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## **Finance Committee Meeting Agenda**

**Tuesday, October 3, 2023 – 9:00 a.m.**

**MODL Council Chambers – 10 Allée Champlain Drive, Cookville**

- 1. Call to Order**
  - 1.1 Mi'kma'ki Territorial Acknowledgement
- 2. Announcements, Acknowledgements, Recognition**
- 3. Public Input (15 Minutes)**
- 4. Changes/Approval of Agenda** (as circulated)
- 5. Approval of Minutes** – September 5, 2023 (as circulated)
- 6. Business Arising from Minutes**
- 7. Presentations/Scheduled Times - Nil**
- 8. Consideration of Correspondence - Nil**
- 9. Recommendations from Council - Nil**
- 10. Staff Reports**
  - 10.1 **Planning & Development Department**
    - 10.1.1 Capacity Building for the Sustainable and Inclusive Development of Nova Scotia's Offshore Wind Resource – Christie Chaplin ..... 9:15 a.m. 1-5
- 11. Added Items**
- 12. In Camera**
  - 12.1 Potential Litigation under Section 2(2)(f) of the MGA
- 13. Adjournment**



## Capacity Building for the Sustainable and Inclusive Development of Nova Scotia's Offshore Wind Resource

**Follow up presentation to MODL**

**September 19, 2023**

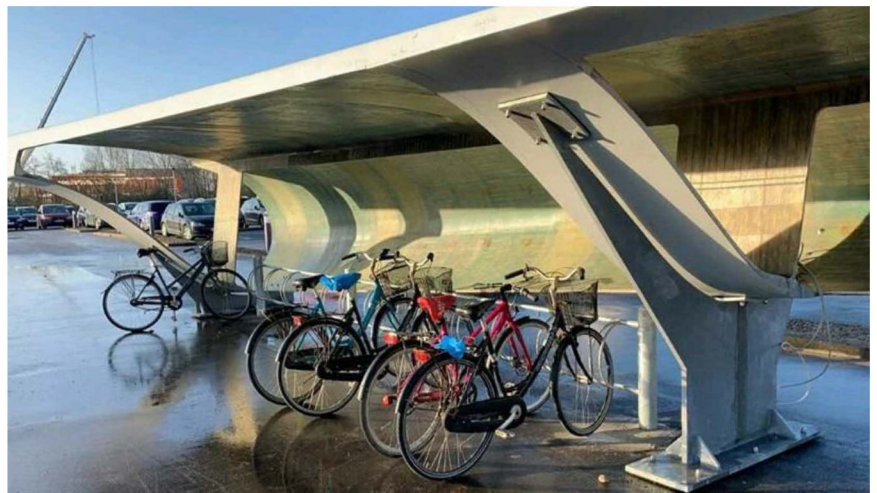
### End of useful life/ waste management



Most wind turbine materials are readily recycled or reused. These include:

- Steel
- Copper wire
- Electronics
- Gearing can be recycled or reused.

Blades have presented challenges, but these are being overcome with material innovations.



Source: Designboom Retrieved from:  
<https://www.designboom.com/design/denmark-repurposing-wind-turbine-blades-bike-garages-09-27-2021/>



# Revenue models

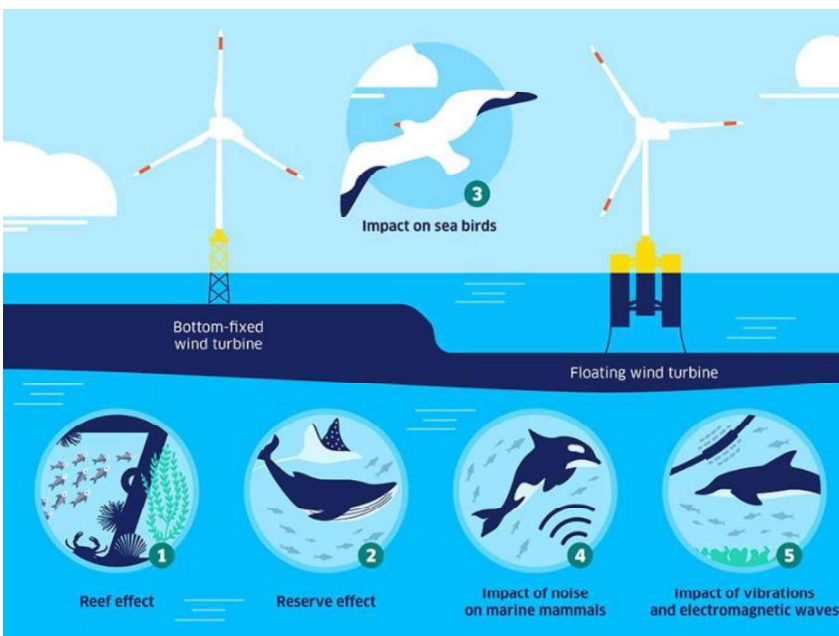
- Leases arrangements involve payments to governments by developers based on specified periods of time
- Royalty payments are based on productivity of an Offshore wind installation
- Equity (ownership) positions are being taken by some governments
- Community benefit agreements are provided in exchange for support of a project
- Community benefit rules are a condition of development in some locations



Source: European Conservation Agriculture Federation  
Retrieved from: <https://ecaf.org/economic-benefits/>



# Offshore wind impact on biodiversity



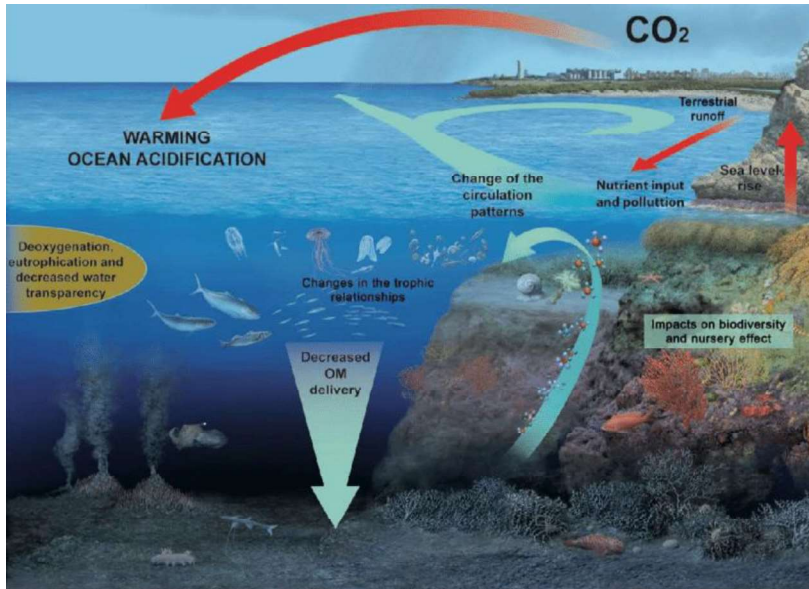
Source: Engie  
Retrieved from: <https://www.engie.com/en/news/offshore-wind-biodiversity>

Aspects of concern include:

- Underwater noise
- Bird/ Bat Interactions
- Disturbances from foundations, anchors, cables,
- Reef affect caused by new structures
- Vessel collisions
- Effects from Electromagnetic Fields



# Emissions impacts on oceans



Heat and chemicals from greenhouse gas emissions (especially carbon dioxide) are absorbed most of all by the ocean.

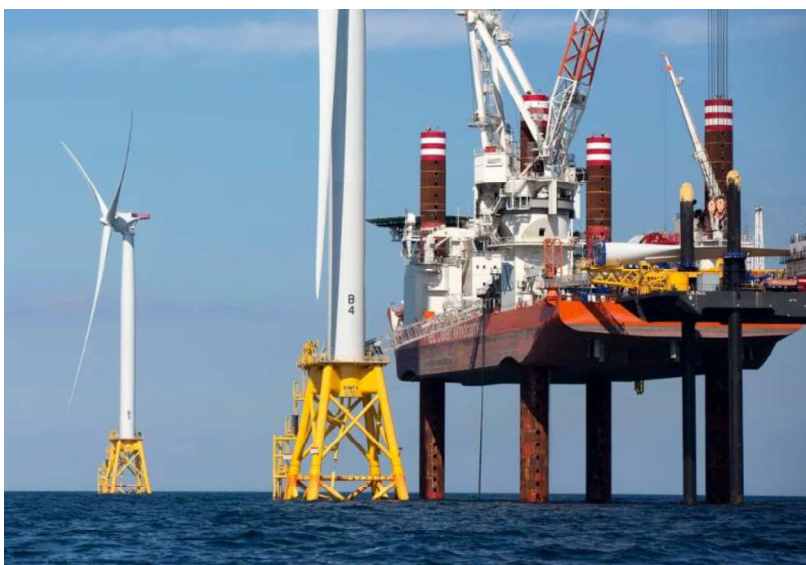
Absorbed heat leads to ice-melting, sea-level rise and marine heatwaves.

Absorbed carbon causes ocean acidification which harms marine life, most immediately shells and skeletons



Illustration retrieved from: [https://www.researchgate.net/publication/347522256\\_Climate\\_and\\_Environmental\\_Change\\_in\\_the\\_Mediterranean\\_Basin\\_-\\_Current\\_Situation\\_and\\_Risks\\_for\\_the\\_Future\\_First\\_Mediterranean\\_Assessment\\_Report\\_MAR1\\_Summary\\_for\\_Policy\\_Makers](https://www.researchgate.net/publication/347522256_Climate_and_Environmental_Change_in_the_Mediterranean_Basin_-_Current_Situation_and_Risks_for_the_Future_First_Mediterranean_Assessment_Report_MAR1_Summary_for_Policy_Makers)

# Some best practices in construction



- Avoid reproductive periods for species that use the area
- Utilize a “soft start” technique for pile driving
- Use pingers to scare away marine mammals and fish during construction
- Avoid existing habitats or in migration flyways of vulnerable bird species
- Bubble curtains can reduce sound intensity
- Protect flyways



Source: NPR Retrieved from: <https://www.npr.org/2021/05/11/995852356/biden-administration-approves-first-major-offshore-wind-energy-project>

# Can existing technology work here?



Image source: Elements magazine by Evonik  
Retrieved from: <https://elements.evonik.com/research-and-innovation/the-offshore-era/>

Turbines can incorporate systems for:

- Braking
- Feathering (pointing the blades into the wind to reduce their surface area), and
- Furling (turning the blades perpendicular to the wind).
- And on site back up power to ensure the above are functional during a grid outage



## Regional Assessment Terms of Reference:



Source: Lunenburg Whale and Seabird Tours

The Committee must consider impacts/effects on:

- Air Quality and Greenhouse Gases (GHGs)
- Marine Fish and Fish Habitat (including species at risk)
- Avifauna (including birds, bats, and associated species at risk)
- Marine Mammals and Sea Turtles (including species at risk)
- Protected and Special Areas (established and proposed)
- Indigenous Communities, Activities, Interests, and Rights
- Fisheries and Other Ocean Uses
- Visual Aesthetics / Viewscapes and Acoustic Environments
- Physical and Cultural Heritage
- Health
- Communities
- Economy

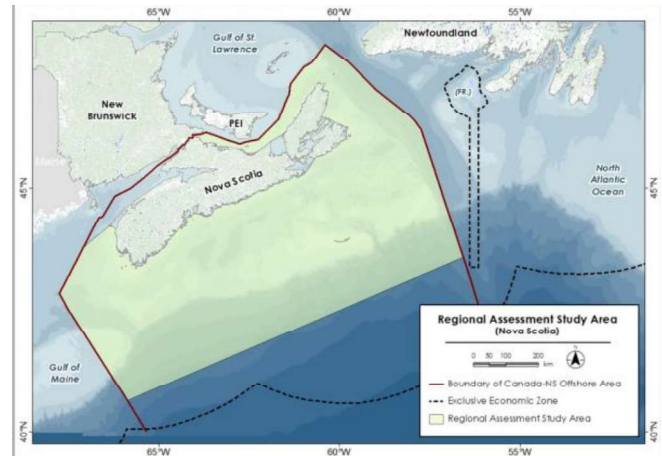


# Key messages and call to action!

- Wind energy is low emitting and cost effective although energy storage solutions are essential to integration
- Nova Scotia has a world class offshore wind resource, although the scale of a development would exceed our domestic energy needs and involve exports
- Offshore wind development is a potential new industry for Canada that will require new regulations, and geopolitical events are accelerating interest

## NOW is the time for local input!

Dates and locations for Regional Assessment in person events will be available in the coming days.



Source: Agreement to Conduct a Regional Assessment of Offshore Wind Development in Nova Scotia, 2023. Government of Canada and Province of Nova Scotia.

