Taking PEI's Oyster Industry to Net Zero

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The aim of our research is to explore the possibility of making PEI's oyster industry a net-zero emissions industry. Oyster cultivation is an integral part of PEI's fishing industry, employing 250-300 wild fishers and between 3500-4000 people on the aquaculture side. There are roughly 100 barges on PEI and in 2022, approximately 14,588,000 lbs were landed for a value of over $24,800,000. As these figures from the PEI Department of Fisheries demonstrate, the oyster industry on PEI is quite a sizeable business.

Our research largely focuses on the use of solar PV panels on oyster barges to power the operations, and move away from the use of fossil fuels. Other main focus areas of our research are on transitioning to electric outboard motors, electrification of other equipment where possible, and overall improvement in energy efficiency of equipment and processes involved in the oyster production. The end goal of the research is to help create a roadmap and online tools which can assist those working directly in the oyster industry of PEI to easily size a solar PV system coupled with battery storage to supply energy for their daily operations. The hope is that this could remove fossil fuels from the equation, or most of it, and ameliorate the working conditions for the staff with a quieter, and less foul-smelling energy system that in turn requires less maintenance and no refueling.

Our research best falls into the category of Clean Tech Innovation as our overall main goal is to improve energy efficiency, and sustainability of the oyster industry in lieu of Canada's net zero 2050 goals.