

Preserve, Protect & Profit - A Plan to Save Owl's Head

Since Owl's Head is being touted as an economic development opportunity for our province, please consider this alternative proposal; one that is still attractive economically, but that drives this value into our community by protecting the park, as it is. The outcomes of this plan can create wins across the board that a simple handful of jobs from a golf course could not.

Background / A Golf Course Case Study

In a similar tale of billionaires being granted ownership over environmentally sensitive land to build golf courses, Donald Trump was granted such access in Aberdeen, Scotland over a decade ago. He promised 6,000 jobs, \$83M additional revenue to the local economy, 2 golf courses, a clubhouse, 36 golf villas, 950 timeshare flats, practice areas, and a newly built 450 bedroom 5-star hotel. Despite these promises, the locals were furious because this would be built on a dunes ecosystem that had been labeled as an official site of special scientific interest (SSSI). 10 years later after being granted the rights, he had only built one course, a much smaller than anticipated clubhouse, employed 150 people and converted an existing building into a 16 bed hotel. And instead of bringing in tens of millions to the economy, the course has seen losses of £1M annually. In retrospect this isn't surprising considering the National Golf Foundation's statistics: 30.6M golfers in 2003 dropped to 24.3M by 2019; the number of golfers between ages 18-34 has declined by 30% over the past 20 years. In Nova Scotia, the average golf course employs 5-99 people.

A New Plan - Carbon Offsets

These losses in biodiversity are irreversible. Instead of a golf course proposal that generates a small amount of economic activity, I propose a plan that delivers the following outcomes:

- Protect this globally rare ecosystem that is critically needed including the full 285 hectares of Owl's Head Provincial Park, that provides us with the benefits of acting as a large carbon store, cleaning drinking water, hosting endangered species, and protecting ancestral Mi'kmaq territory
- Enables our provincial government to meet mandated climate change targets, locally & federally
- Provide economic growth (that increases year after year) & jobs by protecting the land
 - Provides jobs and projects for local academic institutions & students to establish a baseline around the benefits of protecting Owl's Head
 - Create jobs for locals & Indigenous land protectors to continue to monitor & verify the environmental impact using their knowledge of best practices for conserving Owl's Head (assisted by soil measurement tech created by a NS-founded & operated company)
- Enables anyone to invest in the ongoing protection of this park into the future
- Helps multiple Nova Scotia grown climate tech startups to thrive & create jobs in our tech sector

In order to accomplish this plan so that it funds itself, we need to value and measure the amount of carbon sequestered and stored by this area. Carbon has a value on the open market. If we can prevent the planned destruction of a carbon sink, we can sell the amount of carbon saved by this area for a profit on the voluntary carbon markets. Transparently, my company, ROCarbon Labs, has created a first of its

kind marketplace by measuring, verifying, and valuing the amount of CO₂e (carbon dioxide equivalent) avoided or sequestered.

According to my initial back-of-the-napkin calculations (I propose formal calculations would be done by local academic institutions and students), based on Owl's Head being 285 hectares and assuming that every inch of that land is a bog with storage capabilities, it shows that this area could store up to 522,500 tonnes, or sequester 352 tonnes, of CO₂e annually.

The amount of storage potential at Owl's Head is therefore the equivalent of adding nearly 1000 more installations of Nova Scotia's largest commercial solar array.

Facts about Peatlands

To give you an idea of why such a small area of the planet can be such a powerful carbon sink, some info about peatlands, like the rare ecosystem at Owl's Head, are important to note:

On the positive side -

- Despite taking up only 3% of Earth's land surface, peatlands store twice the amount of carbon of all of Earth's standing forests and store more carbon than all other vegetation types in the world combined, which equates to nearly 1/3 of all terrestrial carbon
- The area covered by peatlands worldwide stores 550 gigatonnes (Gt) of CO₂e and sequesters 0.37 Gt annually
- One square meter of peatland in Canada has 5 times the carbon storage of one square meter of tropical rainforest in the Amazon

On the negative side -

- Damaged peatlands due to draining and converting them are a major source of global greenhouse gas emissions, to the tune of 1.3 Gt annually, the equivalent of 6% of all human-caused CO₂e emissions on Earth or more than the entire aviation industry causes
- About 15% of the world's peatlands have been drained or converted, where Canada ranks in the top 14 countries in the world who cause more than 90% of this damage and resulting emissions
- The losses caused by peatland destruction alone due to development in Canada accounts for up to 5% of the emissions caused by our entire cement and fossil fuel industry

Carbon Markets

Due to how powerful these types of ecosystems are at protecting us from climate change, they are valued very highly on the carbon markets. One reason for that is because a big part of making a robust voluntary carbon market includes the need for these markets to be made up by over 50% of carbon sequestration projects and act as a carbon sink. Whereas currently, only 4% of these markets are sequestering carbon, while the other 96% is made up with carbon avoidance projects. There have also been studies that have recently shown that the vast majority of forest projects on these markets have not actually been protecting the lands as claimed. In addition, many projects claim additional benefits that align with the UN's Sustainable Development Goals (SDGs), where this is shown to be unproven.

A Win-Win - Economic Development and Environmental Sustainability

It is for all of these reasons that I propose the money generated from the sale of the CO₂e stored by the Owl's Head region feeds into the local community to provide jobs to carry on with the ongoing measurement of these offsets year over year and to compensate Indigenous land protectors to ensure these lands are indeed protected. This would also help to verify the UN SDG indicators this work helps contribute to, including 15.3 Land Degradation Neutrality. These SDGs can be applied in other areas as well, for example, working with ROCarbon which is 100% female owned and operated, including Indigenous women owners, or working with students to teach them hands-on skills also apply to these SDGs. The importance of this, aside from the obvious, is that our carbon market is designed to increase the value of the offset when broader impacts are strived for and verified. Local, vetted organizations and nonprofits alongside Indigenous nations could be chosen to do this work and to manage the carbon revenue to ensure this project is indefinitely self-sustaining.

In terms of the economic impact of the carbon return, carbon prices are slated to increase steadily, year over year. In the regulated government markets, Prime Minister Trudeau has stated the prices will increase annually from \$40 per tonne in 2021 to \$170 per tonne in 2030. However, the voluntary carbon markets differ in that their pricing is flexible and based on what participants are willing (rather than mandated) to pay. Studies have shown that a 'transformational' price that will keep us under a 1.5°C rise in temperature needs to reach closer to \$13,000 per tonne by 2050. As you can tell, the prices we can earn for protecting this land can be substantial over time, and can continue to generate a return for decades to come. In addition, the marketplace we have created has fractional capabilities, democratizing the ability for anyone to invest in protecting Owl's Head, even if you only have one dollar to contribute.

In conclusion, we have alternatives available to us that can protect Owl's Head, as is, for generations to come. Where we can still make huge economic gains despite not developing one single acre of this land. This plan implements 'two-eyed seeing' which Mi'kmaw elder Albert Marshall coined as the combination of 'the best of Western science and technology' with Indigenous land knowledge and practices related to conservation and sustainability. We are all treaty people. It is important we all come together to find a way to protect this unceded territory. If you believe this is a viable method to do that as I do, let's start a discussion together today to determine how best to make this a reality and to create a movement that gets the government in-charge on board with this plan that generates far more benefits for Nova Scotians than a golf course.

About ROCarbon Labs

ROCarbon Labs is on a mission to help the world transition to a low carbon economy. We are a Nova Scotia-based company, passionate about energy and are experts in energy security, energy data for efficiency, the impact of behavioural changes, and carbon reduction technologies. Our customers trust us to use innovative solutions and collaboration to translate their energy data into a strategic asset aligned with their values and business objectives. Our company is 100% owned and operated by women entrepreneurs, and our ROC Indigenous division is majority owned by Indigenous women.