for offshore wind development activities in the Study Area.

ADD Q.1 – Conduct a cumulative effects study and analysis or any other scientific or technical studies necessary to fulfill the mandate of the committee.

Identification of Information and Knowledge Gaps

q) Identify and evaluate information and knowledge gaps, with a focus on any associated gaps with relevance to, and implications for, environmental impacts, cumulative impacts, marine spatial planning, future planning, licencing and impact assessments for offshore wind development activities in the Study Area.

Add q.1 Conduct the necessary studies on environmental impacts, cumulative impacts and decommissioning of offshore wind farms.

r) Make recommendations to address such information and knowledge gaps as appropriate.

r.1 – Advice on any marine protected areas and areas that should be off limits to wind development activities

Analysis of Effects, Mitigation and Follow-up

s) Identify and consider the potential positive and adverse effects of future offshore wind development activities in the Study Area.

This will include consideration of, but not be limited to, potential malfunctions or accidents; any cumulative effects that may result from the effects of offshore wind development activities in the Study Area in combination with other physical activities that have been or will be carried out; and the result of any interaction between the effects referenced above.

t) In identifying and considering potential positive and adverse effects, the Committee will focus on the following environmental, health, social and economic components:

- i. Marine Fish and Fish Habitat
- ii. Marine and Migratory Birds
- iii. Marine Mammals and Sea Turtles
- iv. Protected and Special Areas
- v. Indigenous Communities, Activities and Rights
- vi. Fisheries and Other Ocean Uses
- vii. Visual Aesthetics / Viewscales
- viii. Physical and Cultural Heritage (including structures, sites or things of historical, archaeological, paleontological or architectural significance)
- ix. Communities and Economy

v) Identify and consider technically and economically feasible mitigation measures and other approaches for eliminating, reducing, controlling or offsetting potential adverse effects and creating and maximizing potential positive effects resulting from offshore wind development activities in the Study Area.

[DELETE TECHNICALLY AND ECONOMICALLY FEASIBLE] – Must identify all mitigation measures. Please leave it to a project EA to determine what is feasible.

w) Identify and consider existing legislation, regulations, guidelines and standards, and associated approvals or authorizations, in domestic and international law, that are relevant to avoiding or reducing their adverse effects.

Other Considerations and Requirements

x) Identify and consider the extent to which offshore wind development activities in the Study Area and their potential effects, would: a) contribute to sustainability and a circular economy; and b) hinder or contribute to the federal and provincial governments' ability to meet their environmental obligations and commitments in respect of climate change, and make recommendations on the manner in which future licencing decisions and/or impact assessments should consider and address these factors.

Administration and Reporting

dd) Complete a draft Report in accordance with these Terms of Reference and make it available for an Indigenous and public review and comment period, prior to the submission of the final Report to the Ministers. The Committee will advise the public that the draft Report is available on the Canadian Impact Assessment Registry Internet site.

Dd needs to be better aligned with the provision in the Agreement, see above.

A2: COMMITTEE REPORT

A2.1 The Committee will provide the Ministers with a Report, as outlined in the Agreement, which will describe the conduct, and document the results, of the Regional Assessment including the information outlined below.

CLARIFY: IS the report the Regional Assessment and how does this link with the GIS?

A2.3 Goal: To provide information, knowledge and analysis regarding future offshore wind development activities in the Study Area and their potential effects, in order to inform and improve future planning, licencing and impact assessment processes for these activities in a way that helps protect the environment and health, social and economic conditions while also creating opportunities for sustainable economic development.

A2.3.1 Goal2 – To ensure that the Regional Assessment does not allow for the bypassing of project level EAs.

Objective A: Providing information, knowledge and analysis related to environmental, health, social and economic conditions and the potential effects of offshore wind development activities in the Study Area, with consideration and weaving together of both Indigenous knowledge and scientific information.

Objective B: Providing an understanding of the regional context that can be used in considering and evaluating the effects of future offshore wind development activities, to inform future planning and licencing processes and impact assessments, including the management of cumulative effects.

Objective C: Identifying and recommending mitigation measures and other approaches for addressing potential positive and adverse effects (both project-specific and cumulative) as part of future decision-making for offshore wind development activities in a manner that fosters sustainability **and promotes a circular economy**.

Objective D: Describing how the findings or recommendations of the Regional Assessment could be used to inform future planning and licencing processes for these activities and to enhance the effectiveness and efficiency of their impact assessments.

a) Recommendations on how to consider, implement or otherwise address the Regional Assessment findings in a clear, effective and efficient manner in future licencing and in impact assessments for future offshore wind development activities in the Study Area, and/or through other initiatives by governments or other parties.

Initiatives may include mobilizing revenue streams through carbon pricing and other measures, including green bonds, and devising revenue recycling schemes to achieve a just transition.

A2.4 The Committee will also include the following in its Report:

c) An identification and analysis of any change to offshore wind development activities in the Study Area that may be caused by the environment.

d) A description of the public, scientific, technical, and Indigenous participation and advisory activities undertaken by the Committee during the conduct of the Regional Assessment, including a summary of any comments received and of where and how these were considered in the Regional Assessment. Reasons for not accepting certain comments will also be provided in the Report.

A3 Schedule

As noted above, the Committee may choose to present its description of current environmental, health, social and economic conditions in an electronic format, such as through a geographic information system (GIS) application. While this information is part of Component 1 (and any such GIS is therefore to be submitted with 12 months, it is recognized that the system may continue to be refined during the remainder of the Regional Assessment process, and that an updated version may be included in the Committee's final deliverable (at 18 months). Any procurement of a GIS system will be conducted in a transparent manner, with a request for proposal being made public to ensure that all options for systems have been included.

A3.2 The Committee will submit its final Report (all components outlined in the above table, including final GIS application as applicable) to the Ministers within 24 [DELETE – 18] months of the public announcement of the appointment of its members by the federal Minister of Environment or after a full cumulative effects analysis is completed. Should these studies not be completed within the 24 [DELETE – 18] month period, the RA committee must ask for, and the government must grant, an extension for the Regional Assessment.

A4: CLARIFICATION OF OR AMENDMENT TO TERMS OF REFERENCE

ADD: A.4.3 The RA represents the first step/stage in the generations of offshore wind activities. A follow up program will be designed to further the results of the RA and will continue with research not completed during the RA process.