

July 2026



# IN OUR POWER:

*Recharging Nova Scotia's  
Energy System*



*Offshore Wind in  
Atlantic Canada*



## **In Our Power:** *Recharging Nova Scotia's Energy System*

**Our energy system must meet the needs of all Nova Scotians.** This is not wishful thinking. Energy is a human right, essential for health, safety, comfort and access to information. A system that is reliable, affordable and sustainable is essential. **We need that system now.**

At the same time, we have substantial offshore wind potential that could make us an important player in the global effort to decarbonize energy.



## What is offshore wind?

**Offshore wind energy** is generated by turbines located in bodies of water. This is a rapidly maturing technology. Denmark has been producing electricity from offshore wind since 1991, and now 18 countries worldwide have offshore wind industries.

## How does offshore wind work?

**Offshore wind is generated** through the same process as onshore wind. Blades on turbines are turned by the wind; the active turbines then spin a generator, producing electricity. The power generated by each turbine flows first to an offshore substation, where the electricity is converted from AC to DC and then transmitted efficiently to onshore grids.



## Why do we need offshore turbines when we have them onshore?

**Offshore turbines are more efficient** than those onshore. Wind tends to be stronger and more consistent offshore, and it is not impeded by landscape features such as forests, valleys and buildings. Offshore wind turbines are also larger. In fact, they are expected to be three times more powerful than onshore turbines by 2035.

## What are the environmental impacts of offshore wind?

**Offshore wind is an integral part of the global move away from oil and gas**, which is critical to avoid the worst outcomes of climate change. There are potential negative impacts to this type of power production, however. These include bird and bat strikes, marine noise, vibrations, light pollution, chemical and solid waste, electromagnetic and heat emissions, habitat disturbance or loss and changes in surface water mixing and sediment transport.



However, many of these impacts can be mitigated. Guidance frameworks can be put in place to avoid and minimize the environmental impacts of offshore wind development.

**Turbines also don't last forever**, but up to 90 per cent of the materials are readily recyclable. And there is growing success in recycling the most challenging component: the blades. Goods such as sneakers, surfboards, playgrounds and bike shelters have now been made of recycled turbine blades!

## Is offshore wind an important option for Nova Scotia?

**Using renewable energy instead of fossil fuels benefits everyone** by improving air quality and reducing climate change. In Nova Scotia and throughout Atlantic Canada, offshore wind could help to balance the grid when onshore wind isn't blowing as strongly or consistently, or when hydrodam capacity is impacted by drought. Having a diverse energy mix helps create greater energy reliability, and favouring renewables leads to more affordable and stable pricing in the long term.



Offshore wind could also become one of Nova Scotia's most valuable exports and establish the province as a major energy producer in Canada. The first round of development, now underway, is expected to have a potential of up to 5 GW of electricity, which is more than twice Nova Scotia's peak demand and almost as much electricity as is produced by the Churchill Falls hydrodam.

**As well, offshore wind could become a major new industry in Nova Scotia**, creating and sustaining at least 1,200 permanent new skilled jobs, and as many as 30,000 jobs annually during construction, across different sectors here and throughout Atlantic Canada.

## When is offshore wind likely to be a reality in Nova Scotia?

**As of May 2026, there are no offshore wind turbines installed anywhere in Canada.** Regional assessments of offshore wind development have been performed in Nova Scotia and in Newfoundland and Labrador. The Canada-Nova Scotia Offshore Energy Regulator has held a call for parcel nomination, developer pre-qualification and information, and Canada's first call for bids to apply for submerged land licenses is expected in 2026.



Once the Call for Bids is complete, the regulator will submit its recommendations to the federal environment minister, who will make the final decision on whether to issue submerged land licenses, where to issue them and to whom. If submerged land licenses are issued, as expected, developers will begin to seek further approvals for each phase of the project.

**The main bottleneck for offshore wind development is transmission planning and construction**, each of which takes an average of four to eight years. Given transmission timelines, Nova Scotia could be producing electricity from offshore wind as early as 2035.



# Resources

**Canadian Renewable Energy Association.** [\*Recycling wind-turbine components in Canada. Sustainable Energy: Recycling Renewables.\*](#)

**Le Bihan, Madlie and Rusan, Ana Miljanović.** [\*Planning Discussion paper on leveraging Maritime Spatial Planning for Nature-Positive offshore wind development\*](#) – November 2024.

**Natural Resources Canada. Nova Scotia Department of Energy.** [\*Proposed Wind Energy Areas for the Canada-Nova Scotia Offshore: Discussion Paper\*](#) – March 2025.

**Offshore Coalition for Energy and Nature.** [\*Avoidance & Minimisation Of Environmental Impacts From Offshore Wind & Grid Infrastructure: How to achieve a nature-friendly energy transition at sea\*](#) – October 2024.

**Regional Assessment of Offshore Wind Development in Nova Scotia.** [\*Final Report: January 2025. The Regional Assessment Committee\*](#) – January 23, 2025.

**Regional Assessment of Offshore Wind Development in Newfoundland and Labrador.** [\*Final Report: Regional Assessment of Offshore Wind Development in Newfoundland and Labrador\*](#) – January 23, 2025.

**Renewables Grid Initiative.** [\*Offshore energy infrastructure and biodiversity\*](#) – 2023

**Stena Recycling.** [\*Wind turbine blade recycling - from lab to industrial testbed.\*](#)

