September 22, 2023

Committee for the Regional Assessment of Offshore Wind Development in Newfoundland and Labrador

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RE: Proposed Focus Area for the Regional Assessment of Offshore Wind Development in Newfoundland and Labrador

About Marine Renewables Canada

Marine Renewables Canada ("MRC") is a national association with a mandate to support the advancement of offshore wind, tidal, wave, and river current energy. Representing over 170 businesses and organizations across the country, we are active in catalyzing opportunities for how marine renewable energy can contribute to achieving net-zero goals through the production of clean electricity and green fuels such as hydrogen, as well as displacement of diesel in remote communities and marine industries.

MRC has been working to promote the responsible, efficient, and inclusive development of Canada's offshore wind resource. Newfoundland and Labrador ("**NL**") is well-positioned for the development of both traditional offshore wind and emerging approaches like offshore wind powered oil and gas platforms. The Committee for the Regional Assessment of Offshore Wind Development in Newfoundland and Labrador (the "**Committee**") has a vital role to play in laying the parameters for offshore wind development in NL, and MRC hopes to help in informing and supporting the Committee's important work.

Recommendations regarding the Proposed Focus Area

Offshore wind is a promising area of marine renewable energy for Canada, with a proven track record of development and reliable energy output across the globe. It is a rapidly growing market expected to reach $1 trillion in capex spend by 2031[1] and a rapidly evolving industry, with ever larger turbines being deployed, floating offshore wind becoming increasingly popular, direct wind-to-hydrogen, and offshore wind powered oil and gas platforms being some of the latest innovative areas of development. NL presents unique opportunities in both traditional and emerging areas of offshore wind technology and MRC wishes to encourage the Committee to consider their task in this context.

After consultation with its members, MRC offers the following feedback to the Committee regarding a few key issues related to the potential reduction of the Regional Assessment of Offshore Wind Development in Newfoundland and Labrador (the "**NL RA**") Study Area. **Ultimately, MRC recommends that the study area scope is not narrowed to a decreased area size, with the following rationale in mind:**

[1] International Energy Agency, World Energy Outlook 2019, https://www.iea.org/reports/offshore-wind-outlook-2019.

- **Offshore Wind in harsh environments.** Preliminary offshore wind studies of NL[2] and the development of offshore wind globally suggest that the Committee's analysis that offshore wind technology is "generally untested" under challenging climate and geographical circumstances (e.g. ice, water depth, and harsh maritime environmental factors) is overly cautious.[3]

  Offshore wind farms, like offshore oil and gas platforms and other marine infrastructure are constructed and must be able to operate under the harshest ocean conditions. The vast majority of installed offshore wind globally is currently in Europe, with much of that deployed in the North Sea – an extremely harsh environment. The Baltic Sea currently has 2.8 GW of installed offshore wind capacity, with a mutual target set by several countries to reach 19.6 GW by 2030.[4] Given the conditions, offshore wind farms in the Baltic Sea must be built to withstand ice and harsh frozen sea conditions.[5] In fact, one offshore wind farm off the coast of Finland built in frozen sea conditions in 2017 continues to operate and has plans for expansion.[6]

  NL is not be the first to deal with offshore wind construction in harsh and icy conditions and can benefit from the experience of other jurisdictions, as well as from its extensive experience in the offshore oil and gas sector, to inform responsible development of this important resource.

- **Offshore wind development depths.** Floating offshore wind technologies are suited to water depths greater than 50 metres to 1000+ metres and the technology continues to evolve to help unlock deep water sites. In fact, 80% of the world's offshore wind potential is in depths of 60+ metres where floating technologies would be required[7]. Because of this, there is ongoing investment and innovation in floating offshore wind technologies, which could help ensure that suitable technology is deployed in NL's offshore in the future.

- **Electrification of oil and gas platforms.** Offshore wind presents an important opportunity to electrify oil and gas platforms in the Jean D'Arc Basin, an area of interest that has been identified by industry and MRC members.[8] The potential to reduce emissions of the offshore oil and gas sector is an important part of the economic, environmental and social value proposition that offshore wind presents to NL, and one that should not be inadvertently discounted by a

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[2] WESI, Report 2022, https://energyresearchinnovation.ca/wp-content/uploads/2022/10/E063_WESI-Report-2022-OCT_13-POST.pdf.

[3] The Proposed Focus Area for the Regional Assessment of Offshore Wind Development in Newfoundland and Labrador, 2023,https://www.iaac-aeic.gc.ca/050/documents/p84343/152815E.pdf.

[4] Wind Europe, Baltic Sea Countries sign declaration for more cooperation in offshore wind, 2022, https://windeurope.org/newsroom/press-releases/baltic-sea-countries-sign-declaration-for-more-cooperation-in-offshore-wind/#:~:text=Baltic%20Sea%20Countries%20sign%20declaration%20for%20more%20cooperation%20in%20offshore%20wind,-%C2%A9%20Danish%20Ministry&text=The%20Baltic%20Sea%20has%20enormous,2.8%20GW%20of%20installed%20capacity.

[5] Aker Arctic, Offshore Wind Farms tailored for Winter, 2023, https://akerarctic.fi/en/arctic-passion/offshore-wind-farms-tailored-for-winter/#:~:text=Solid%20foundations%20to%20withstand%20ice&text=Almost%20ten%20years%20ago%2C%20Aker,built%20in%20a%20freezing%20sea.

[6] Hyötytuuli, Tahkoluoto offshore wind farm, https://hyotytuuli.fi/en/wind-farms/tahkoluoto-offshore-wind-farm/.

[7] CanmetENERGY. 2021 Offshore Wind Technology Scan, https://ftp.maps.canada.ca/pub/nrcan_rncan/publications/STPublications_PublicationsST/329/329349/gid_329349.pdf.

[8] For an example of offshore wind's potential to contribute to electrifying offshore oil and gas, see the following: Euronews. "Norway: World's biggest floating wind farm will power oil and gas platforms."(2023); Equinor, "Hywind Tampen".

reduction of the study area. Further work will be required beyond the NL RA to determine this potential, and therefore it remains important that the NL RA encompass this broader geographical area.

Given the tremendous effort of this first offshore wind Regional Assessment for NL, it is unknown when and if another RA would take place to scope areas not included in this initial study. Therefore, we encourage the committee to avoid limiting that area now, particularly when offshore wind technologies are constantly evolving to meet the needs of the market and tap into new resource potential. MRC hopes that this submission will be of assistance to the Committee. I would be happy to provide more detailed information on any of the recommendations. Thank you for your consideration of this submission.

Sincerely,

Elisa Obermann, Executive Director