

Hello,

Thank you for considering the following comments from Green Nova Scotia First for the Windy Ridge EA.

Green Nova Scotia First supports the development of wind energy projects in Nova Scotia provided the provincial government fully addresses and completes certain obligations.

Before exporting hydrogen or ammonia, we must eliminate our dependence on coal and fossil fuels for energizing our grid.

We need to better manage our forests, soils and water through a provincial Landscape Level Planning Strategy.

We need to better protect Nova Scotia's rich biodiversity and abundant ecosystems through an improved Environmental Assessment process.

We need to ensure currently proposed industrial projects prioritize ecological and community resilience in the face of climate and biodiversity crises.

Some members of Green Nova Scotia First were also involved Protect Wentworth Valley's EA comment submission in response to the Higgins Mountain wind project. Through months of dedicated work by volunteers PWV submitted a professional 40-page submission and was able to help rally over 100 other groups and private citizens to submit comments.

Rumours were the Higgins Mountain project was dead on arrival. Less than 24 hours before the Ministerial response was due Minister Halman's team had a Project Denied response ready to publish, yet at the 11th hour the Minister reversed his decision and approved the project with a standard template list of conditions.

This was devastating and demoralizing to all the people that submitted comments.

And now Green Nova Scotia First has been overwhelmed with trying to keep on track of numerous hydrogen projects and ongoing changes to promoted projects.

It started with Premier Houston publicly stating he wants to see turbines on every hill in NS. It was quickly followed by various hydrogen project announcements and their related wind projects, most of which were formerly planned as domestic NSP grid projects. Next was the Provincial government strong arm-meddling in municipal affairs along with lies and misleading information promoted by Everwind Fuels. Then Provincial and Federal governments publicly supporting hydrogen-ammonia-export projects without understanding the GHG implications of such support, NSP grid upgrade meetings/news. Green Nova Scotia First then organized, hosted meetings, attended Premier Houston's community meeting where 200+ of his own constituents gave him an earful regarding Bear Head Energy plans for the area. Add keeping track of related pipeline news, biomass, LNG, salt caverns, tax credits, subsidies, changing and growing hydrogen-ammonia-export projects has made it near impossible for any volunteer public interest groups such as Green Nova Scotia First to keep on top of during a lightning frenzy pace for an unproven industry.

Insult to injury global experts in hydrogen, energy, sustainability and climate change clearly state jurisdictions that still rely on coal and natural gas for their grid, such as NS, should **NOT** export hydrogen or ammonia before they are 100% free of coal and fossil fuels.

Based on this and that Green Nova Scotia First has been overwhelmed by the process we did not do the work to get hundreds of comments that we know we could have inundated the Environmental Assessment office with.

Do not take a lack of comments compared to the Higgins Mountain project, that people do not care. We know they do. We are gaining members every day and now have members across most counties in the province.

Our government and the cash rich industries has worn us down so we chose to focus on the following Environmental Assessment comments below.

We know that our comments will have little effect on Minister Halman's decision. In fact, we assume Tim Houston has already made Minister Halman's decision for him, before the Windy Ridge EA was submitted.

Environmental Assessment process failings

Last year the government requested comments for Environmental Assessment modernization, acknowledging the system needs upgrading. Yet now without any upgrades the government is considering more 'green' hydrogen proposals that would overload our grid and there's a second RFP Rate Based Procurement renewable energy call.

There are numerous outstanding issues with the NS EA system such as;

- conflict of interest between proponents and environmental/consulting companies
- no Class II assessments for massive renewable and hydrogen projects
- a 30 day comment period is completely inadequate
- Cumulative impacts not addressed in meaningful way, especially when considering multiple wind projects connected to hydrogen-ammonia export scenario
- No funding or govt support for public interest groups to research, review EA's
- No transparency for Ministerial decision making
- Climate change considerations such as total project life cycle GHG emissions
- No Code of Conduct or accountability for proponents, consultants who lie and mislead public and government officials. Needs penalties.

There should be no approvals given to massive industrial wind-hydrogen-ammonia export projects, such as Windy Ridge, until NS has an enhanced Environmental Assessment process.

Lack of NS Landscape Level Plan

NS needs a province-wide landscape level plan. Without one EA's are flawed before they begin. It is impossible to understand what areas are appropriate for energy, mining, industrial forestry and what areas need to be protected for land and water conservation, ecological connectivity, Species-at-Risk, flood mitigation, watershed protection until a Landscape Level Plan for NS is complete.

A Landscape Level Plan would help mitigate conflict between communities, protected areas, wildlife and industrial proponents/proposals.

Until Nova Scotia has a province-wide Landscape Level Plan, no approvals should be given for massive industrial wind projects for hydrogen-ammonia-export.

Renewable energy -Hydrogen-Ammonia-export

Global hydrogen energy experts, such as Michael Liebreich, Paul Martin, etc agree no jurisdiction, including NS, should export a single kilowatt of wind energy via hydrogen-ammonia until local electrical grids are 100% free of fossil fuels such as coal and natural gas.

Even if the NS grid was 100% free of coal and natural gas, 80% of the energy collected is lost to system and processes of converting energy to hydrogen, then converting it to ammonia, shipping it across the ocean and reconverting it back to energy. It is an extremely energy intensive process.

No 'green' hydrogen schemes that involve shipping hydrogen or ammonia across oceans are sustainable or green if they need to ship product more than 5,000km which is the case for NS to Germany and Europe shipping.

A study of 1,000 hydrogen projects worldwide concluded that 'green' hydrogen projects connected to a power grid that use fossil fuel are as bad as hydrogen made with fossil gas.

Everwind hydrogen-ammonia projects will mostly be grid connected and cannot be called green. They won't reduce GHG emissions.

Renewables-hydrogen-ammonia export will slow NS and Canada from meeting our greenhouse gas emission reduction targets for 2030.

NS wind-hydrogen-ammonia exports will increase CO2 emissions globally.

NS wind-hydrogen-ammonia exports to Europe will give most renewable energy benefits away to Europe.

Therefore Nova Scotia and the Federal Government should not be subsidizing or supporting wind-hydrogen-ammonia-export schemes.

No wind-hydrogen-ammonia-for export schemes should receive EA approval.

Greenwashing

Throughout the Windy Ridge EA, website, marketing, community meeting information, etc... Everwind and their consultants make many false, misleading and deceptive environmental claims in promoting their project and interests. The Windy Ridge EA has numerous claims about how their project will reduce greenhouse gases and help climate change that they do not back up with any support.

The United Nations Climate Action group states, ‘greenwashing presents a significant obstacle to tackling climate change. By misleading the public to believe that a company or other entity is doing more to protect the environment than it is, greenwashing promotes false solutions to the climate crisis that distract from and delay concrete and credible action’.

Everwind’s EA and communications make claims that promote the environmental, social and ecological benefits of their proposals that are not based on adequate and proper tests. The burden of proof is on Everwind when making environmental claims.

Everwind’s NS projects should not be called ‘green’ and they won’t reduce GHG emissions.

There are too many examples to list here but a few from the Windy Ridge Wind Power Project EA Registration Document are as follows;

Page III ‘The Project will have a positive residual effect associated with minimizing the regional carbon footprint...from the Municipality of the County of Colchester.’

Page 3 ‘By using wind energy, the Point Tupper Green Hydrogen/Ammonia project will comply with the European Renewable Energy Directive II Renewable uels of No-Biological Origin Standards – internationally the most stringent set of requirements.’

Page 3 The Project will contribute to the province’s goal to reduce GHG emissions by 2030 as per the *Environmental Goals and Climate Change Reduction Act* Pages 282, 283 Everwind claims there are no significant residual effects of their project, except for positive effects for population and economy. Take Bats for

example, the population of bats is slowly recovering from White nose syndrome. There are various bat hibernacula in the immediate area and wind turbines are a known hazard to various species of bats. The EA does not prove there is not a significant risk to bats.

A few of Everwind's Windy Ridge website greenwashing examples as of July 3, 2024;

- 'Green hydrogen allows us to store wind power; provides zero-carbon energy/electricity when the wind isn't blowing and the sun isn't shining'
- 'Green hydrogen combined with electrification allows a 100% transition from fossil fuels'
- 'operationalize the Mainland Moose Recovery Plan' which is impossible with the Windy Ridge project as planned. A plan should have been made before turbine and road locations were chosen.

Everwind carbon emissions reduction claims are weak, unproven and likely contradictory point in this project, that could be linked to greenwashing. Due to the energy intensity, vast resources required, extreme inefficiency in the wind development-hydrogen-ammonia-shipping-reconversion to energy process Everwind needs to produce the data showing total carbon emissions VS total carbon sequestration for the wind farm itself, as well as combined with the hydrogen/ammonia project including the emissions to export the final product from NS to Europe.

The fact that the wind farm is part of the hydrogen/ammonia project and the electricity won't go into the NS grid makes this project a good candidate for Bill C-59 anti-greenwashing legislation.

Without data to back-up Everwind claims, the EA should not be approved.

NS Grid based project poaching

RES first went public with Windy Ridge in 2012 as a domestic grid project and it remained that way until 2023. A member of Green Nova Scotia First was present at various Windy Ridge domestic grid meetings between 2012 and 2023. Hydrogen-ammonia-export schemes were never mentioned in that time.

Everwind's Windy Ridge 2024 EA document sites RES 2012 work on page 30 of the Windy Ridge Registration Document.

Everwind Fuels has poached a project from Nova Scotia that could have gone directly to reducing coal and natural gas on the NSP grid. Such is also the case in several other wind projects around Nova Scotia in Hants County, Antigonish and Guysborough, to name a few.

No wind-hydrogen-ammonia-export project, such as Windy Ridge, that was poached from becoming a domestic grid project should get EA approval.

Access Roads

The Windy Ridge EA is incomplete and the public cannot make informed decisions. The EA does not specify what access roads will be used, so residents along potential access roads have no idea whether they could be impacted by potentially up to 16,569 concrete trucks, turbine and blade trucks, supply trucks, maintenance, and untold others using their road.

On April 10, 2024 Andrew from RES told McCallum Settlement residents the Proponent was still deciding on Windy Ridge access roads as a couple of their first choices were not feasible.

He said they were then considering Reid Road in Debert as a primary access road.

On June 30th, Green Nova Scotia First member spoke with residents from twelve different households on Reid Road and none of them had heard anything about their road being used for the Windy Ridge project, nor had some of them even heard about the project.

The EA should not be considered until access road details are final and shared with the general public.

Visual Simulations

There were no visual simulations done for about 2/3rds of the perimeter of the project area. Residents of East Folly Mountain, Debert, Masstown, Crowes Mills, Onslow Mountain, McCallum Settlement, East New Annan and Central New Annan were not offered any visual simulations.

Andrew from RES told Green NS First members they could not do visual simulations in these areas because they never got land owner permission, however

many of the visual simulations that were completed were done from road side. This is very easy to model for wind developers.

The EA should not be considered until every perimeter community has at least one or two simulations from areas showing the most significant visual impacts.

Cumulative Effects

The Proponent suggests 11 of the 13 criteria considered for Cumulative effects were Low. This defies all logic for a project the size of Windy Ridge especially considering neighbouring approved and proposed industrial wind projects such as Nuttby, Kmntuk, Higgins, Blueberry Acres, Westchester and the years of industrial logging that had a heavy effect on the region. Despite the proponent often highlighting their use of existing roads, it attempts to obscure the fact that road widening has serious negative effects on many VEC's especially moose, birds, wetlands, fish habitat to name a few.

This is greenwashing. Take for example the Atmospheric Environment 15.3.2.1. First the Proponent fails to list Atmospheric Environment in Table 15.1 but in the text section they compare their project to steam methane project emissions. This is a ridiculous, misleading comparison.

A more realistic comparison would be if the Windy Ridge Project was entirely for the NS grid as originally planned between 2012 and 2023. The cumulative effects for a domestic grid project would be significantly less than the wind-hydrogen-ammonia-export-conversion back to energy project that they are proposing.

The Proponent makes unsubstantiated claims such as 'The Net effects of the renewable energy projects in Colchester County and the Point Tupper Green Hydrogen/Ammonia project-Phase 1 will result in a positive cumulative effect to the atmospheric atmosphere'.

The Proponent does not discuss cumulative effects of their other related wind projects such as the Bear Lake, Kmntuk, the 404 turbines proposed for Guysborough County, Point Tupper or the untold hundreds of offshore turbines they are likely still planning.

Without evidence supporting their many false, misleading and deceptive environmental claims the Proponent suggests cumulative effects are mostly low.

Based on cumulative effects alone, the Windy Ridge EA should not be approved.

Mainland Moose

Much of the project area is considered 'Essential' mainland moose habitat and as the term implies is essential for survival of mainland moose. Most of the remaining project area is considered 'Core' mainland moose habitat.

Nova Scotians have been waiting for designation of 'Core' mainland moose habitat since 2007.

As we wait for government to designate core habitat, industrial projects keep being proposed and passed that further degrade and fragment excellent moose habitat. This inaction by the Houston Government will most likely lead to the extinction of the mainland moose, as any opportunity for ecological connectivity corridors for moose disappear, industrial project after industrial project.

Key guidelines from the Mainland Moose Recovery Plan should be adopted by Windy Ridge to avoid possible harm to the mainland moose

1. Minimize roads, fences, lighting and other linear infrastructure.
2. Orient and clump them together in ways that do not sever or intersect intact forest or other natural habitat linkages through the site.
3. Plan in a spatial way that retains wide (300 m minimum; 1000 m ideal) habitat linkages/corridors through the site in multiple directions, especially to connect with intact habitat beyond the site.
4. Retain both hardwood and softwood and access to water in order to provide summer and winter security and thermal cover and forage.
5. Include mechanisms to deter motorized human access beyond that necessary to service the site.
6. Retain and enhance natural cover for moose and other SAR habitat delineated as core habitat in Recovery Plans.
7. Retain and enhance natural cover for moose and other SAR habitat modeled as high habitat suitability or high likelihood of presence as delineated in Recovery Plans.
8. Avoid new road construction/expansion/enhancement in areas delineated as unroaded/low road density in Recovery Plans.

9. Retain as much natural cover as possible to favour moose habitat over deer habitat to minimize incursion of deer and associated *P. tenuis* (brain worm fatal to moose and carried by deer).

Everwind and RES have been talking a lot about a proposed moose corridor. They first declared their intent in October of 2023. They hired two non-moose/conservation experts to work on the project with no results to show for it in the Windy Ridge EA Registration document.

This isn't surprising. The 2023 [Higgins Mountain EA Figures -Part 1 Figure 3.1](#) clearly showed Moose Reserves (Northern Pulp) throughout the project area. Later at a CLC meeting Higgins Mountain project manager Jonathan Turner was asked how the moose reserves were going. He denied they existed and was confused when shown Figure 3.1.

It is not surprising Northern Pulp would not want designated moose reserves or moose corridors on their properties as it would impact their industrial harvesting activities.

Stating on Page III of the Windy Ridge EA registration document, 'The Proponent has also proposed the concept of a 'moose corridor' to describe a collaborative, large scale, land conservation effort in the region in which it is prepared to play a coordinating role. A moose corridor would provide ecological connectivity between protected areas and foster improvements in land use practices, such as reduction in forest harvesting'

It seems unlikely Northern Pulp would support such work as it would have dramatic negative impacts on forestry operations and the number of turbines and widened roads on their properties in the Windy Ridge project area.

Unless the Proponent can show any tangible evidence a moose corridor is being worked out, it amounts to nothing other than greenwashing.

EA should be denied based on the greenwashing, misleading moose corridor claims and the irreversible harm to moose this project will cause.

Bats

Bat populations across North America were decimated in recent years by white nose syndrome.

So characterising 105 recorded bats in a single year study as ‘relatively low number’ seems to be false or misleading greenwashing. Suggesting ‘low’ bat activity needs robust scientific references to back it up!

105 recorded bats includes 21% of the bats were migratory species which are protected under federal law.

From the EA Registration document page 191 – 194;

‘The Project presents risks of direct bat mortality and injury during construction, primarily due to vegetation clearing and increased traffic. Once operational most bat deaths at turbines are due to blunt force trauma from collisions with smaller component of deaths related to barotrauma due to rapid change in air pressure’

‘The reasons why bats do not avoid turbines remain largely unknown.’

‘as outlined in the Recovery Strategy (ECCC, 2015) activities that cause excessive disturbance (eg light, noise, vibrations) could result in the arousal of bats from torpor.’

‘Wind turbines during operation generate noise that may impact the ability of bats to carry out a wide range of behaviours such as communication, foraging, and predator avoidance.’

‘Bats may be attracted to wind turbines because these structures have similar characteristics similar to favourable roost trees.’

Mortality mitigation during operations is possible. Bat mortalities occur most frequently when turbines blades are turning slowly at low speed. Most wind turbines operate at a cut-in wind speed below which, while the blades still slowly rotate, no electricity is generated. Recent studies have shown that by preventing wind turbine blades turning when the wind is light, bat mortalities is reduced dramatically.

‘Mitigation works. Turning wind turbines off for very short periods at low wind speeds during the fall season can reduce mortality by 50-80%, while minimally

compromising energy production, notes Stephen Petersen, co-chair of COSEWIC's terrestrial mammal subcommittee.

If the EA is approved with conditions, mitigation techniques around low turbine speeds should be a condition of approval.

However, the high risk to recovering bat populations should be reason alone to not approve the Windy Ridge EA.

Wetlands

The Windy Ridge project expects to infill a staggering 72 acres worth of wetlands for the project.

Wetlands provide countless benefits to communities, watersheds and wildlife.

Wetlands provide many functions such as;

- water storage
- water cooling
- water filtering
- mitigate drought effects
- mitigate flooding
- prevent, reduce erosion
- significant carbon sequestration
- provide habitat, shelter and refuge to countless local, migratory and SAR species
- maintain regional biodiversity
- maintain food chains
- provide recreation
- enhancing fishery productivity

There are 365 wetlands in the Potential Development Area all of which play important roles.

Of these 14 wetlands are classified as Wetlands of Special Concern.

Wetlands to be infilled will require other wetland compensation, but this usually means other wetlands will be protected or new wetlands will be created. These areas are, more often than not, are in different watersheds or much further downstream where they don't have the same effects such as flood control, etc....

When offsetting wetland destruction through wetland restoration, it is important to consider several key factors. Firstly, the compensatory process is governed by policies such as the Wetland Conservation Policy, which aims to protect against the net loss of wetlands. According to this policy, compensation is the last step in the mitigation process, and the first course of action in the mitigation process should be avoidance, followed by minimize/mitigate impacts. Compensation as a final option is critical, as the destruction of wetlands in one area followed by the creation or enhancement of wetlands elsewhere presents the injustice of transferring values to other communities while stripping these values/services from the communities in which they were derived from. Therefore, it is imperative that restoration efforts take place in the same watershed to mitigate the negative impacts on the local community. However, it is notable that it can take decades if not centuries for ecosystem services from a restored wetland to be similar to an intact, reference wetland. This represents a loss provincially as GPI Atlantic estimates that wetland destruction through development in Nova Scotia equates to approximately \$2 billion annually resulting from the diminished ecological services.

Given that 72 acres of wetlands are expected to be infilled, it is reasonable to assume serious potential negative effects on downstream communities, as the hydrological connectivity between wetlands and downstream waters influences the overall structure, function and dynamics of the watershed, which directly influences the integrity of downstream waters. To provide examples, flood control will be diminished in various watersheds. As seen in the deadly NS floods of 2023, downstream communities will be at greater risk. In addition, within watersheds, wetlands are sinks for detrimental materials such as excess nutrients (e.g. nitrogen and phosphorus), sediments, contaminants, and certain metals. Given the continued resource extraction in the area (e.g. lumber, mining) and the added habitat destruction resulting from the wind development, wetland conservation is crucial to buffer these materials and preserve the water quality locally and of the downstream communities.

It is insulting that the Proponent and their consultants declared the risk to wetlands is 'Not Significant' related to loss of wetlands, change in wetland hydrology and change in wetland function when they plan to infill 72 acres of wetland including Wetlands of Special Significance.

The cumulative effects of wetland damage should be considered high, yet somehow, all but two of the Windy Ridge cumulative effects assessments were rated as 'Low'. The area occupied by the Windy Ridge project is characterized by a

plethora of interconnected watersheds where wetlands serve as a critical component to maintain the overall integrity of the system as a whole. Because of the intrinsic link between wetlands and surrounding waterbodies (e.g., lakes, rivers, streams) it is inappropriate to consider the cumulative impacts 'Low' due to potential cascading effects across surrounding ecosystems that would result from construction, operation and maintenance, and decommissioning, in an already ecologically sensitive area.

The EA should not be approved on wetland impacts alone.

Fish Habitat

The Wallace and the French River systems are well known, important systems for Atlantic Salmon and American Eel. Therefore, all high quality fish habitat should be protected and road-crossings should not be allowed within or adjacent to these habitats. Road-crossings should only be built in poor quality fish habitat and must be fish-passable in order to connect all the protected good habitats within the watershed.

Species -at-Risk Buffer Zones.

Several endangered and vulnerable in both aquatic and terrestrial habitats were found within the area of the project and once they are buffer zones must be established to protect them. Moreover, the size of the buffer zones varies according to the biology and dispersal range of the target species. For example, buffer zones for endangered lichens like the boreal felt lichen is 500m (source: <https://cdnsiencepub.com/doi/full/10.1139/cjfr-2012-0452>), while amphibians and reptiles require a terrestrial habitat ranging from 127 to 290 m from the edge of the aquatic site (source: <https://conbio.onlinelibrary.wiley.com/doi/abs/10.1046/j.1523-1739.2003.02177.x>).

Riparian zones

Vegetation suppression in riparian zones has a significant impact on water quality and fish habitat and the suppression of riparian vegetation should not be allowed or at-least highly avoided. Among the impacts, we can highlight the erosion of riparian zones that results in high influx of sediments in the rivers destroying important fish habitat like spawning and feeding sites for endangered species such as Atlantic Salmon and American Eel. Moreover, riparian vegetation provides shade allowing the creation of cold-water refugia for Atlantic salmon in the summer, thus removing riparian vegetation will result in warmer waters due to the

direct exposure to sunlight that will likely lead to higher mortality of cold-water associated species.

Acoustic Environment

When Everwind says ‘Computer models were used to predict noise levels from operation of the Project’ or ‘The modelling results predict sound levels ranging from 14.9 to 37.5 dBA’, please keep in mind that predictions are not real data and must be interpreted with caution. They say the models predicted a noise of 14.9 to 40 dBA at 2 km that is equivalent to a quiet rural area during nighttime period and use that as a reference to define the setback distance at 2km, but values above 35 dBA is not in accordance with the baseline acoustic value recommended by Health Canada (2017) and due to the uncertainties associated with the predictions a more conservative setback of 3 km would be more appropriate.

As a precautionary principle, the EA should not be approved without 3km setbacks from all home and/or private property boundaries.

Signing Land Use Deals While Under Court Order

Northern Timber was not allowed to sign land use deals with Everwind and other wind companies while under BC court protection. Natural Resources & Renewables Minister Tory Rushton was made aware of this at a Protect Wentworth meeting in 2023 or 2022.

The Windy Ridge EA should not be considered for approval as land-use deals were signed when they were not legally permitted to do so.

Final Comments

The state of the industrial wind energy industry in Nova Scotia is like the wild west.

Wind-hydrogen-ammonia-export plans dwarf the current capacity of our grid and take the best wind sites in NS that could be used for our domestic grid.

Wind-hydrogen-ammonia-export proponents are looking for billions in tax subsidies, tax credits, Canada infrastructure bank money, and more recently an Everwind-led consortium asking the provincial government for infrastructure upgrade money.

These export projects will increase global CO2 emissions, while exporting away the benefits of renewable energy.

Greenwashing projects is a major problem and needs to be addressed.

At the same time the NS government is in the middle of its second Rate Based Procurement for renewable energy for our domestic grid.

Just about every corner of NS has new energy projects popping up on an almost weekly basis whether it be wind, solar, biomass, LNG, pipelines, salt cavern storage, hydrogen, ammonia, etc...

It is all overwhelming communities, citizens and our ecosystems.

In the face of the real risks related to climate change, the province needs to step back, make a province wide Landscape Level plan, improve its Environmental Assessment process, and create a Class II assessment for all industrial scale energy projects ASAP before any new projects are given the green light.

Thank you,

Green Nova Scotia First