Pollock, Meaghan Elizabeth

From: @gmail.com>
Sent: April 11, 2023 2:55 PM
To: Environment Assessment Web Account
Subject: Intact wetland, significant habitat in Higgins Mountain Wind Farm EA

Hello,

Including a few photos representing old growth forest, wetland of special significance, and unique talus slopes within the Higgins Mountain Wind Farm Project area.

The Significant Habitat of the Rockland Brook area was particularly underrepresented in field work analysis.

Thanks

Pollock, Meaghan Elizabeth

From: @gmail.com>
Sent: April 11, 2023 2:59 PM
To: Environment Assessment Web Account
Subject: Higgins Mountain Wind Farm EA & climate change

Hello,

The proponent spends a lot of effort describing the Project benefits to climate change but says very little about potential negative impacts the project may cause.

This project harms nature and potentially threatens existing protected areas.

Thanks

New UN Report Says Protecting and Restoring Nature is Key in Climate Crisis

By Lindi Osborne

Pollock, Meaghan Elizabeth

From: gmail.com>
Sent: April 11, 2023 3:01 PM
To: Environment Assessment Web Account
Subject: Higgins Mountain Wind Farm EA

Hello,

For Higgins Wind EA submission.

THE COLCHESTER WIRE

Find more local stories at SaltWire.com

Wednesday, November 3, 2021

WHAT A VIEW!

The Fall Festival of Colours at Ski Wentworth provided an opportunity for visitors to witness the stunning fall foliage and beautiful vistas from atop the popular ski mountain. The annual event was held during three recent weekends and allowed guests to ride the chairlift to the top of the mountain for a view of the breathtaking natural scenery and dazzling display of colours that autumn has to offer. **CONTRIBUTED**

Pollock, Meaghan Elizabeth

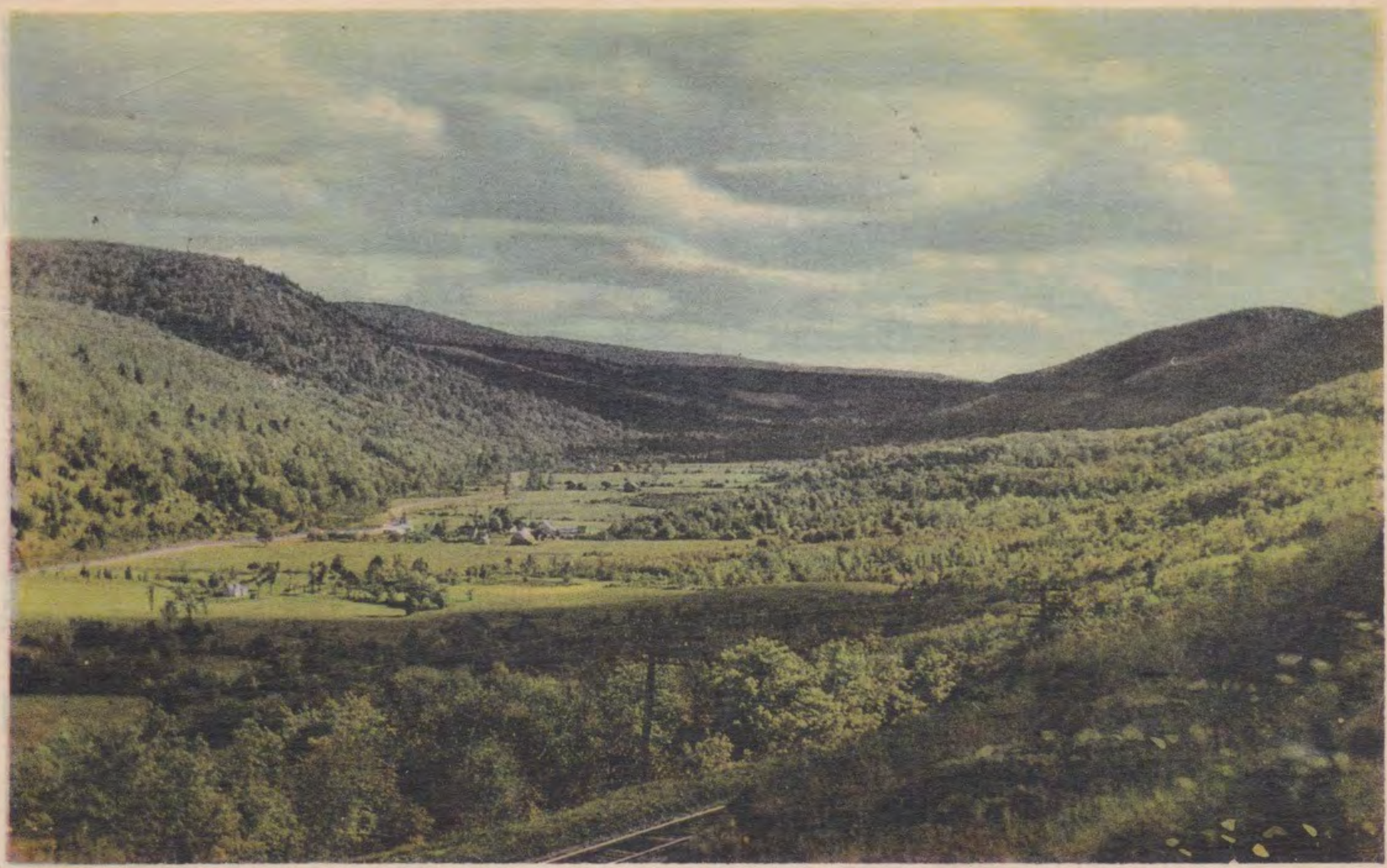
From: @gmail.com>
Sent: April 11, 2023 3:13 PM
To: Environment Assessment Web Account
Subject: Higgins Mountain Wind Farm EA - more historical context
Attachments: Ski Wentworth Olands ad 1961.pdf

Hello,

The Higgins Mountain Wind Farm did not include any historical context for the Wentworth tourism reality so here is a few more examples or two 1936 CN promoted postcards and a 1961 beer ad by Olands Brewery..

Thanks,

In the Famous Wentworth Valley, Nova Scotia—2. C.N.R. Photo



Wentworth Valley, Nova Scotia, Canada.—S12,901B.

For REAL pleasure...

There's excellent skiing in the Maritimes. Here, at scenic Wentworth Valley, Nova Scotia, on the Trans-Canada Highway, is one of the exciting ski hills, served by two rope tows, each 1,000 feet long. The photograph shows the view from the top of the lower tow.

OLAND'S

HALIFAX AND SAINT JOHN

EXPORT ALE • EXTRA STOUT • SCHOONER BEER

Pollock, Meaghan Elizabeth

From: @gmail.com>
Sent: April 11, 2023 3:25 PM
To: Environment Assessment Web Account
Subject: Higgins Mountain Wind Farm EA

Hello,

A lovely old poem about the natural beauty and wonder of the Wentworth Valley. The Author is a Letcher and one of the oldest multi-generation settler families still living the Wentworth Valley.

Did the proponent ever reach out to the Letchers, Littles, Feeleys or other early settlor families still residing in the area?

Thanks,

WENTWORTH VALLEY

A little green valley with your river and brooks
Have you ever been told of your beauty in books?
Your green fields and pastures amidst little streams
Could an artist compare you in picture or dreams?

* * *

Your steep rising mountains with clear crystal fountains
Make brooks that flow past our door;
Your maples and elms, where little brids dwell in
Could nature bestow on you more?

* * *

The trains on your West Mountain side
Puff along and whistle with pride,
The passengers look down and see all around
Where nature in full doth abide.

* * *

Your mountain to east is a photographer's feast
Your green dress and bare face he has taken;
But the prettiest of all are your garments of fall
Fill the minds of all imagination.

* * *

Your month to the north brings cold winds and snow forth
As winter spews you over with snow
Under your white frozen dress your garden's at rest
'Til spring comes with sun all aglow.

* * *

You're hemmed in at the south, except a small mouth
Where the road enters into your beauty
As the strangers pass through they make much ado
To see such magnificent beauty.

* * *

Your forest shroud wreath you with timber they greet
And the moose and the deer roam within;
Sometimes without pardon they visit ore's garden
Not knowing they commit any sin.

* * *

In your rivers and brooks are fishes to hook
And the salmon arrive spring and fall;
O, I say, little valley, may I add to this tally
You've got pleasure and beauty, you're the belle of the ball.

* * *

But alas, man's utilities, will spoil you quiet and serene
With rubber wheel chariots whose trumpets do scream.
And far up reaching spires with their cross arms to band
A network of wires across your fair land.

Richard Letcher, Jr.
Wentworth Valley.

Pollock, Meaghan Elizabeth

From: @gmail.com>
Sent: April 11, 2023 8:06 PM
To: Environment Assessment Web Account
Subject: Higgins Mountain Wind Farm EA - conservation lands

Hello,

The photo was taken in July 2018, The Wentworth Valley was the first example of where government needs to protect.

For EA consideration.

Thank you,

lice "driving recklessly on [illegible] streets," the police said in the

12:45 p.m. A Halifax Emergency

1-800-222-TIPS (8477).

Get on with protecting lands, says wilderness protection group

STUART PEDDLE
THE CHRONICLE HERALD
speddle@herald.ca
@Guylafur

The Canadian Parks and Wilderness Society says the Wentworth Valley is an area that's in need of protection. **IRWIN BARRETT**

The Canadian Parks and Wilderness Society is calling on Nova Scotia to "pick up the pace" in creating protected areas.

Chris Miller, executive director of the Nova Scotia branch of CPAWS, said in a telephone interview on Tuesday that the charity identified the Nova Scotia need in its annual Parks Report.

"There's actually a pretty good plan in place, called the Nova Scotia Parks and Protected Areas Plan," Miller said. "But it's been around for five years now and there's still many sites that are recommended for protection in that plan that have yet to be designated. In total there's about 100 sites that we're still waiting for."

He said that there's broad support for creating protected areas across political party lines.

"The original targets were established by the Progressive Conservatives, the plan was developed by the NDP and the Liberals are implementing it, so this is an issue that really crosses the political divide," Miller said.

"The current government needs to finish the job and to implement the plan that's already in place."

Miller said the province's industrial history has left a "really heavy footprint," making it that much more important to have protected areas.

"Some of the places that have been identified that are in need of protection but have not yet been designated that are really important include the Wentworth Valley, St. Mary's River (and) Mabou highlands. Now, these are important places and the government really needs to hurry up and finish the job."

Miller said all that's required to make these sites official is an order-in-council.

"So cabinet just needs to review the documents that the bureaucracy brings to them and then make the final decision to make this happen."

He said clear legislation is already in place, it just needs to be made official.

"All of these areas have gone through multiple rounds of public consultation over a several-year period," he said. "The government has already approved the final version of the plan."

Peter Labor, director of protected areas and wetlands for the Department of Environment, said in an emailed statement that Nova Scotia has about 12.4 per cent of the province's land mass legally protected. The goal is 13 per cent.

"Prior to formally designating sites we need to ensure that all legal and survey work is complete," he said in the email.

Labor wrote that the department is working with the Department of Lands and Forestry to fully evaluate the next group of potential protected areas.

"We are optimistic that several properties will be designated this fiscal year."

Miller said CPAWS knew it would take some time to implement the plan when it was first approved.

"There's some tasks that are required, legal descriptions to surveying on the ground — we understand that it takes time but now that five years have passed, we really feel that's more than enough time to have completely implemented the plan that's in place now."

The group is concerned that industry may be putting pressure on the government to roll back some its commitments.

The Nova Scotia-specific recommendations in the CPAWS report include:

- Completing the full implementation of the Nova Scotia Our Parks and Protected Areas Plan
- Undertaking a provincewide gap analysis to identify priority conservation sites and opportunities for improving connectivity between protected areas
- Initiating a wilderness area assessment for the Ingram River watershed on the former Bowater lands
- Seeking matching funding from the new federal Nature Fund for protected area establishment and conservation planning
- Re-establishing a land acquisition budget for the Nova Scotia Department of Environment so that key private lands can be purchased for conservation.

The society is a non-government charitable organization that works specifically on protected areas across Canada. It has been in operation for more than 50 years.

Pollock, Meaghan Elizabeth

From: elementalenergy.ca>
Sent: April 11, 2023 8:21 PM
To: ɔstrum.com; Environment Assessment Web Account
Cc: @strum.com; ; Minister, Env;
Subject: Re: Higgins Mountain Wind Farm 2023 EA - March CLC meeting
Attachments: 230406 Response to CLC[44].pdf

Thanks for the questions and subsequent follow-up correspondence, including discussions that occurred at our Community Liaison Committee meeting on March 28, 2023 and the Protect Wentworth Valley community meeting on March 29, 2023.

Please find attached a memo from Strum providing responses to your questions below, which are relevant to the proposed Higgins Mountain Wind Farm currently undergoing an environmental assessment review with the Province of Nova Scotia.

With respect to the visual simulation picture locations 10.2F and 10.2J, these were photo locations you had previously requested to be included as part of the visual assessment in the EA. Further to your notes below, we were unaware that you had identified preferred alternative locations to photo location 10.2 J (top of the lift and top of the Canada Games mogul venue). Visual simulation picture 10.2J in the EA illustrates that there are a number of turbines visible from the ski hill, but are hidden by foliage. Depending on the photo location chosen (current location or other identified preferred locations), the visual simulation conclusions will be similar, in that a number of turbines are visible from Ski Wentworth which may or may not be hidden by foliage.

We regret that prior permission to access picture location 10.2J was not obtained from Ski Wentworth prior to Strum visiting this location in April 2022.

Please let us know if you have any further questions or require clarifications on the responses provided to your questions below.

Sincerely,

Elemental Energy

From: @gmail.com>
Date: Friday, March 31, 2023 at 10:51 AM
To: @elementalenergy.ca>, @strum.com>, ea@novascotia.ca <ea@novascotia.ca>
Cc: @gmail.com>, @strum.com>, , minister.environment@novascotia.ca <minister.environment@novascotia.ca>
Subject: Re: Higgins Mountain Wind Farm 2023 EA - March CLC meeting

Hello,

wrote;

> Since you have provided these questions in response our CLC meeting agenda and request for discussion topics, I have removed the NS EA office from this email thread.

As this is directly related to your professional EA work during the open 30-day comment period, I have re- Cc'ed EA office. And I ask EA office this email be part of the received comments.

wrote;

> ...we will do our best to answer these questions (I have just sent them to Mel Smith) at our meeting this afternoon. If there are questions that Strum is unable to answer, we will endeavour to provide more fulsome answers to your questions as a follow-up to the CLC meeting.

Thank you. When can we expect the follow-up answers? Please have ready prior to Easter weekend.

The following were not answered at the March CLC meeting

> ~~1) Is there still a non-compliance directive against the Higgins Mountain wind partners related to their 2006 EA Terms and Conditions?~~

> 2) Why did the EA share high quantity of "location sensitive species" location data throughout the EA Registration documents especially related to bats and moose, as this location information is a direct threat to their survival?

GW asked if sharing this information was a professional or good idea. I asked if this information should be removed from EA ASAP and re-submited. Not sure it was answered.

> 3) EA appears to have made a number of obvious mis-identifications such as Boreal Felt Lichen, Tuckerman's Sedge, Tender Sedge, eutrochium purpuren, and large/small purple fringed orchids. Does Strum stand by their research?

GW asked if she professionally stood by this research in the EA document. Did not get an answer. stepped in but did not answer specific question.

> .
> 4) Wetlands assessments used old (2000 & 2004) non-peer reviewed science regarding wetlands when many, much better, and very current peer reviewed articles discuss Forested Wetlands/treed swamps in NS/Atlantic appear to be avian biodiversity hotspots for species known to be in the Project Area?

Time running short, did not get an answer from Mel.

> 5) See 4. Why doesnt EA consider the significant carbon sink potential of treed swamps, fens and bogs in project area and record stored carbon/GHG that will be lost during wetland alterations?

Time running short, did not get an answer from Mel.

> 6) Why apparently no field work in Roaring Brook when 6 turbines and some related infrastucture sit along its headwaters, and when Roaring Brook and Hants Brook had Significant Habitat identified in the

2006 Higgins Mountain Road wind project EA? There appears to be no information about this in the 2023 EA.

Did not have time to ask this question.

7) Why was there little field work around Carters Lake when it is clearly identified in the ACC DC reports to be full of vascular flora? Was the fen or wetland west of Carter Lake assessed considering there may be overstay removal for connector route?

Time running short, made this a quick comment when spoke of visual assessment regarding Turbines 15,16. Did not receive an answer.

8) Will proposed connector route over Rockland Brook require overstored removal? If so, how wide? Does it go through the section of old-growth forest your field assessments discovered on crown land?

Did not have time to ask this question. New related question, why so few transects in the large steep rugged part of Rockland Brook when clearly so much unique, rugged topography that has helped protect it from previous industrial development.

Elemental Energy Higgins Mountain Wind Farm 2023 EA Drawings 10.2F, 10.2J indicate Strum's professional staff was on Ski Wentworth property engaging in professional work without our knowledge or permission during in April 2022. Mr Turner first suggested since Ski Wentworth is open to public hiking, etc that Strum didn't need to reach out.

I pointed out I previously worked with project partner) and Elemental staff to assist their assessments and freely gave half of my day to them. At that time, I stressed to should not use location 10.2J because it was in a no stop zone, and buried behind a chairlift and trees when I saw him taking photos from there. I specifically requested Visual Simulation for the top of the oldest ski trail and oldest ski lift in Atlantic Canada and or the top of the Canada Games Moguls site given the federal dollars that supported the construction of that trail. took pictures from moguls site, yet Elemental and Strum chose not to use that area for a visual simulation. Why?

I also pointed out all of our 'inbounds' ski area property was closed and clearly "Do Not Enter, Construction Site" and gated closed from April until October due to installation of our new chairlift. This information was also shared on our social media and communication channels. We were however still able to keep other hiking and biking trails open on a separate northern section of our mountain and saw thousands of people use them during the time.

joined our PWV online community EA meeting the following day. I asked him again if he thought the general public hiking our property was an equivalent as a professional, completing professional work on our property. He said something to the effect, that it was unprofessional or should not have happened and blamed Strum.

Since Strum stamped the work and Elemental hired Strum to complete the work, I would like an explanation why this happened.

Ski Wentworth would like a public apology from Strum and Elemental for this unprofessional action.

Thank you,

On Mar 28, 2023, at 4:58 PM, @elementalenergy.ca> wrote:

– Thanks for your questions below.

Since you have provided these questions in response our CLC meeting agenda and request for discussion topics, I have removed the NS EA office from this email thread.

will be attending the CLC meeting as a Strum representative as Shawn is on holiday and not available.

Given the short notice regarding your questions we will do our best to answer these questions (I have just sent them to) at our meeting this afternoon. If there are questions that Strum is unable to answer, we will endeavour to provide more fulsome answers to your questions as a follow-up to the CLC meeting.

Thanks for taking time to review the Higgins Mountain EA in advance of our CLC meeting, and we look forward to the discussions this afternoon.

Elemental Energy

From: @gmail.com>
Date: Tuesday, March 28, 2023 at 12:22 PM
To: @elementalenergy.ca>, ea@novascotia.ca <ea@novascotia.ca>, @strum.com <sduncan@strum.com>
Cc: @mmfi.ca>
Subject: Higgins Mountain Wind Farm 2023 EA - March CLC meeting

Hello,

Ive been scrambling to get questions together as you requested. As a volunteer working on this as I can it has been difficult especially considering you released your EA during Spring Break, a significant event in the ski community, has impacted my response times.

Since the EA is now open I thought it would be appropriate to share my questions with EA office as well.

1) Is there still a non-compliance directive against the Higgins Mountain wind partners related to their 2006 EA Terms and Conditions?

2) Why did the EA share high quantity of “location sensitive species” location data throughout the EA Registration documents especially related to bats and moose, as this location information is a direct threat to their survival?

3) EA apparels to made a number of obvious mis-identifications such as Boreal Felt Lichen, Tuckerman’s Sedge, Tender Sedge, eutrochium purpuren, and large/small purple fringed orchids. Does Strum stand by their research?

4) Wetlands assessments used old (2000 & 2004) non-peer reviewed science regarding wetlands when many, much better, and very current peer reviewed articles discuss Forested Wetlands/treed swamps in NS/Atlantic appear to be avian biodiversity hotspots for species known to be in the Project Area?

5) See 4. Why doesnt EA consider the significant carbon sink potential of treed swamps, fens and bogs in project area and record stored carbon/GHG that will be lost during wetland alterations?

6) Why apparently no field work completely in Roaring Brook when 6 turbines and some related infrastucture sit along its headwaters, and when Roaring Brook and Hants Brook had Significant Habitat identified in the 2006 Higgins Mountain Road wind project EA? There apparels to be no information about this in the 2023 EA.

7) Why was there little field work around Carters Lake when it is clearly identified in the ACCDC reports to be full of vascular flora? Was the fen or wetland west of Carter Lake assessed considering there may be overstay removal for connector route?

8) Will proposed connector route over Rockland Brook require overstored removal? If so, how wide? Does it go through the section of old-growth forest your field assessments discovered on crown land?

CLC member

Folly Lake, NS

April 6, 2023

Higgins Wind

Re: CLC Questions, Higgins Mountain Wind Farm Project

Strum Consulting participated in the March 28, 2023 Community Liaison Committee (CLC) meeting for the Higgins Mountain Wind Farm Project (the Project) with slides prepared to discuss the Environmental Assessment (EA) process, wildlife studies, visual simulations, and sound and shadow flicker modelling. Several questions were provided to Strum shortly before the meeting and a commitment was made to provide written responses, which are presented below in **bold**. Question 1 is not included as it was specifically directed to Higgins Wind.

2) Why did the EA share high quantity of "location sensitive species" location data throughout the EA Registration documents especially related to bats and moose, as this location information is a direct threat to their survival?

Strum works closely with NSNRR on managing data related to "location sensitive species", both data that is shared with Strum and data that Strum collects through field studies. Mainland moose presence in the Higgins Area is widely known and well documented, as they regularly move through the Study Area. As part of our wildlife monitoring program, we deployed trail cameras across the Study Area, many of which captured images of Mainland Moose, as well as other occurrences of wildlife.

With respect to bat data, information shared in the EA was primarily sourced from publicly available databases. The general locations of bat detectors were presented in the EA, to describe the study methods used to understand bat use across the Study Area.

Strum will continue to work with NSNRR on data handling regarding species at risk.

3) EA apparels to made a number of obvious mis-identifications such as Boreal Felt Lichen, Tuckerman's Sedge, Tender Sedge, eutrochium purpuren, and large/small purple fringed orchids. Does Strum stand by their research?

Strum works with an expert botanist who is well known and respected across the province.

There were two small administrative errors in Appendix J that Strum takes responsibility for. The inclusion of Boreal Felt Lichen in the species list (Appendix J) of lichens found within the Study Area was an error. In the EA (Section 7.4.2), it was clearly stated that no Boreal Felt Lichen was found within the Study Area, nor was there any habitat identified through field surveys or the desktop review of the Boreal Felt Lichen layer.

This error was communicated to NSECC on March 21 (prior to this error being raised at the CLC and through communications with on March 28) and in no way changes information contained in the EA Registration Document, including the effects assessment, content in the EA chapters, or conclusions of the EA.

It is further noted that *Eutrochium purpuren* was a type-o in Appendix J at the species level (genus level was correct); it should have been identified as *Eutrochium maculatum*. *Eutrochium macultatum* is widespread across the Study Area and other similar habitats across Nova Scotia. Neither species (*Eutrochium purpuren* and *Eutrochium macultatum*) is suitable for conservation efforts and the presence of either in the Study Area has no impact on the EA.

4) Wetlands assessments used old (2000 & 2004) non-peer reviewed science regarding wetlands when many, much better, and very current peer reviewed articles discuss Forested Wetlands/treed swamps in NS/Atlantic appear to be avian biodiversity hotspots for species known to be in the Project Area?

Wetlands are included as a valued component (VC) in the EA. The effects assessment for wetlands, like all VCs, looks for interactions between the Project and the VC. In the case of wetlands, potential interactions are first identified through desktop assessment and then field delineated in areas where there is potential for interaction with the Project infrastructure. The EA describes mitigation measures to minimize the alteration area and reduce impacts on functionality. Further refinements are likely to occur during the detail design of the Project to minimize the interactions between delineated wetlands and Project infrastructure.

Literature references in this chapter are used to describe potential effects to wetlands from activities on a general scale. The effects assessment is based on the field research and interactions with Project infrastructure.

The EA also confirms that permitting is required for any wetland alterations, which will include compensation for loss of wetland habitat. Further information on the Nova Scotia Environment and Climate Change Wetland Alteration Application Approval Process can be found here.

5) See 4. Why doesnt EA consider the significant carbon sink potential of treed swamps, fens and bogs in project area and record stored carbon/GHG that will be lost during wetland alterations?

There is an overall significant reduction of GHG emissions associated with this Project, whereby any increase in GHG emissions associated with construction activities, manufacturing of equipment, transportation of equipment, and loss of vegetation habitats capable of sequestering GHG emissions will be offset, while still resulting in a reduction of GHG emissions associated with power generation contributions to the Nova Scotia Power Grid.

The GHG assessment in the EA is designed to identify and quantify direct emissions from Project sources during the different phases of the Project. The methodology was developed in accordance with the specifications described in the International Standard ISO 14064 (2019), which considers only the largest sources of GHG inputs, allowing for a more conservative scenario. Further, altered wetlands will be compensated at a 2:1 ratio and the resulting effects of wetland alteration (and subsequent compensation) on the Project's GHG balance are assumed to be negligible.

6) Why apparently no field work completely in Roaring Brook when 6 turbines and some related infrastucture sit along its headwaters, and when Roaring Brook and Hants Brook had Significant Habitat identified in the 2006 Higgins Mountain Road wind project EA? There apparels to be no information about this in the 2023 EA.

Field work for the Higgins Mountain Wind Project (2023 version) was scoped for the Project layout presented in the EA Registration Document, as potential effects are related interactions between the Project and the environmental resources within the identified Study and Project Areas for each of the Project VC's. Field work completed within the Project footprint is described in the EA and included (but is not limited to) wetland delineation, watercourse assessment, and rare plant and lichen surveys.

The original Higgins Mountain Wind Project presented in 2006 was significantly different than the project presented in 2023. Furthermore, environmental resources including the location of existing roads and disturbance to existing vegetation disturbance areas have also changed over the past 15-17 years.

7) Why was there little field work around Carters Lake when it is clearly identified in the ACCDC reports to be full of vascular flora? Was the fen or wetland west of Carter Lake assessed considering there may be overstay removal for connector route?

It is noted in Section 7.3.3.5 of the EA that additional field investigations are required in the vicinity of Turbines 15 and 16. The EA has identified the commitment by Higgins Wind to survey areas subject to minor layout modifications when field conditions are suitable to do so. This commitment is also made in the flora and archaeology chapters. The results of follow up surveys will be provided to NSECC and NSCCTH, and will also be included in future permit applications, as applicable.

8) Will proposed connector route over Rockland Brook require overstored removal? If so, how wide? Does it go through the section of old-growth forest your field assessments discovered on crown land?

The electricity collector line does cross Rockland Brook, connecting electricity collection lines in the vicinity of Turbine 16 to the proposed substation location.

To support the collector line right-of-way (ROW), the Project will require a 12 m wide RoW. It is noted that disturbance to vegetation will be dependent on the vertical clearance requirements to prevent interaction between vegetation and the energized collector lines.

It is also noted that the collector line routing across Rockland Brook is located on private lands owned by Northern Pulp. There is a short collector line connection between Turbines 16 and 17 that crosses a parcel of Crown land.

9) Re: photo taken from Ski Wentworth property.

Strum took the photo in question (EA drawing 10.2 J), as requested by Higgins Wind. Strum understands that the request to have pictures from Ski Wentworth included in the visual assessment was raised in CLC meetings, at public meetings, and through direct discussions with (a member of the family that owns Ski Wentworth). While a number of photo locations had been suggested, this photo location was selected as it was a representative viewpoint from the ski hill.

The photo in question was taken in good faith, where permission to access the Ski Wentworth property was inferred; however, we apologize if there was a misunderstanding in the communication.

We trust the above to be satisfactory. If you have any questions, please contact us.

Thank you,

VP, Environmental Assessment and Approvals
@strum.com

Pollock, Meaghan Elizabeth

From: @csc-scc.gc.ca
Sent: April 12, 2023 9:17 AM
To: Environment Assessment Web Account
Subject: Proposed Project Comments

Project: higgins-mountain-wind-farm Comments: I have multiple concerns, some of which I have already relayed. Additional concerns include: 1.Endangered Mainland Moose - what is the Higgins Mountain Wind Project Proponent doing to mitigate the risk to Mainland Moose? I want to protect our moose. 2.I have land value concerns for my property in the area. 3. I have concerns with the trails being affected and destroyed. 4.The visual impact will we catastrophic for this area. Wentworth Valley is a truly special place that has been enjoyed by multiple generations. My goal is to protect its beauty for future generations, your plans destroy this plan. Name: Email: amy.jorda@csc-scc.gc.ca Address: Municipality: Wentworth email_message: Privacy-Statement: agree x: 54 y: 28

Pollock, Meaghan Elizabeth

From: @hotmail.ca
Sent: April 12, 2023 10:33 AM
To: Environment Assessment Web Account
Subject: Proposed Project Comments

Project: higgins-mountain-wind-farm Comments: I am surprised that Higgins Mountain proposed wind turbine project has come to this stage. All the way along, the local community has made it clear that we do not want large industrial wind turbines here. Our MLA and other politicians attended a public meeting about a month ago and listened to a substantial list of concerns and they agreed that this was a bad idea. I consider myself to be pro-environment and yes, we DO need to get off fossil fuels. Obviously, our climate cannot take it anymore and even for those who do not care about rising sea levels, flooding, and fires, they understand the economic and political pressures. But, wind power is NOT the answer. Every giant turbine is manufactured elsewhere and travels over thousands of kilometers to get here. Once here, 10,000 square metres of land is clear-cut for each tower and 2,500 tons of concrete is poured into the ground as a base. This 2,500 tons of concrete for each tower then remains in the ground in perpetuity. Our forests will become industrial sites. The animals and eco tourists will no longer visit. It will be very sad for Nova Scotia. Plus, the project installation stage will generate over 13,000 tons of CO2, a deadly greenhouse gas. It is NOT good for the environment! And on the economic side, the majority of the money goes to the landowners who happen to be owned by the Widjaja family from Indonesia. This billionaire family doesnt need the money! I encourage you to resist this proposal and consider seriously other than wind power alternatives for getting off coal power generation. Or, if wind power is seen as the only alternative in the short term, put the sites close to where the coal is currently being burned, where the grid is ready for it. Do not turn our green forests into grey industrial sites. Thank you. Name: Email: @hotmail.ca Address: : Wentworth email_message: Privacy-Statement: agree x: 46 y: 21

Pollock, Meaghan Elizabeth

From: Environment
Sent: April 12, 2023 2:49 PM
To: Environment Assessment Web Account
Subject: Proposed Project Comments

Project: higgins-mountain-wind-farm Comments: kSkkcSKcKSclkC Name: Email: Address: Municipality: email_message: Privacy-Statement: agree x: 71 y: 25

Pollock, Meaghan Elizabeth

From: @icloud.com>
Sent: April 12, 2023 8:03 PM
To: Environment Assessment Web Account
Subject: Higgins Wind farm

[You don't often get email from @icloud.com. Learn why this is important at https://aka.ms/LearnAboutSenderIdentification]

** EXTERNAL EMAIL / COURRIEL EXTERNE **
Exercise caution when opening attachments or clicking on links / Faites preuve de prudence si vous ouvrez une pièce jointe ou cliquez sur un lien

We would like to express our concern about the visual impact of turbines on our beautiful landscape. Living in Pictou County, we see the result of ineffective zoning and planning bylaws. There are turbines and red flashing lights marring the horizon in every direction.
The province must come up with an appropriate zoning plan so there aren't turbines on every hilltop. We are against the Higgins Windfarm project until such time.
Let's make sure our future generations and tourists can enjoy the scenery of Nova Scotia!

Pollock, Meaghan Elizabeth

From: @yahoo.com
Sent: April 12, 2023 10:02 PM
To: Environment Assessment Web Account
Subject: Proposed Project Comments

Project: higgins-mountain-wind-farm Comments: Hello, I am strongly opposing to Higgins Mountain Wind Farm. We all do want to act on climate change but having putting windmills/ wind power supply is not a solution. Higgins Mountain farm will destroy green space and animalâ?Ts natural habitat. If we want to help cure the earth then we should NOT be cutting down trees or destroying green space. Nova Scotia should go find a different way of producing or sourcing out energy such as nuclear. Name: Email: @yahoo.com Address: Municipality: email_message: Privacy-Statement: agree x: 98 y: 24

Pollock, Meaghan Elizabeth

From: gmail.com
Sent: April 13, 2023 8:26 AM
To: Environment Assessment Web Account
Subject: Proposed Project Comments

Project: higgins-mountain-wind-farm Comments: We need to preserve this wildlife corridor for animals humans alike. Name: Email: @gmail.com Address: Municipality: Wentworth email_message: Privacy-Statement: agree x: 67 y: 20

Pollock, Meaghan Elizabeth

From: Protect Wentworth Valley <info@protectwentworthvalley.com>
Sent: April 13, 2023 8:25 AM
To: Environment Assessment Web Account
Cc: Minister, Env; Minister, Natural Resources and Renewables; Minister of Communities, Culture, Tourism and Heritage; Protect Wentworth Valley
Subject: Letter of Opposition to Environmental Assessment Registration Document for the Higgins Mountain Wind Farm (March 2023)
Attachments: PWV EA RESPONSE (1).pdf; Higgins Wind Turbine EA Visual Analysis March 2023.pdf

Protect Wentworth Valley respectfully submits this submission of written comments in response to the Environmental Assessment Registration Document provided for the Higgins Mountain Wind Farm Project.

Attached are the following two (2) documents:
1) PWV EA Response
2) Higgins Wind Turbine EA Visual Analysis

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Protect Wentworth Valley

protectwentworthvalley.com
info@protectwentworthvalley.com

April 12, 2023

Honourable Timothy Halman
Minister of Environment and Climate Change
PO Box 441
Halifax, Nova Scotia
B3J 2P8

RE: Letter of Opposition to Environmental Assessment Registration Document for the Higgins Mountain Wind Farm (March 2023)

This submission of written comments is in response to the Environmental Assessment Registration Document provided for the Higgins Mountain Wind Farm Project. Protect Wentworth Valley (PWV), a group of volunteer community members who have significant concerns regarding this project and the proposed location in the Wentworth Valley area stand in firm opposition to granting conditional environmental assessment approval by the Minister of Environment and Climate Change.

We desire that the special ecology and biodiversity of the Wentworth Valley be protected, and where sustainable, support human enjoyment of it now and for generations to come.
We believe that the size, location, extent, impacts, risk and cost of any project are critical considerations and that they should proceed only when the benefits of renewable energy are sustainable and developed with consideration to the many factors that contribute to the quality of life of a community and Province.

The Minister should reject this Environmental Assessment because of the likelihood that it will cause adverse effects and environmental impacts that cannot be mitigated by the Proponent. The Higgin's Mountain Wind Farm Project Proponent relies on the premise of no evidence that harm is likely but the Environmental Assessment must provide evidence that harm is unlikely.

Based on our evaluation of the Environmental Assessment Registration Document in its entirety we wish to state our unequivocal opposition to the Project. As follows are our primary concerns related to each section.

<u>Biodiversity and Connectivity (Section 7 in Appendix 1)</u>

The Project area is in the heart of an essential biodiversity corridor between the Portapique River Wilderness Area and the Wentworth Valley Wilderness Area. The Minister should reject the Environmental Assessment because the Proponent has not proven that they can mitigate the harmful impacts of the Project to biodiversity, ecological connectivity, the Nova Scotia Mainland moose and their core habitat and corridor and neighboring parks and private land trust conservation properties.

Endangered Nova Scotia Mainland Moose (Section 7 in Appendix 1)

The majority of the Project area is private land, essential moose habitat and a well-known moose concentration area. The Minister of Environment and Climate Change must protect this habitat including Wetlands and adjacent forest habitat consistent with the Province's commitments per the Nova Scotia Mainland Moose Recovery Plan. The Proponent fails to identify how they will mitigate the risks that this Project places on the endangered Nova Scotia Mainland moose.

co-author of the Nova Scotia Mainland Moose Recovery Plan, provided key guidelines/advice that she mentioned in conversations with the Proponent and that were omitted in the Higgins Mountain Wind Farm Project's Environmental Assessment:

- Minimize roads, fences, lighting and other linear infrastructure.
- Orient and clump them together in ways that do not sever or intersect intact forest or other natural habitat linkages through the site.
- 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.
- Retain both hardwood and softwood and access to water in order to provide summer and winter security and thermal cover and forage.
- Include mechanisms to deter motorized human access beyond that necessary to service the site.
- Retain and enhance natural cover for moose and other SAR habitat delineated as core habitat in Recovery Plans.
- 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.
- Avoid new road construction/expansion/enhancement in areas delineated as unroaded/low road density in Recovery Plans.
- Retain as much natural cover as possible to favour moose habitat over deer habitat to minimize incursion of deer and associated P. tenuis (brainworm fatal to moose and carried by deer).

Socio-Economic Impact (Section 8 in Appendix 1)

The Minister should reject the Environmental Assessment based on the socio-economic impact analysis of the area. The project will harm recreation, four-season tourism, and property values and the EA minimizes the significance this area plays in municipal, regional and interprovincial economies.

The generalizations included and vagueness of the socio-economic section of the Environmental Assessment does not provide the Minister the ability to do an analysis of the assertions made and is insufficient for the Minister to make a conclusion.

Visual Impact (Section 10 in Appendix 1 and 2)

The Minister should reject this Environmental Assessment based on the visual impact of the Project on the Wentworth Valley and Folly Lake areas various scenic viewscapes. The Proponent grossly underestimates the impact of this project on the area (Appendix 2, Higgins Mountain Wind Farm Visual Analysis). The impact is magnified by the topography. The Proponent minimizes the impact on rural existence and tourism. In the Environmental Assessment there is no mitigation strategy or monitoring.

Cumulative Effects (Section 14 in Appendix 1)

The Minister should reject this Environmental Assessment based on the Project's enormous footprint and scale. The scope should have weight in Ministerial decision making in addition to the cumulative effects of two existing wind projects in the area which have already passed the Department of the Environment's approval, Natural Forces and the 2006 Higgins Mountain Road Project. RES has an industrial wind proposal due east of Higgins Mountain and SWEB has a proposal ready immediately west of Higgin's Mountain. It is important for the Minister to take note of the existing cumulative effects of the railroad, quarry, forestry, and trucking in the area. The province must take cumulative effects into account in reviewing Environmental Assessments.

The Environmental Assessment contains numerous factual errors, it relies heavily on outdated research to support claims and draws incorrect assumptions made because of sub-standard technology in testing hypotheses and a lack of robust engagement with community stakeholders to provide important local context.

The Minister should reject the Higgin's Wind Farm Project Environmental Assessment as it failed to provide sufficient evidence of no harm to the health and welfare of community members, socio-economic well being of communities and the environmental welfare of the biophysical environment.

In addition to these major concerns, PWV has provided more specific comments related to inadequacies in every section of the document under review by the Minister. We ask that the Minister or a person designated by the Minister review these comments before considering granting approval of the environmental assessment document provided by the proponent. These comments support why Protect Wentworth valley believes that the Minister should reject this Environmental Assessment. (See Appendix 1)

Appendix 1: Specific Inadequacies Noted in the Environmental Assessment Document (Organized according to section in the Environmental Assessment Report)

Section 2: Project Information

Overview of errors and inadequacies

1] Failure to prove in the Environmental/ecological cost benefit analysis that this Project's environmental benefits will outweigh the environmental cost of destroying forests, wetlands and other natural carbon sequesterers and carbon sinks

2] No resolution of legal dispute with landowners

3] Confirmation of project lifetime and assurance project 35, not 25 years

4] The Minister should disqualify the Proponent based on non-compliance with the previous 2006 Environmental Assessment agreement

Specific concerns with EA Report

2.1

Indicates that the Project is expected to be operational for a minimum of 35 years but in 3.4 page 16 indicates that decommissioning in 2050 (25 years) . What is the expected time frame of this project?

2.1

Indicates that the Study Area is primarily private land and drawings indicate the project area is owned primarily by a Land owner which is part of a group of companies currently suing the province of Nova Scotia. (8.2.2 states the study Area is primarily " Commercial Forest " private land owned by Northern Timber Nova Scotia Corporation) The Province of NS also holds the mortgage on this property on this private land. We understand that given these matters are now before the Courts the Province cannot make any comment on the ownership, status or planned use of these lands. The Minister of Environment has to consider and determine with this uncertainty how he can make a decision that will result in so much disruption and change to these properties and dictate the use of it for what could be 35 years. The Minister should defer any decisions with respect to the use and development of this land until this litigation with the owner of the property is resolved.

2.2

In its assessment report Climate Change 2022

While this project may be able to contribute to meeting NS's renewable energy goals, so could many of the other projects lined up waiting to also help contribute. And those could have less of the following negative impacts as the Higgins Mountain Wind Farm Project appears to have;

- biodiversity
- threats to various Species-at-Risk, SOCI, etc,
- ecological connectivity between large protected areas
- loss of super carbon sinks/unique wetlands
- probable avian diversity hotspots

- various unreported socio-economic issues
- poorly represented visual impacts on a historic scenic area

2.3.2

Higgins Mountain Wind Farm partners did not meet their 2006 Environmental Assessment Terms and Conditions of Approval when they began decommissioning of the project without submitting a decommissioning plan to NSE. There is, or recently was a non-compliance directive against them.

At the same time the 2023 Higgins Mountain Wind Farm Project submitted a new NS Environmental Assessment for a much larger 100 MW project that is utilizing some of the 2006 project defunct turbines.

2.3.3

The 2006 Higgins Mountain wind project was in non-compliance with Cumberland County wind by-laws for two to three years beyond the permitted six month non-operational period.

2.4

Higgins Mountain Wind Farm has applied for funding under the Natural Resource Canada's Smart Renewable and Electrification Pathways Program under the Established Renewables Stream and a contribution agreement with the Federal Government if the application is successful. If Federal funds are invested, the project should be subject to a federal environmental assessment .

Public record indicates that Higgins Mountain Wind Farm has hired a lobbyist " seeking to raise the awareness amongst the political and bureaucratic stakeholders with the federal government for its project based in Cumberland County". It is also public record that the lobbyist "has arranged or expects to arrange one or more meetings on behalf of the client between a public office holder and any other person in the course of this undertaking". Again if the federal government has interest in and is funding this project it should be subject to a federal environmental assessment to ensure it adheres to those guidelines.

Section 3: Description of the Undertaking

Overview of errors and inadequacies

1] Failure to prove that surrounding communities have been provided an opportunity for fulsome, objective engagement where issues meaningful to the people in these areas are discussed e.g., visual impact, water safety, flicker, sound, ….

2] Failure to prove that widening of existing roads and construction of new roads will not negatively impact populations of mainland moose, other endangered species, water quality, land erosion

3] Failure to prove that construction and/or renovation of roads will not use any pesticides, or other chemicals.

4] Failure to provide guarantee that a company with a history of non-compliance will comply to a new agreement and provide a solid mitigation plan for non-compliance

5] Failure to provide accurate sitelines and conclusive evidence that telecommunications won't be negatively impacted AND that the community will be able to access any telecommunication upgrades or additions for future needs once wind turbine projects are operational. Failure to provide mitigation strategy if wind turbines have negative impact

6] Failure to prove that all setbacks protect wildlife and humans from suffering the effects of flicker, sound, and loss of habitat. Failure to provide a monitoring plan that includes pre-construction data, monitoring as well as monitoring throughout operation and deconstruction. This should be supported by a solid mitigation plan that results in immediate and resolution to the satisfaction of community stakeholders.

7] Failure to provide a Complaint Resolution Plan.

Specific concerns with EA Report

There are affected communities missing from this section including the Communities of Sutherlands Lake, Isaac Lake, Wentworth Station, and Greenville. Perhaps this is to make it appear that there are less people living nearby- as was mentioned by a representative of the Proponent in an earlier CLC/Community meeting when they stated: "No one lives there anyway". We live here, we play here, we work here. These are OUR communities and OUR community families.

- This section has minimal information on proposed locations and schedules during construction and operations of the Project.
- There is no water management plan for surface water, ground water, storm water, drainage, erosion, sediment control (a well known forestry issue on Higgins Mountain).
- There is very little detail around transportation, modes, routes, load size, frequency, continuous cement pour plans, timelines, night time work, speed restrictions (dust/safety), tire cleaning.
- Viewscape protections have been achieved through community efforts convincing both Cumberland and Colchester municipalities to enhance setbacks and restrictions. No discussions about possible tree screens and buffers zones for remaining visually dominant turbines.

The buffer zones around the towers and roads are not defined adequately. The document states a 100 m radius from the turbines and a 25 m buffer zone from the centreline for road layouts. There is no mention of how the 100 m buffer is determined nor is there evidence that this is sufficient- especially since the actual radius for the blades on the turbines expands 170 m. The majority of the roads that are stated as existing in this project are roads that are not maintained. Some are old logging roads, recreational trails etc - unclear how 25m is determined given that there is no centre line. All of these roads stated as 'existing' will require extensive clearing and upgrades to support the construction and maintenance of this project. All of these roads dissect areas of great biodiversity, old growth forest, and ecological connectivity. Further to more statements in our reply we do not believe the significance of the impact to upgrading these roads has been given throughout this Environmental Assessment.

Currently Tower Road roadbed is about 7m wide. Ditches on each side are cleared an additional 6m per side. Therefore road and ditches cleared approximately 9.5m from centreline to end of cleared area on each side of the road. The new buffer means new road clearing width of an additional 17m is required per side of road beyond what is currently cleared.

The Proponent frequently throughout the Environmental Assessment states something to the effect that since we are using existing roads effects will be minimal. Potentially 26 km of roads/ditches at 19m width being cleared to 50M wide is significant, as is 7.5km of new roads to 50m width. New connector lines, laydown areas and other infrastructure being cleared also add up to considerable work.

As of April 2, 2023 Northern Pulp is currently cutting near towers 17, 16, 15, and 14. Areas around turbines 1 - 13 not seen since January when they were cutting near 1, 2, 3, 4. It would seem that many areas that will require further study are actively being logged before an Environmental Assessment is complete or approved.

The Environmental Assessment also mentions Previous Development within the 'new' development. We would like to bring forth the significant fact that Higgins failed to meet their 2006 Environmental Assessment decommissioning plan when they felled one of their existing turbines like a tree and impacted surrounding forest behind it that was previously undeveloped for wind turbines. They scattered debris and waste with no thought and created a field of destruction. They have been cited with a Non Compliance directive.

Under citing considerations they say they included many considerations- including reference to telecommunications- but yet they have provided no such evidence to any telecommunications provider for a list of longitudes and latitudes of turbine sites and a map - neither of which match up. They also do not mention the consideration of community members here and the consideration of the disruption to the community both during and after construction. As well there is no mention of the essential corridor and habitat of the mainland moose.

Residential setbacks were changed because of community impact and concern of the Project- we want this to be recognized- not because the proponent deemed it necessary. We would also like to bring to light that the restricted overlay in Cumberland county was set to be 3.5 km until the proponent of Higgins Mountain Wind Farm threatened legal action against the county should they not change it to 3.2 km. The community did not have a chance to comment on this as it was done at the very last minute at the second reading of the bylaw resulting in further discord between the Proponent and members of the community.

The community has also been asking for shadow flicker reports to determine proper setbacks- we have to date not been provided any- this is very concerning considering there are several documented complaints in the Colchester area about shadow flicker and how the current models for guidance were non sufficient.

The Proponent also refers to prior disturbed land- we believe that is irrelevant. It was never logged under best practices and now is the time to restore the area and protect it, not further decimate it to wasteland. And again we bring attention to the existing roads- that they must be widened to 25m - as we mentioned above most of what they are deeming as 'existing' roads are old logging or recreational roads- which the majority, currently are less than 25 ft wide- so it is substantial to expand these roads to 25 m.

Under the physical components of the turbines- we would like to bring attention to the matter that a few decades ago that the highway #4 was replaced with a new Hwy 104 because of the

bad weather through this area. The old highway was referenced as ‘death’ highway and the new highway known as the Cobequid Pass is frequently shut down because of poor weather conditions. Wind turbines do not work well in bad weather and the size of the turbines being suggested are very high risk. There is also no mention of fire suppression or emergency access and maintenance procedures. As well as ice throw values that could further impact the ecosystems around them.

There is much duplicate reference to existing roads and turbines in this section of the Environmental Assessment - so we will again repeat- Higgins Wind was very recently under a non compliance directive for their 2006 Environmental Assessment on decommissioning their old wind turbines. There is no confidence that they have any respect for the Environmental Assessment or its surrounding community by the poor decisions and actions they continue to make.

We will also touch on the recreational use of existing roads they are continuously referencing in this document- they do not give details on how long roads that are used for recreation will be closed, from our estimates we are talking at least 3 years. There are also no details provided on how they will be creating ‘new’ trails- so therefore we can only infer that there is no impactful reference provided or included to new trails to replace lost recreational trails in all aspects of impact of the community and biodiversity surrounding the proposed project area.

There is also reference to existing transmission lines in the Project area- at least half of these existing transmission lines collapsed in a storm in 2021 and were not maintained or repaired. In 2022/2023 a weather tower also collapsed in their survey area which to this date has not been repaired or re erected. Further construction will be required to repair what is being referenced as existing. The Proponent indicates the current transmission infrastructure in the area of Wentworth and notes it will not be used for the Project. It is in disrepair near the top of Higgins Mountain. Decommission plan required with non-compliance penalties before approval considered.

This Environmental Assessment submission has not provided any water table/resource testing as part of the site consideration or preparation. This area is a mineral dense area. A large highway design had to be continuously redirected and re-engineered as these mineral dense areas became apparent. Approving an Environmental Assessment on a Wind Turbine project without requiring testing on identification of these sites is premature. Any disruption to mineral dense sites could have a detrimental effect on potable water to human and wildlife alike. Also no mention of acid rock drainage risk, risk to marine life is failed to be mentioned as impactful as well.

In the section on access road construction- there is no mention on what chemicals or modes of prevention will be used to control dust and debris during construction. No mention of the amount of hours and days of work that could significantly impact the land owner and recreational user.

The turbine pad lay down site is said to be 100m x 100 m, yet the radius of the turbine blades is 170 m across- so there will have to be impact beyond that 100 x 100 m pad. There is a discrepancy which needs to be reconciled.

The stated life span directive in this Environmental Assessment is varied throughout the document ranging from 25 to 35 years.

Reference to plowing of roads brings forth the loss of these roads for recreational use beyond the construction period. There is no quantification on the loss lands for recreational use nor is there any mention of how plowing of roads will affect recreational use beyond the construction period.

Reference to vegetation management is made but there is a lack of detail regarding use of herbicides and/or pesticides.

Section 4: Project Scope and Assessment Methodology

Overview of errors and inadequacies

1] Failure to prove that migratory bird populations won't be negatively impacted by turbine development

2] Failure to prove that the encroachment and destruction of Nova Scotia Mainland Moose core habitat won't threaten the recovery of the Nova Scotia Mainland Moose population. The Government of Nova Scotia committed to "address threats, protect and enhance habitat, improve connectivity and ensure regular monitoring and assessment of population health", news release from the Nova Scotia Natural Resources and Renewables Department, New Mainland Moose Recovery Plan, dated November 25, 2021.

3] Failure to provide visual studies with industry standard technology from locations identified by community members or provide evidence that community members have had ample opportunity to examine and provide comment regarding the impact

4] Failure to prove that the area that has been designated as a provincial "scenic loop" has been preserved and to that extent that community members are satisfied that visual spatial impact will not impact their quality of life or the socio-economic value of tourism and outdoor pursuits that benefit the area

5] Failure to prove that adequate surrounding area is included i.e. need to extend beyond 100m for 170 m turbines to provide evidence that endangered species and communities outside the project boundaries aren't impacted

Specific concerns with EA Report

We will immediately bring attention to the stated fact on site sensitivity that this is a Category 4 risk rating project- high risk. Because of the turbine height and baseline data. We also believe this is because of the recognition of the biodiversity of this area. **It is home to migratory birds and habitats, and species at risk.**

We would like to request studies of bird decline in areas of turbines of such height. We have not found any documented studies to coincide with the turbines being suggested. **There is also no mention of the Folly Gap migratory corridor for birds and the impact this project would have on such.**

There is no mention of a study on the ecological connectivity between wilderness areas addressed as suggested in the NSE's Proponents Guide to Wind Environmental Assessment.

When identifying 'valued components' **there is no mention of the mainland moose, altered waterways or potential impact on water quality.** We believe these should all be studied as valued components.

In the identified socioeconomic environment - **there are missing reports or references to all of these identified VC's**. The visual impact study will be referenced furthermore in our reply- but to touch-the visual impact photos/studies were found to be outside the identified areas to be reference and agreed upon with the community and the proponent as well as at different focal lengths that do no mimic 'real' life but what the proponent wants to be visualized- not the community that lives here.

In the "Spatial Boundaries" section there is no regional assessment provided for areas of great concern such as moose connectivity, cumulative effects, identification of this area as the highest elevation landmass on mainland Nova Scotia with significant high elevation wetlands and climate change refuge.

Again there is reference to the buffer area of 100 m- this cannot be considered accurate when the impact area of a wind turbine is a 170 m area. This is not an acceptable or an accurate buffer for consideration.

Again the life span is mentioned as 35+ years but with no reference on this.

The effects assessment criteria- the Project area is largely impactful outside just the boundaries of the wind turbines- the impact of this expands into all the areas surrounding this project. Residual and cumulative effect studies need to be implemented outside the boundaries of the project. There is significant risk to the species at risk, wetlands and old growth forest and their future longevity.

Section 6: Government and Public Engagement

Overview of errors and inadequacies

1] Validate records of 'engagement' with stakeholders and organizations list

2] Public engagement component failed to accurately portray community engagement

Specific concerns with EA Report

Having attended both open houses that the Proponent hosted and therefore having first hand knowledge of the events including the lack of organization, lack of answers/transparency from the proponents, negative public responses, we are aware of the inconsistencies and bias related to the reporting of the public engagement as included in the Environmental Assessment. The Bias and lack of full disclosure related to this section causes me to question the credibility of the entire document.

The Minister needs to understand and appreciate the widespread community opposition and concern related to this Project when making his decision.

Too Many Wind Project Questions Unanswered - Bill Martin (sixrivers.ca)

Higgins Mountain Clash of Interests - Bill Martin (sixrivers.ca)

See also Halifax Examiner, Saltwire, Shoreline Journal (print), CBC, others?CTV? Hfx radio guy?

Section 7: Biophysical Environment

Overview of errors and inadequacies

1] Most of the items studied are considered in the Environmental Assessment to be of no or low risk. Failure to provide proof that this is indeed true and that the definition of low-no risk is acceptable to community stakeholders.

2] Most of the concerns have no monitoring or mitigation plan. Failure to prove how this is acceptable for a project with so many unknowns and so much at stake. Failure to include meaningful mitigation strategies

3] Failure to provide justification for locating Higgins Mountain Wind Farm project in areas of key and essential habitat referencing the NS Moose Recovery Program

4] Failure to provide proof that the Higgins Mountain Wind project location will have NO impact on current moose populations as well as the growth of the population as set out in the NS Moose Recovery Program

5] Failure to provide details of how moose population will be monitored and detailed mitigation plan for remediating any harm to this populations

6] Failure to provide a detailed, evidence based plan illustrating habitat protection and wildlife corridors through the area that will provide, with certainty, sufficient habitat for the mainland moose to survive and increase population size to that required for a sustainable population. Failure to provide proof that for every forested area that is destroyed, equivalent areas are reforested to a standard that supports moose and other wildlife habitat

7] Failure to provide evidence that construction of roads, widening of roads, blasting, pad construction… will not cause harm to wildlife, ecosystems, waterways.

8] Failure to provide accurate and specific details regarding:

- Blasting-amount, timing, effect on bedrock, waterways
- Road construction and widening- amount, effects on waterways, erosion,flooding, water quality, wildlife…

9] Failure to provide justification for the use of Northern Pulp land already rendered useless from industrial logging. Failure to provide explanation as to how this is a rationale justification for permitting further destruction. Failure to explain why the landowner isn't being held to restoring the land to its former state and why they are permitted to contribute to global warming by leaving the land denuded as a result of poor forestry practices.

10] Declare all existing treed areas/forests, wetlands, bogs…. in the project area are to be preserved- i.e. no felling of trees or encroachment on wetlands to construct or operate turbines

11] Failure to provide solid evidence that blasting, and changes to water course and waterways won't affect water quality or fish populations downstream in all waters connected to waters coming from, originating in or connected to or in close proximity to the project area.

12] Failure to conduct a thorough geological study of bedrock, elements that are contained, —highlighting any risks for communities/individuals in proximity, downstream or within watershed areas of the project

13] Failure to provide proof there will be no risk of exposures to radon, arsenic, manganese, cadmium, uranium and other elements known to cause harm to humans and animals

14] Failure to provide a monitoring plan that starts with pre-project levels of radon, uranium, arsenic,... for all communities within watersheds and downstream of the project area.

15] Failure to provide a detailed mitigation plan to communities and individuals for addressing any alteration to baseline levels of these elements

Specific concerns with EA Report

Minister Halman and Minister Rushton should consider whether the stated 35 year lifespan of the Project is realistic and worth the risks to biodiversity, moose, Species at risk in the area, and reject the Environmental Assessment. Especially considering 20-25 year life spans of the industrial wind farms has been the historic best case scenario for most wind projects and the Proponents 2006 Higgins Mountain Road wind project was non-operational after eleven or twelve years.

Quantification of the GreenHouse Gas Emissions from the project:

Fugitive dust and GHG emissions from the construction of new roads and upgrading of existing roads were not quantified. Fugitive dust could have significant impacts that were not addressed on the various lakes surrounding the project area or potential air quality issues for the Wentworth Valley cannabis growing operation that borders the Project Area.

Concrete tower foundation and pedestal will be required for each wind turbine. The project will require a significant quantity of concrete to be produced and delivered to each wind turbine location. (1,000+cubic meters; 140+ truckloads per turbine; 2,500 tons of concrete per wind turbine) – Heavy duty diesel concrete trucks will be required to transport the concrete. The impact was not quantified in the Environmental Assessment.

Table 7.16

Reports significant savings in Greenhouse Gas Emissions as a result of this Project . This analysis is based on NS Power Energy Statics from 2021 which would not account for significant investments in renewable energies since 2021 including increased availability of solar energy and hydro. In addition the analysis does not include the emissions related to security, snow plowing, blasting, road building, road clearing, travel during operations and construction phases. The summary also does not account for the effect on emissions of deforestation during land clearing .

Regardless of the results of this Project the source of electricity will be significantly different in Nova Scotia than was reported by NS in 2021 . There have been many investments and will continue to be in renewable energy ie Hydro, solar, wind that will reduce our reliance on coal as a source of electricity. The savings calculated in Table 7.16 is based on the assumption that the

source of electricity throughout the project life will be the same as in 2021 (i.e. 47% coal) . This assumption is flawed and therefore the conclusions per this table as calculated should not be relied on.

Geophysical

Higgins Mountain contains the 2nd, 3rd, 5th, 6th, and 8th highest peaks on the mainland of Nova Scotia. See email forwarded by from Colin MacDonald, NS Director of Geographic Services on March 22, 2023 with maps, kmz files, and lat/long data.

See Saltwire news article about the discovery of the highest mainland summit here. Property borders Higgins Mountain Wind Project area.

Higgins Mountain is the single largest, highest landmass on the mainland of NS as can be seen in Higgins Mountain Wind Project Part 2 Drawing 7.3 Geomorphology. An unnamed peak west of in the Wentworth Valley Wilderness Area is the highest peak on the mainland of Nova Scotia which lies less than 2km from Project Area.

Dicks Meadows Wetlands of Special Significance are about 200-300M north and east of Higgins Mountain summit and make up the highest elevation wetland ecosystem on the mainland of Nova Scotia. The Dicks Meadows ecosystem uniquely drains into both the Bay of Fundy and the Northumberland Strait. Higgins Wind had multiple turbines located in the Dicks Meadows area until the Cumberland County Restricted Wind Overlay forced the project further west.

Unfortunately, DNRR's *Ecological Land Classification for Nova Scotia* is incorrect on page 87 where it claims Nuttby and Dalhousie are the highest points. **These unique topographic features matter as it relates to climate change mitigation and refugia for a number of SOCI and SAR that prefer cooler habitats.**

The Folly Gap is the single largest mountain pass on the mainland of Nova Scotia and the largest wind gap in the Cobequid Mountains. Most of the Western half of the Folly Gap lies within the project area. **This is a unique geological feature.**

The area has unknown potential to cause disturbance of geological hazards through geotechnical work, road building, blasting and clearing. **The Project Area is mostly at a High Risk for arsenic, Medium Risk for uranium with unknown potential for Acid Rock Drainage**. These elements can mobilize in groundwater and degrade nearby groundwater quality and the effects of these issues can last thousands of years.

Section 8.2.2 claims no mineral leases are known within the Project Area but fails to note the 265 NovaROC claims listed in the Project Area. These are easy to find on a quick desktop scan of the public maps page of the Nova ROC site. Proponents EA says No monitoring programs are recommended at this time despite no evidence of lack of harm to water quality. **The Proponent has failed to prove how these geophysical issues are not significant.**

Aquatic Environment

There are 21 lakes/ponds, 277 watercourse feature segments, and 1203 feature segments within 5 kilometres of the Study Area. According to the Significant Species and Habitats Database, Higgins Mountain is recorded to contain two areas of talus slopes within the Project Area.

The largest watercourse flowing through the Study Area is Rockland Brook, a major tributary to the Great Village River, which drains into the Bay of Fundy, and represents the largest watershed source within the Study Area. It contains old growth forest and contains big areas of colluvial slopes including talus, cliffs, wet rock faces, and rock outcrops.

Smith Brook and Wallace River are recorded as areas containing significant species and/or their habitat; Smith Brook is recorded to contain talus slopes, and Wallace River is recorded to contain Wood Turtle! Watercourses drain through three primary watersheds: the Phillip/Wallace Watershed, the Economy Watershed, and the Salmon/DebertWatershed. 18 watercourses were identified within the Assessment Area; several areas of potential turtle habitat were noted and 83 drainage features were identified within the Assessment Area.

Project activities, primarily those that involve earth moving, vegetation removal, and road construction have the potential to impact watercourses. These potential impacts could include habitat loss, changes to hydrology, and/or displacement of sediment. Effect-specific management, mitigation, and monitoring are required to eliminate, mitigate, or otherwise manage the magnitude of these direct effects.

Watercourse alterations (i.e. removal of overhanging vegetation from stream banks, removal instream cover, altered substrate composition, interference with sediment transport) for the project have the potential to impact aquatic habitat; habitat degradation. Indirect effects such as erosion and sedimentation or changes in water quantity and quality can be farther reaching.

Changes in surface water quantity / flow resulting from the alteration of bank or channel grades for road development, the compaction of soil from heavy machinery required for turbine assembly, the alteration of channel beds to facilitate the removal/replacement of pre existing infrastructure can alter channel morphology, increase flood potential, and disrupt habitat characteristics that support vulnerable species.

Changes in surface water quality can arise from alterations to the surrounding environment and can include an increase in water temperature from decreased shade, an increase in pollutants from machinery and infrastructure, and the mobilization of sediments. Given the dynamic nature of channeling water, effects upon water quality can quickly spread throughout different reaches of the respective watershed.

An EPP still needs to be developed. The above key points reiterate why this is not the right place for this project and the Environmental Assessment minimizes these important aspects of the area and proposed project.

Effects to watercourses are claimed to be not-significant without much evidence. More information required.

<u>Fish and Fish Habitat</u>

For species designated as rare or at risk, said species and/or their dwellings are provided protection federally under SARA (Species At Risk Act) and provincially under the NS ESA and Biodiversity Act.

Federally, DFO is responsible for the protection of fish and fish habitat in accordance with the Fisheries Act which states that no person shall carry on any work, undertaking or activity, other than fishing, that results in the death of fish, and restricts any work, undertaking or activity that results in the harmful alteration, disruption or destruction of fish or fish habitat.

The southern half of the Study Area is located within critical habitat for Atlantic salmon IBoF pop and there are documented observances of IBoF Atlantic salmon and Brook floater within the Study Area. The northern half of the Study Area is located within habitat for the Gsspe/Southern Gulf of St Lawrence, Species of Special Concern, atlantic salmon.

The Environmental Assessment says the effects to fish and fish habitat are not significant. Considering the clearing, blasting, infill, road construction, this seems unlikely. Six kilometers of roads and turbine locations span the border of two watersheds so risk factors for those 6km likely double other areas.

There is one large WSS within the Project Area and several other WSS associated with provincially protected areas including the Portapique River Wilderness Area to the west and Wentworth Provincial Park to the north. In addition there are two WSS (determined to contain SAR) located 2 km west of the Study Area associated with Sutherland Lake.

The Study Area is classified as a Mainland moose concentration area.

19 wetlands were identified either partially or fully within the Assessment Area; treed swamps, shrub swamps, bogs, fens, vernal pool. **More studies are necessary.**

The WSS in the Project Area known to support significant species habitat including confirmed presence of moose, beaver, nesting waterfowl, and an assemblage of flora SOCI including the large purple fringed orchid.

Project activities have the potential to impact wetlands through habitat removal, disruptions to hydrology, and/or displacement of sediment.

Loss of habitat can fragment wildlife corridors, potentially isolating species and lowering species richness. Habitat loss can also disrupt vital habitat characteristics that support vulnerable species. The removal or infilling of wetland habitat can impact the hydroperiod of neighboring wet areas, resulting in farther reaching impacts of habitat quality.

11 of 19 delineated wetlands require poorly defined alterations.

The Environmental Assessment that claims effects to wetlands are not significant do not seem credible.

<u>Terrestrial Habitat</u> – sensitive and important habitats

For species designated as rare or at risk, individual species and/or their dwellings are provided protection federally, under SARA (Species At Risk Act), and provincially, under the NS ESA (Endangered Species Act) and Biodiversity Act.

The Cobequid Hills and project areas contain large intact late successional Acadian forests to shade tolerant hardwood trees, such as sugar maple, beech (SOCI -Species of Conservation Interest), yellow birch, white ash, and ironwood. The forests of this ecodistrict are generally defined by a large abundance and diversity of ferns and club mosses in the understory.

Softwood-dominant forests can also be found at higher elevations, where topographic features are plateau-like, and mixed-wood forests dominate sheltered ravines.

The majority of the Study Area is composed of untreated (ie., not treated silver culturally) natural forest stands according to the Nova Scotia Forest Inventory Forest Groupings (81% cover).

Several high ranking potential old-growth stands were identified as occurring within the Assessment Area and intersecting with the location of proposed electricity collector lines.

New DNRR old growth forest policy protects all old growth forests on crown land. Cutting is not permitted. Old-Growth Forest assessments were not undertaken on private Project Area forests.

NSE suggests 'it is best not to locate projects close to parks and protected areas.'

Late successional forests such as the Rocklands Brook Valley exhibited old-growth features characteristic of the Cobequid Valley Ecodistrict and the Project design avoided these areas. **A segment of the proposed transmission line crossed one high-ranking forest stand on Crown land.**

The proponent plans to significantly widen 26km of pre-existing roads 6km of new roads. C**umulative impacts of road widening, infilling, new road construction, clearing for turbine and crane laydown sites, blasting etc. for 17 massive turbines will have a large impact.**

Talus slopes, a priority habitat feature, are found throughout the Study Area.

The Proponent claims no old-growth forest will be impacted by the Project yet they acknowledge old growth on the leased property is not being assessed. **The terrestrial habitat within the Assessment Area will be modified.**

No monitoring programs specific to terrestrial habitat are recommended for wetlands and other unique habitats

Various watercourses are also prominent throughout the Project Area known habitat for eastern waterfan. (SAR S1) – very rare, and highly sensitive lichen, and is granted a 'Protected Zone' buffer. This buffer restricts forest harvest, new construction, and road upgrades within 200 m of the lichen.

183 flora species were identified; 4 plant SOCI and 3 lichen SOCI. Blue felt lichen is granted a buffer for 'Rare and sensitive lichen' which restricts new construction within 100 m of the lichen.

Project activities have the potential to impact terrestrial flora. These activities could result in changes to or loss of habitat used by SOCI, loss of plant or lichen SOCI, or introduction of non-native species that may become invasive of the environment.

Because some of the Assessment Area was surveyed out of flowering season (October to December) due to a minor layout modification, additional plant and lichen SOCI surveys are recommended during flowering season before construction activities, including land clearing, are initiated.

Large areas of high-quality Mainland moose (NS ESA status Endangered S1) habitat were identified across the Study Area. The analysis displays the habitat of Mainland moose ranked from suitable to high quality in 5 ha hexagons spanning the RAA (Regional Assessment Area).

Threats to Mainland moose include habitat loss and fragmentation, particularly resulting from industrial activities; and loss of habitat connectivity due to the increased placement and density of roads.

Renewable energy projects were described as a medium level threat, as the nature of wind projects usually requires the construction or expansion of road networks and loss of forested habitat. Habitat loss and reduced habitat quality may result in behavioral changes, including from reduced opportunities for thermoregulation, loss of overwintering areas, loss of adequate sources of food, reduced space for mating, and reduced protection for calves. Connectivity importance of Project Area likely increases the Meduim Risk level.

The Mainland moose habitat analysis indicates that the majority of suitable habitat within the RAA is considered high quality.

It appears the Study Area supports a population of Mainland moose for at least part of the year.

The nature of the Study Area being at relatively high altitude and featuring abundant mixed wood forest and wetland habitat makes the majority of the Study Area ideal habitat for Mainland moose. The cooler summer temperatures in this area are also better suited to Mainland moose, and an observed lack of White-tailed deer and ticks limit the risk of disease spreading to moose using the Study Area. The deep snow in winter seems to drive the Mainland moose off the mountain; however, evidence of their return was clear in April 2021 and October 2022.

*Terrestrial fauna

(Important EA comments to capture). The majority of the Higgins Mountain Wind Farm project area is private land, essential moose habitat and a well-known moose concentration area. The Minister of Environment & Climate Change must consider protecting a lot of this habitat including the WSS, other wetlands and adjacent forest habitat.

Higgins Mountain Wind Farm project area needs to include a viable ecological connectivity corridor on project area land for moose between the Portapique River Wilderness Area and the Wentworth Valley Wilderness Area or there is no viable connectivity route for moose between the Cumberland County Core moose habitat areas and Colchester County core moose habitat east of the Project area.

Unfortunately there is only a small portion of Crown Land included in the Project area that could not meet all the needs for moose in the area as outlined in the Mainland Moose Recovery Plan. However the eastern ⅓ of the Project area crown parcel and a few other crown parcels nearby may also be important for moose connectivity.

Other crown parcels in the area that should also be considered for protection for mainland moose include the following properties;

PID 20131330, DNRR 4387, Carters Lake, wetlands, SAR downstream

PID 20131546 DNRR ID 4388, west of Folly Lake property with Significant Habitat talus slope and possible old growth on northeast side, forestry degraded wetland on western side.

PID 25267527, DNRR ID 5404, Newfound Lake, wetlands, intact mature forests,

PID 25267527,25267535 DNRR IDs 5408, 5409, East of Sutherlands Lake

PID 25385949, DNRR 5073, east of Cobequid Pass

PID 25509696, DNRR 5073, west of Cobequid Pass, borders PRWA

PID 25473372, DNRR 5074, northwest of 25509696, borders PRWA

There are other crown parcels scattered around the area that may also be suitable including but not limited to PID 25267394, and many crown parcels east of Hwy 4 and Folly Lake.

NSE Mandate Letter and Environmental Goals and Climate Change Reduction Act includes goals to modernize the EA process to better include cumulative effects and ecological connectivity by 2024. It is also included in the Minister's Mandate Letter. Unfortunately the mainland moose can't wait for 2024 and the Mainland moose recovery plan needs to find unique ways to try to manage this problem before new legislation is passed.

Dr. Karen Beazley, co-author of the Nova Scotia Mainland Moose Recovery Plan, provided the following key guidelines/advice regarding NS Mainland Moose that she had mentioned in conversations with the proponent and that were omitted in the Higgins Mountain wind farm Environmental Assessment:

- Minimize roads, fences, lighting and other linear infrastructure.
- Orient and clump them together in ways that do not sever or intersect intact forest or other natural habitat linkages through the site.
- 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.
- Retain both hardwood and softwood and access to water in order to provide summer and winter security and thermal cover and forage.
- Include mechanisms to deter motorized human access beyond that necessary to service the site.
- Retain and enhance natural cover for moose and other SAR habitat delineated as core habitat in Recovery Plans.
- 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.
- Avoid new road construction/expansion/enhancement in areas delineated as unroaded/low road density in Recovery Plans.

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

Biophysical Environment - **This section clearly illustrates why the Minister of the Environment should reject the Environmental Assessment and protect, once and for all, this unique area of biodiversity. This project does not belong here for all of the following reasons.**

Most of the wetlands in the assessment area are treed swamps (10). Treed swamps are important ecosystems for biodiversity and carbon storage. See attached papers from a recent research of forested wetlands (which treed swamps are) in Atlantic Canada. ….(IMPORTANT) treed swamps as carbon sinks in Nova Scotia. There appears to be no reference to these studies in the report and this would be important to consider for a carbon budget.

Other main wetlands are bogs (3) and fens (3). Bogs and fens are peatlands, which store the most carbon of all wetlands. Peatlands are also extremely sensitive to disturbance. Even people walking through them can disrupt the moss – lichen – heath network on the ground. Peatlands also have plants that are naturally nutrient-poor and adapted to acidic conditions. Disturbances that can introduce fertilizer, pesticides, other chemicals (arsenic, silting) can severely impact these plants. Peatlands are resilient and filter water, but too much contamination will disrupt this natural ecosystem service that the peatlands provide. Bogs and fens are a preferred habitat of the mainland moose.

Altering wetlands, notably peatlands and forested wetlands which are carbon sinks, defeats the purpose of a wind farm, unless the wetlands are ensured to be protected with this Project. When wetlands are altered, such as drying out or losing vegetation (ponds emit more methane than a marsh, for example), they emit GHGs of CO_2, CH_4, and N_2O. I read only one line on page 48 “Another source of methane is the decay of organic solid wastes and, indirectly, methane can also be released due to disturbance of wetlands (which act as methane sinks)”. They also act as sinks of CO_2 and N_2O. They should include ecosystem disturbances in their carbon budget, which they could have extrapolated from my paper and countless other papers about carbon storage of wetlands.

Most of the references are from governments or websites (secondary sources). They lack primary sources (i.e., peer-reviewed scientific papers). Proponent referenced two old wetland papers from 2000 s(roads/wetland) and 2004 (invasive species/s) wetland when there are many better scientific studies on wetlands that could have been sourced.

Higgins Mountain Wind Farm group should have given detail of how they will protect the wetlands, including how they will implement buffer zones, notably for peatlands to prevent damage and ensure natural carbon storage.

Wetlands of Special Significance in the Project Area make up the highest elevation wetland ecosystem on the mainland of Nova Scotia. This ecosystem uniquely drains into both the Bay of Fundy and the Northumberland Strait. Higgins Mountain Wind Project had multiple turbines located in this area until the Cumberland County Restricted Wind Overlay forced the project reluctantly further west.

Climate Change

Higgins Mountain is unique as the largest and second highest mountain on the mainland of Nova Scotia. It also supports the high elevation wetland ecosystem including WWS on the NS mainland, High elevation, steep ravines with microclimates etc are critically important for climate change mitigation and provides refugia for a number of SOCI and SAR that prefer cooler, damp and or higher elevation habitats.

The proponent has not demonstrated they are aware of this situation.

Terrestrial Habitat

7.4.1.3

The Higgins Mountain Wind Farm project area is surrounded by two large Wilderness Areas, a provincial park and three land trust conservation properties making the area a conservation area concentration area. Wilderness Area additions and no less than two more proposed conservation areas adds the conservation values of the area, with most of the properties sharing a boundary with the Project Area.

The Proponent failed to assess the collective impact the Project will have on the conservation areas.

7.4.1.5

Much of the Project area has been negatively impacted by industrial forestry practices, however there are many narrow bands of small semi-connected areas of sensitive or important habitat through steep ravines and along wetland corridors, throughout the Project Area.

The majority of Fiona forest damage was along forest and road edges and ridges exposed to northwest winds but otherwise most of the Project area forests managed fairly well.

The Proponent claimed they were “No mature forests of talus slopes were identified through field studies” despite mature talus slopes being a common feature on lower 2/3rd of Rockland Brook and other steep gorge terrain steep in Roaring Brook and lower Hants Brook.

Effects

No habitat for SOCI claim in the Assessment Area needs to be re-visited. Forested wetlands, fen, bogs, talus slope areas especially important habitat. Talus slopes throughout the project area, including large areas in Rockland Brook, Hants Brook, Roaring Brook, East Branch Great Village River, and perhaps Emery Brook, could be seriously impacted without mitigation planning work around siltation from forestry and road/site clearing work.

Effects of widening over 25 km of existing roads and over 7 km of new roads to a new 50M road width requirement plus new laydown areas, and other infrastructure areas is a significant amount of newly cleared area. As the mainland moose recovery plan outlines, moose prefer not to use wide, linear roads and cleared areas. The effects of this work could be significant and involve a lot of essential mainland moose habitat. The Higgins Mountain Wind Farm project cannot meet mainland moose recovery plan mitigation guidelines without harm to mainland moose.

Various Northern Pulp Moose Reserves have been identified on 3.1 that appear around a number of wetlands around the Project Area. While a nice gesture, it appears that it duplicates

protected buffers already afforded to all watercourses, brooks, wetlands and rivers in Nova Scotia. While existing buffers are better than nothing, they do not meet minimum corridor widths as suggested in the Mainland Mooose Recovery Plan.

Habitat Creation

New habitat MAY be created, existing essential habitat for moose and various SAR SOCI birds WILL be destroyed.

Low magnitude of impact is unreasonable considering project damage and threats to wetlands, moose, birds and other flora and fauna and the unknown threats to the significant habitat in areas like Rockland Brook.

7.4.2 Terrestrial Flora

Table 7.39 indicates a number of species that are unlikely in the project area. Mature beech trees can be found in and around Rockland Brook hardwood areas that have not been cut recently.

Project Area seems to be a hotspot of eastern waterfan which is both federally and provincially protected. Waterfan is particularly susceptible to siltation effects of industrial forestry operations, road building and road widening. The Proponent does not comment on either of Canada's or Nova Scotia's Eastern Waterfan Recovery Plans so mitigation effects likely unknown.

7.4.2.6

There are large clusters of SOCI near turbine sites 1,5, 7, 11, 13, and east-southeast, and downstream of turbine construction sites 15 and 16. Another cluster appears to be located near a new road intersection between turbines 8 and 11. Proponent does not discuss extra mitigation efforts for these areas.

Invasive Species

The Proponent shared an older research document on invasive species but did not discuss the wash stations, locations or their mitigation plan.

Conclusion

The Proponent does not provide evidence of no-harm to SOCI, species-at-risk or related habitat.

The Proponent does not define the amount of SOCI habitat to be negatively affected, nor do they justify the low magnitude risk assessment.

7.4.3 Terrestrial Fauna

The Project Area contains large areas of high quality moose habitat. The entire Project Area is considered Core Habitat or buffer. Most of the Project area is Essential moose habitat.

Page 135 states "mainland moose are a 'location sensitive species', the results of this model have not been provided in this EA" yet numerous specific location details have been provided throughout public accessible parts of the Environmental Assessment via text, figures and maps. Figure 3.1 is the most obvious bad example of sharing 'location sensitive' moose, flora and fauna.

Threats to mainland moose include habitat loss and fragmentation, particularly from industrial activities such as industrial logging and industrial energy projects, especially those that sprawl over larger areas such as wind energy projects. Another major threat to mainland moose is the loss of habitat connectivity due to increased placement and density of roads such as 30 km plus of road widening and new roads required for the Project Area.

The fall 2022 surveys provided evidence of more moose in areas not previously surveyed more which suggests more areas should be surveyed.

Fishers are known throughout the Project area, thanks to the many steep colluvial slopes of Rockland Brook, Higgins Brook, Harty Brook, Smith Brook and Roaring Brook and in many areas too steep for forestry work.

Effects p 146

Mainland Moose

‘Road construction is defined as one of the main activities likely to result in destruction of important moose habitat (NSNRR, 2021f). Renewable energy is included as a potential threat to Mainland moose in the Recovery Plan due to potential habitat loss, conversion, and degradation caused by vegetation clearing for infrastructure associated with wind farms.’Higgins Wind EA p 147

Roads/cleared ditches may be widened from current width of 19m to 50M for 26km of roads and 7.5km of new roads to a 50m width, not including new collector lines, tower site, crane pad sites, new infrastructure sites, turbine laydown areas. This will involve damage to no less than 11 wetlands. The Proponent does not share the total area required to be cleared for the project.

Second last paragraph is misleading.

“Of the 4,403 ha of habitat determined to be suitable for mainland moose within the RAA, only 184ha lie within the Assessment Area (3.4%).”

Which also means 78% of the Assessment Area (or 184ha) is suitable for mainland moose.

The majority of (4,403ha) suitable habitat within the RAA is considered High Quality habitat. The Proponent implies they are ‘avoiding areas’ of Wetlands of Special Significance but that was forced on them by the Cumberland County 3.2 km Restrictive Wind Overlay. Turbines were pushed an additional 1.5km west of WSS. The Proponent did not move these towers out of goodwill. Various locals had been asking the Proponent for ‘4km from Highway 4’ for no less than 3 years.

The Proponent does not appear to state total land cleared or altered that is considered Suitable for moose.

New roads and road widening worsen fragmentation, a key threat to moose. The Proponent has not demonstrated further habitat fragmentation will not harm the mainland moose and give the issue a Low value without any justification.

Proponent talks about connectivity and its importance but offers no solutions to this large scale, fragmenting, industrial project. They cherry pick small details for the Mainland Moose Recovery Plan but give no meaningful plan to mitigate risks to moose. They say the project area is already fragmented by previous work but don’t address how their project will make matters worse.

The Proponent does not consider the cumulative effects of the recent Environmental Assessment approval for Natural Forces Westchester wind project.

The Proponent does not address the risks to moose from wider roads as deer more easily access moose habitat, potentially spreading brain worm.

Poaching page 149.

The Proponent expects poaching to decrease because the 'increased presence of staff within the Project may act as a deterrent to moose poaching. Yet on page 151, the Proponent says post construction 'maintenance will only require a small number of technicians to access the site to perform regular maintenance. These statements appear conflicting.

Furthermore, this Environmental Assessment frequently gives very precise location data and descriptions for 'location sensitive' species such as moose. Drawing 3.1, it is shown in Tables, Figures, Trail Camera maps and details, and in general text. For a few examples in Section 7.4.3.5 see pages 141, 142, and 147. Many more examples throughout the Environmental Assessment Registration Document.

Climate Change (page 150) section for moose does not discuss the area as the second highest and largest landmass on the mainland of NS. This high elevation status is a critically important factor for climate change mitigation. Cooler temperature loving species such as moose, prefer cooler higher elevation wetlands. The Proponents EA does not discuss the amount of GHGs expected to be lost through alteration to the super carbon sequestration habitats such as the 11 forested wetlands, fens and bogs in the Project Area.

Northern Pulp is currently (April 2023) cutting in Project areas for collector lines and turbines 15 & 16 that appears to have been near perfect habitat for fishers.

Habitat fragmentation of an additional 5 km in length sounds significant yet the Proponent diminishes the amount.

Road Traffic p151

The Proponent does not state how many cement trucks are required per Siemens Gamesa 6.6MW turbine. Elsewhere in the Environmental Assessment the Proponent uses cement truck references for much smaller turbines in the Amherst area and these have little correlation.

The Proponent states renewable energy projects have small impact area compared to other natural resource sectors. The Higgins Mountain Wind Farm project sprawls about 12 km north south by about 5 km east - west. This equals about 60 square kilometers, 6000 hectares, or almost 15,000 acres. The overall size and scale of this project is HUGE. The Project occupies a HUGE footprint including the vertical plane.

Tree clearing is currently ongoing in the project area for project specific work. It is the beginning of migration season, birds and waterfowl and moose are returning to the area.

Sensory disturbances have been identified in Canadian research indicating that wind projects cause changes to chorusing frogs which is related to the persistent nature of wind sounds effects versus the irregular and non-going noises related to logging, and recreational off-highway vehicle users. See *Wind Farm Alter Amphibian Community Diversity and Chorusing Behavior* (May 2022)

Terrestrial Habitat Mapping

The Proponents first give away the name of the local bat hibernacula (L*** S****) and 17 others on page 156. Simple google research can pinpoint the locations fairly easily. ‘Location Sensitive’ species such as bats should not have locations disclosed. Many parts of this Environmental Assessment need to be redacted, or reshared without sensitive locations for bats and moose.

The Proponent mentions a 25 buffer for bats/hibernaculum but five turbines are located less than 8 km away and all turbines are located 10 km or less away. And significant areas of Rockland Brook colluvial slope, talus, cliff face, rocky outcrop area are completely surrounded by all the turbines with most less than 1-2 kms away. These steep slopes of Rockland Brook are also home to old growth forests and large areas with mature hardwoods, including many large nesting cavities.

Little brown myotis and Northern myotis located 2 km from the centre of Study Area.

Bat studies were incomplete. Active bat assessments only occurred in 2021 and no assessments were completed in the significant Colluvial slope habitat of Rockland Brook, only some research in flatter terrain. One fall season and one spring season seems to be the extent of bat research. October 2020 hibernacula data was corrupt in 2020 so no fall data. Two year baseline should be the minimum standard.

Collision risk and habitat loss: Wind turbines in forests impair threatened bat species.

German mitigation work restricting turbines to 500m setback from threatened species forest roosts.

Rockland Brook is full of excellent bat roosting, feeding habitat including old growth, mature hardwood and mixed stands of forests, and large cavity trees. Rockland Brook is also full of very steep colluvial slopes with talus, cliffs, wet cliffs, rocky outcrops, and features a major gorge brook with unique microclimate, topographic features. It is also in close proximity to a significant hibernaculum.

Most of the turbine sites are within 500M of significant roosting habitat and wetlands preferred by many species at risk including protected bats.

The Proponent has not clearly articulated how the Project will not cause harm to various bat species.

Pages 164 - 166 make the Project sound like a very bad idea for no other reason than bats.

Bat testing was very incomplete, and most prime habitat feeding and roosting areas were not assessed.

The Proponent’s very limited research found ‘only three’ species of bats that were at higher risk due to higher flight patterns seems to imply regional scale impacts are not likely.

Increased wind turbulence and localized temperature effects of large turbines were not addressed.

Without justification, the Proponent suggests the Post Construction Bat Monitoring Plan are not required.

7.4.5 Avifauna

The closest IBA in NS is 12km south of the project area. The Folly Gap is mainland's largest and highest mountain pass and is located due north of the Cobequid Bay IBA and makes it an obvious migratory and navigational corridor.

The numerous waterways, small lakes, forested wetlands, and significant habitats are scattered throughout and all around the project area. Smith, Harty, Roaring Brook and Hants Brooks and Dicks Meadows all are in the Project Area.

150 of the 185 Bird Point Counts appear to be along roads. Unique steep colluvial terrain of Rockland Brook and Roaring Brook had little research or transects.

The Proponent does not address 200m buffers for Rusty Blackbird habitat including wet, soft land and forested wetlands in proposed wetland alteration areas

2020 Project Area breeding surveys includes eight SOCI species, and various others have been previously identified in the area.

Growing evidence that forested wetlands may be avian diversity hotspots. Proponent does not discuss these areas in relation to avian diversity. Low risk analysis requires evidence.

Many SOCI were observed throughout the project area at various times of the year despite various research issues such as radar problems, limited significant habitat searches etc…Short test, observation windows.

There is no evidence that turbines with heights of 195.5 metres have been researched in our region. Low swing area of 25m above the ground has not been addressed.

Habitat Loss and Fragmentation are a problem in the Project Area Environmental Assessment. The large footprint of the project area of 12 km by 5 km wide is huge. Most large industrial projects confine the majority of the project area in a much smaller footprint. Over 20km of significant road widening and over 7km of new roads and associated turbine pads sites, crane sites, laydown areas, and 11 altered wetlands, collector lines, etc..

The Environmental Assessment suggests page 198 that 'the well drained, high elevation Project Area is not expected to provide an abundance of preferred habitat. 'Well drained' is not elaborated on, the Project Area is full of wetlands and large wet areas. Rusty blackbirds prefer Treed Swamps. The Project is full of treed swamps including no less than 11 to 13 treed swamps in the project area including no less than 6 treed swamps scheduled for alteration.

Mitigation Measures

Recommended to avoid topographic funnels such as lakes, river valleys yet the Project Area includes the west half of mainland Nova Scotia's most significant mountain pass, the Folly Gap.

Conclusion

The Minister should reject this Environmental Assessment as too much research is missing/incomplete. The size and location of the Project Area between two large Nova Scotia Wilderness Areas suggests that regional scale impacts are possible for many Biophysical environmental elements.

Section 8: Socio-Economic Environment

Overview of errors and inadequacies

1] Failure to provide more relevant, specific and recent data in drawing conclusions

2] Failure to provide details with evidence of road use, construction and damage from project construction and operation and its effect on roadways

3] Failure to provide objective and current data on the state of tourism and development and the project's impact on it

4] Failure to provide the project's impact on housing and land investment based on CURRENT literature.

5] Failure to provide a guarantee that housing prices and investments in properties will NOT be negatively impacted.

6] No mention of compensation for pre-project evaluation of properties and homes within project area nor a compensation package for any losses at time from time of construction through years of operation

7] Failure to provide SOLID and indisputable evidence that the project will support community socio-economic development positively and in a manner consistent with community stakeholder values and principles

Specific concerns with EA Report

8.1.1

Missed a lot of important details

- Regional, inter-provincial tourism destination
- Cumberland County (2016) $215,800,000 tourism value
- Ski Wentworth one of Nova Scotia largest tourism attractions based on 3 month winter market, not accounting for new four season tourism plans
- Total Ski Wentworth labour market
- Total short term rentals in the Wentworth area
- Wentworth drives a lot of economic activity to Masstown, Tatamgouche, Pugwash, Gulf Shore, Brule Shore, and the Fundy Shore

8.1.2

Sutherlands Lake, Folly Mountain, Isaac Lake missed

- Ski Wentworth and other trails, scenic attractions seeing more young families moving to Wentworth. Huge growth at the Wentworth Learning Centre daycare and various kids camps and programming.

Table 8.3 should break down values more specifically. Value of homes, new homes, renovated homes in communities surrounding the Project area are significantly higher than county wide numbers. For example there is a $3 million dollar log home in Wentworth Valley.

Table 8.4 doesn’t include tourism numbers. Ski Wentworth employs more people than all but Health Care/Social Assistance at 225-250 staff. Fox Harbour is another large Cumberland County employer.

Fox Harbour rents accommodations in Wentworth for their seasonal summer staff and they advertise Wentworth trails, scenery, fishing, and waterfalls recommended To Do’s while visiting Fox Harbour.

Bottom of page 203 Proponent mentions Truro and Amherst are service centres for Wentworth, etc… but fails to also state that people from various centres all around the Maritimes come to Wentworth for our trails and nature based tourism assets. Truro, Amherst, Halifax, NS, Moncton, NB and even PEI residents regularly visit the Wentworth area for mountain sport, recreation, trails, old forests, rivers, waterfalls, scenic look-offs, and protected conservation areas.

It is unclear whether the Proponent has interviewed business leaders and business development groups and associations such as golf resort operators, breweries, wineries, campgrounds, local grocers to get a scope of what percentage of their clients and customers regularly use Wentworth.

Table 8.6 describes the Proponents' take on potential Project-Economy Interactions but analysis fails to consider any downside to Valued Components. While Land Surveys, Temporary Works & Site Restoration, Commissioning and Site Reclamation may have few or negligible negative economic effects, the following may have negative effects not discussed or accounted for. That is; Sedimentation and Erosion Control Measures being inadequate (as they historically have been on Higgins Mountain), Clearing and Grubbing, Access Road Upgrades, Laydown Area & Turbine Pad Construction, Turbine Assembly, General Operation & Maintenance, Vegetation, Infrastructure Removal.

The Proponent speaks in general terms about possible local employment. While a few local employment jobs could occur during the construction phase, 2-3 years of a realistic maximum 25 year project. Most jobs will not be local, especially related to many pertaining to environmental studies, geotechnical investigations, engineering, turbine component transportation, turbine foundation construction, turbine installation, collector system construction, and substation construction. Industrial projects of this scale typically use national or international based construction companies for the majority of the work. The potential for employment is vague as to numbers, scope, duration and level of work for residents of both Cumberland and Colchester counties.

Temporary construction jobs will have a negative impact on the short stay, rental and hotel accommodation market, and tourism worker accommodation markets. The workers from away need will want to stay as close as possible to the Project Area competing with the well established tourism and recreation market. With possible exceptions of April and November, the Wentworth area is very under-served in any kind of accommodation.

Accommodations are so tight regionally that Fox Harbour Resort, 40 minutes away, rents staff accommodation in Wentworth for the golf season.

If the Proponent’s proposed energy literacy initiative is vague and unclear as to objectivity of the information to be presented.

The Proponents assertion the economic impact is positive is interesting considering the very limited scope of their analysis. The Proponent has not provided evidence that harm is unlikely to

the reality of the inter-provincial destination status of the Wentworth Valley area and Ski Wentworth.

Conclusion

The Minister of Nova Scotia Environment should reject the Higgins Mountain Wind Farm Environmental Assessment. Section 8 Socio-Economic Environment does not provide evidence of sufficient benefit to the local community, stakeholders in the area.

8.1.3

This section of the Environmental Assessment document which concludes that the Project will have positive economic impact is very vague and lacks detail to support this conclusion . The lack of support includes:

- Estimates the Project will result in approximately 115 m in investments in the province of NS over the next 25 years(4.6 million a year). There is no detail to support the breakdown of how these dollars will be invested, timing on the investment with the exception of the 800,000 annually paid to municipalities .

- The section does refer to where possible using local skills and labour and provides some estimates on employment requirements during construction and operations. The report does not provide any detail or commitment of what these jobs will be, the timing, duration, rates of pay etc. It has been reported and experienced by other wind projects that given the skills requirement of the jobs associated with wind turbine projects that labor is often sourced from outside the project areas and often not possible to use local skills and labour.

- The document describes hosting of CLC since 2019 has helped to characterize potential Project related opportunities and benefits for the local community. No funding has been announced at CLC or via any local community group.

The generalizations included and vagueness of this section does not provide the Minister the ability to do an analysis of the assertions made and is insufficient for the Minister to make a conclusion on the accuracies of the conclusion with respect to Economic Impact

8.2.2

The Higgins Mountain Wind Farm Proponent says “Ski Wentworth…is a central attraction for many landowners in the immediate area”. While this is true for many people fortunate enough to live in this outdoor recreational mecca, Ski Wentworth and the Wentworth Valley are a 90+ year regional ski, hiking, scenery tourism destination. The Proponent analysis undervalues the reach and the breadth of activity in this area.

The various Higgins Falls, Higgins Brook Falls and the Wentworth Falls, have been a scenic destination in Wentworth since at least the 1890’s. The popular Higgins Mountain Falls has been featured on the covers of two Nova Scotia waterfall guides; Waterfalls of Nova Scotia, and Waterfalls, Nova Scotia’s Masterpieces.

CLC member, local tourism operator, and owner of these falls shared with the Higgins Mountain Wind Farm Proponent the eco-tourism Site Master Plan overview of the public waterfalls and trails access and unique stay accommodations. No mention of the plans or its possible impacts

were mentioned in the Environmental Assessment.

Smith Falls are also on private land. Land owners there do not allow people on their property to access the falls yet the Environmental Assessment implies public access is acceptable. This information should be removed from the Environmental Assessment.

The Environmental Assessment mentions once or twice the two pending additions to the Wentworth Valley Wilderness Area. The Higgins Brook Significant Habitat property shares a 2.5km border with the Project Area. The Nova Scotia Nature Trust also has two additional pending conservation properties that also border the Project Area but they are not discussed in the Environmental Assessment document.

The Proponent states no mineral leases are known within the Project Area but fails to note the 265 NovaROC claims listed in the Project Area related to ten 'Rights Numbers". These are easy to find on a quick desktop scan of the public maps page of the Nova ROC site.

8.2 .3

With respect to users of the land parcels the Environmental Assessment states that the parcels are primarily industrial in nature and concludes that none of the existing and permitted use of the private land are expected to be impacted by the Project. This conclusion lacks the appreciation and recognition of the many traditional uses of these lands that have been permitted for many years and are referenced in other sections of the Environmental Assessment including wildlife habitat,home to species at risk, mountain biking, hiking, snowmobiling . Section 3.32 of the document indicates that throughout the 25 to 35 year life of the Project, roads will be plowed, sanded and salted as required for driving safety and in the event of an emergency. document. Many of these roads have been traditionally used for Snowmobiling and this appears to restrict the use of these roads for up to 35 years. The document does indicate that new trails will be created in the event that existing trails are no longer available. The document does not provide any detail as to the extent of new trails required, where they will be located and the timing of the building of the new trails.

This analysis given the lack of the recognition of the uses of these lands beyond industrial does not support the conclusion that the impact on land use is negligible.

The Proponent tries to suggest the relatively small base footprint (30 m diameter) of individual turbines suggests no problems but they omit the huge Project footprint which will occupy a significant space within the landscape at large.

In pages 208 and 209 the Proponent uses 12 referenced sources for property values that are 10 to 13 years old. In 2010 most turbines were significantly smaller than the nearly 200m range industrial monsters widely used today.

The Environmental Assessment includes reference to studies and research that supports that sales prices of homes surrounding wind energy facilities are not significantly different from those attained for homes sited away from wind energy facilities.

This section refers to a study by (Hoen et al., 2013) which concluded that if effects do exist, either the average impacts are relatively small and or sporadic. A review of this study which is over 10 years old indicates that the average size of the turbines were app 2 MV as opposed to turbines of 5.9 to 7 MW as proposed in this Project. Given that this report is over 10 years old and the difference in size of turbines included, it is not relevant as a predictor of what the effect of this project could be on land values in 2023 in the Wentworth Valley of Nova Scotia.

Another study referred to is (Brinkley & Leach ,2019) which reviewed the housing and property values of various energy projects including wind. The Proponent should include important comparable context such as; height of turbines referenced, population comparison, topographical comparison of the 2019 study area and the Higgins Mountain Wind Farm project area. Context required.

The Environmental Assessment does not recommend mitigation efforts around land use and values. The Project area will have significant Dominant view impacts at Folly Mountain, Folly Lake, Sutherlands Lake and the top Ski Wentworth and for some residents of the Westchester and Isaac Lake area.

The Wentworth Valley does not have many of the traditional draws that drive investment and construction in a Community. The community surrounding this project is known and valued for its recreational offerings, ecosystems and scenic / serene landscapes as has been referenced in other sections of this response. These are the attributes which motivate and drive the purchase of properties and development in this area. This makes the location unique and land and property values more at risk from the negative impact on recreation, biodiversity, visuals etc. from wind turbines .

Records from the County of Colchester report that in the period 2018 to 2022 building permits for new Residential Construction in and around the proposed Project area Area (Folly Mountain, Folly Lake, Hart Lake and Londonderry) total almost 7.5 million dollars. Records from the County of Cumberland report that in the period January 1, 2021 to March 31, 2023 (27 months) building permits for new residential construction in and around the proposed project area (Wentworth and Westchester) total 13.5 million dollars. The driver for these confirmed investments in residential property in our Community is the attributes that we have described and value i.e. eco-systems ,outdoor recreation, natural beauty, serene landscapes etc. The majority of these dollars are to the benefit of local contractors and suppliers ensuring that these investments will directly and indirectly contribute to the local economy. In addition municipalities benefit from the increased residential tax dollars resulting from the new construction. The threat that the further industrialization and disruption resulting from the building of massive concrete industrial wind turbines, will curb the boom in residential construction this area has experienced recently, driven by a draw to a rural community with all the attributes valued is real. This threat is not recognized in the Environmental Assessment.

The statistics related to residential construction does not include the app 4.5 million invested by Ski Wentworth to build a new ski lift or the planned investments to further promote the area as a year-round destination.

The conclusion in the document on page 210 that land use and value is expected to be negligible and is therefore considered not significant is not supported by the information included in the Environmental Assessment.

A review of recent articles and research including the website Wind Concerns Ontario demonstrates the recent push back of rural communities across North America against huge invasive wind turbine projects. The concerns cited by these rural communities often mirrored those risks identified by Protect Wentworth Valley which provides support and validation to our concerns related to negative impact on our community

8.3.4

On page 212 it says” During the Project’s construction phase, trucks and other vehicles will be

frequently visiting the area resulting in increased vehicular sound and air emissions. Most days during construction will have 20 to 40 trucks per day, with a few days requiring 100 trucks". The route that trucks will use to travel to the project site is not included in the document. The EA is inadequate and vague in that it does not provide specific information on the volume of traffic to be expected.

The extent of this increased truck traffic during the construction phase of the Project which will be at least 24 months in our small rural community will be significant including risk of sound, emissions, accidents, road damage etc. The Environmental Assessment does not indicate that since 1997 when the Cobequid pass was built highway 4 has been closed to large truck traffic with the exception of local traffic. Since 1997 truck traffic on highway 4 given the restriction has been minimal. Prior to 1997 our Valley was often referred to as "death valley" due to the extent of fatal vehicle accidents . Since the construction of the Cobequid Pass and partly as a result of reduced truck traffic the fatal accidents in the Valley have fortunately reduced dramatically. Residents should not be subjected to the increased risk of accidents and the other negatives identified (sound, emissions etc) as a result of this project . We also note that since 1997 Highway 4 has been maintained on the basis of restricted truck traffic and it is expected would not withstand the extra traffic without significant road damage .

The concerns re traffic and transportation as disclosed above including the extent of increased traffic, safety, noise , road damage , uncertainty regarding route etc do not support the documents conclusion that the impact to traffic and transportation is moderate and impacts of transportation not significant and should not be accepted by the Minister.

The EA is inadequate and vague in what road modifications will be required for Tower Road access and what public road route and modifications will be required to get turbines to the north end of Higgins Mountain Road in Westchester.

The Environmental Assessment suggests there is rare drive through traffic in the Study Area. It is almost impossible not to bump into other motorized on and off-highway vehicles when traveling the various roads on Higgins Mountain. While not recommended, especially during wet seasons, 2WD compact cars can drive through Higgins Mountain Road or connect through Tower Road. A number of the culverts on these roads are in bad shape and extra care must be taken. Saturdays and Sundays can get relatively busy in pleasant weather.

Protect Wentworth Valley and community members will seek special traffic programs to help mitigate and monitor the known acoustic effects. This past winter Northern Pulp logging operations at Turbine Site 4 or 5 which is 5km from Folly Lake. When Northern Pulp logged the clearcuts in 2017 that outraged local residents and visitors alike, residents of 3-5 kms away from the source in Wentworth and Folly lake complained of the all night noise.

8.4 Recreation and Tourism

8.4.1

The EA is inadequate as it does not do a detailed review of historic and current Wentworth Valley tourism.

Even though the following data was readily available to the Proponent they chose not to include the following events in their desktop reviews.

Ski Wentworth is currently the largest employer in Cumberland county and serves up to 70,000

winter based customers per year.

Ski Wentworth is a major inter-provincial tourism player in the Maritimes. Visitors from a 3-hour drive radius are regularly seen at Ski Wentworth and the various trailheads 12 months a year.

Ski Wentworth currently sees more annual visitors than Kejimkujik National Park.

That is based on historic ski season visitor numbers.

Ski Wentworth is currently expanding to a four-season model.

Hiking, salmon fishing, scenery viewing and waterfall hunting has attracted people to visit the area since the 1890's.

CN frequently showcased the scenic Wentworth Valley as a celebrated scenic feature of the trip no later than the 1930's. Simple google search highlights various CN related marketing.

National Orienteering Championships have been held in Wentworth several times starting in the 1970's.

Nordic skiing races were first held on Higgins Mountain starting in the 1970's.

The annual Spoke Bender Mountain Bike took place for 30 years on Higgins Mountain starting in the 1980's

Ski Wentworth's Fall Festival of Colours has been a wildly popular event for nearly 30 years and has been promoted broadly as a Tourism Nova Scotia featured event/attraction. Up to 5000 visitors per weekend visit the Wentworth Valley for an event that now spans 3 weekends. Proponent never mentioned this.

Ski Wentworth has hosted popular Spartan and Foam Fest physical, fun events attracting 1,500 and 2,500 participants respectively.

The past ten years has seen an explosion in the popularity of trail running. There are currently two or three events planned this year. Regardless of events, the various trails and trailheads around Wentworth are frequented by runners.

The Proponent neglected to mention Highway 4 through the scenic Wentworth Valley is Bicycle Nova Scotia's first designated Blue Route. The Blue Route is a provincial cycling network and active transportation network. It is a 55 km long route from Masstown to Wentworth marked with numerous highway signs.

The Wentworth Mountain Bike Association has only existed for two years and sold 750 memberships in 2022. It was not uncommon to see 40-60 cars in the Ski Wentworth parking lot on Friday - Monday in 2022 June through late October. With five new trails planned for the 2023 season, the WMBA expects to sell 1,000 members for the 2023 season. These numbers are based on being required to bike up the mountain before riding down the mountain.

Ski Wentworth plans to operate its chairlift for hikers and mountain bikers starting July 2024. Access for mountain bikers should double or triple membership/lift tickets/numbers overnight. For the first ever, Ski Wentworth is employing two full-time staff to manage bike related bike and non-ski season trails.

Unfortunately exit numbers don't capture the internal NS numbers visiting the year round

popular Wentworth Valley.

Did the Proponent do any “exit numbers” from popular Wentworth trailheads, waterfalls, Wilderness Area, Wentworth Provincial Park, etc…?

Did the Proponent interview the operators of the Wentworth Market, the Masstown Market, what percentage of their customers are visiting Wentworth Valley for the tourism, recreation, scenery related purposes?

The document on page 215 concludes that based on results of the 2017 Nova Scotia Visitor exit survey (administered 2015 and 2017) that indicates the main attractions reported in exit surveys were” coastal scenery, the world’s highest tides, lobster consumption, and the attractions in HRM, the communities surrounding the Project do not appear to be significant tourist destination, indicating that the Project is not likely to have a significant impact on inter-provincial tourism in the area”. A review of the 2017 exit survey as completed by Tourism Nova Scotia reports that the 1869 exit surveys were completed between June and October 2017 and 1582 surveys were completed January to May and November and December 2015. To be eligible for the survey visitors had to be 18 years or older and to have stayed at least one night in the Province. Surveys were distributed for those visitors existing in the Province through Halifax airport Digby , Caribou, Yarmouth or Highway 104(Cobequid Pass).

This survey is not relevant to a study on Tourism in the Wentworth Valley and reference to it highlights the Proponents lack of understanding of the Wentworth Valley area and drivers of Tourism for the following reasons:

- We know that thousands of visitors travel from New Brunswick and PEI to the Wentworth Valley for the scenic drive (it is acknowledged by the Province as one of the most Scenic drives in Nova Scotia), fall colours, biking and hiking, snowmobiling and of course skiing. Ski Wentworth is the largest ski hill in the Province and draws thousands of visitors to the Province annually. Many of these visitors are with in a few hours drive of the Wentworth Valley and would make day trips and not spend a night in the province and would therefore not be part of the exit survey.

- The data included in the survey for the winter months is based on 2015 (8 years ago) and all of the survey details would be based on pre pandemic levels. Residents of the Wentworth Valley know and have witnessed the significant increase in visitors to the Valley since the Pandemic prompted by increased interest in the physical and mental health benefits of outdoor activities, natural beauty and the solitude that this area provides. The increase in visitors to the Wentworth Valley since 2020 would not be reflected in the survey results.

- Visitors to the Wentworth Valley travel through the Valley on Highway 4. They leave the 104 highway at exits at Glenholme NS or Thomson station (depending on direction traveling). This route results in visitors not passing through the Cobequid Pass and therefore would not receive the exit survey or be included in the reported results .

On page 216 the Environmental Assessment refers to a 21 year old study from Scotland to determine attitudes towards wind farms in the area. The size and technology related to what are now massive structures have changed significantly in 21 years which would have a significant impact on attitudes of tourists. Also on the same page the Environmental Assessment refers to a study in 2018 connected with Amherst Wind Farm and suggests that” since respondents largely supported an increase in wind energy, both in a general context, as

well on the regional scale" that the proposed project will not have an impact on visitors and tourism in the area. The results of a 21 year old study or one that is based on smaller wind turbines largely on the Tantramar Marsh are not relevant in predicting current impact on Tourism of massive wind turbines in the Wentworth Valley. The turbines in the Tantramar Marsh area are smaller than those proposed and the Tantramar Marsh is not an area where the traditional key driver of visitors and tourism is the abundance of outdoor and recreational activities and natural beauty. The Environmental Assessment does not recognize that Protect Wentworth Valley is not opposed to the building of Wind Turbines in any region but opposed to the construction in the Wentworth Valley location given the unique qualities as presented throughout this response .

In section 8.5 page 218 the Environmental Assessment refers to nearby operational wind projects in Nutby Colchester County and Amherst in Cumberland County. Again these references are not relevant to a decision to build wind turbines in the Wentworth Valley given the unique qualities of the Wentworth Valley (ie recreation, tourism, biodiversity, wildlife habitat, sensitive ecosystem etc) and the size of the proposed project.

Missing from the 2023 Higgins Mountain Wind Project Environmental Assessment is any references from Nova Scotia Environments *Commercial Benefits of Nova Scotia Protected Areas* (The study). This study was conducted by Gardner Pinfold Consultants with support from personnel at Nova Scotia Environment's (NSE) Protected Areas and Ecosystems Branch and submitted to the then Department of Environment in 2017. The sections of the study provided below highlight the importance of this area related to ecosystems, biodiversity, recreation, tourism, physical and mental health, wildlife and economic development. **Failure to provide the detail included in these sections and that have not been considered in the Environmental Assessment further support why the Minister should fail this Environmental Assessment.**

Sections from the 2017 study:

4.8.1

'The Cobequid Mountains form a long, linear upland, spanning portions of Cumberland, Colchester, Pictou and Antigonish counties. Broad hardwood hills alternate with fast flowing headwater rivers and streams in damp ravines and incised valleys. Scattered vernal pools, ponds, and a few small lakes occur throughout, and waterfalls are common in ravines. Certain areas offer scenic look-offs. This region offers the most reliable winter snow-cover in mainland Nova Scotia, and impressive wildflower blooms occur in certain hardwood areas in May. This remains a stronghold for the endangered mainland moose, especially in the more remote areas. Atlantic salmon continue to spawn in the headwaters of some of the rivers.

A substantial portion of the larger, provincially-owned land holdings in this region are now **protected or identified as candidates for protection – about 30,000 hectares (75,000 acres)** altogether. These lands are highly suitable for trail-related uses, such as hiking, snowshoeing, backcountry skiing, mountain biking and camping. They are highlights in the provincial snowmobile and all-terrain vehicle trail systems, where such use is permitted. Other recreational opportunities include wildlife and wild flora viewing, geocaching, orienteering and hunting. Several municipalities derive their drinking water from protected areas in this region. The major protected areas with opportunities for commercial benefits include…"

4.8.2

“Wentworth Valley Wilderness Area (candidate)(edit - now protected) This 1,900-hectare (4,500 acre) candidate wilderness area consists of hardwood and mixed forest hills and slopes along the east side of Wentworth Valley. It includes the highest peak in mainland Nova Scotia (365 m above sea level), as well as headwaters of the Wallace River, which supports an Atlantic salmon run. This area is a refuge for the endangered mainland moose and other species which prefer undisturbed woodlands. A 3-km section of a more extensive Nordic ski trail system extends into the candidate wilderness area from adjacent lands of Ski Wentworth (Wentworth Valley Developments). No other managed trails exist, though informal trail use occurs, including for off-highway vehicle use. The area has also been used for provincial and national orienteering events. These lands are easily accessed via highway #4, Ski Wentworth, and other locations. The hilly, scenic geography, good access, and proximity to major population centres make this area highly suitable for development of managed trail opportunities which can support commercial benefits. This potential has been recognized by Wentworth Trails Association and Ski Wentworth, which have articulated a vision of fourseason experiences within and around the candidate wilderness area, including hiking, trail running, backcountry and Nordic skiing, snowshoeing, adventure racing, mountain biking and zip lining and rope/obstacle courses.”

4.8.3

“Ski Wentworth Downhill ski resorts across North America are building four-season revenue streams to expand their business and reduce risks associated with variable winter conditions. Ski Wentworth is no exception and has already hosted numerous cross-country running and mountain biking events. The rapid rise in fat-bike enthusiasm also fits well with ski hills in both winter and shoulder season conditions. Ski Wentworth offers diverse trail experiences, primarily on their own lands, and wishes to expand this network within the adjacent, candidate Wentworth Valley Wilderness Area and on other lands. A larger trail network offers more features to draw in visitors, as well as more variety to extend their stay and increase repeat visits. The company believes protection of local wilderness areas helps ensure the long-term, four-season viability of Ski Wentworth. Growing the business will support investment in four-season resort facilities and employment. Resort-based access to wilderness areas for these types of activities is the business model for many four-season mountain resorts in western North America and more recently in the east. Examples of such access and partnerships can be found in B.C., Alberta and Quebec14 .”

We ask that the Minister, based on the concerns provided, not accept the Environmental Assessment’s conclusion on page 217 of the Environmental Assessment that impacts related to tourism and recreation are considered not significant.

The approval of the Higgins Mountain Wind Project will have negative Socio- Economic Impact on the Wentworth Valley Area for all of the reasons outlined in the comments above and we are asking the Minister to reject this project.

Section 10: Other Considerations

Overview of errors and inadequacies

1] Failure to provide an accurate visual plan for community stakeholders to evaluate as well as a guarantee that once plan is agreed upon, no further changes will be allowed without re-evaluation by community and government. See Higgins Mountain Visual Impact Analysis (Appendix 2) provided by Protect Wentworth Valley

2] Failure to provide guarantee of NO visual impact to community nor a detailed plan for monitoring and mitigation

3] Failure to provide shadow flicker studies which include accurate light calculations and data from real life lived experiences of those living with shadow flicker effect of turbines

4] Failure to provide detailed monitoring and mitigation strategies for those affected by shadow flicker nor provide a plan to bring a satisfactory resolution to the community/affected individual in timely manner

5] Failure to provide guarantees of night sky preservation.

6] Failure to provide a guarantee that limits noise and light disturbance to between 8 am-5 pm daily on weekdays

7] Failure to provide a guarantee that construction noise will not exceed OHS standards and will not be additive to current industrial noise.

8] Failure to provide detailed plan of project timelines and strategy if timelines exceeded

9] Failure to provide a guarantee that turbine operational sound will not exceed 36 dBL throughout the area

10] Failure to provide detailed monitoring and mitigation strategies to the satisfaction of community stakeholders

11] Failure to provide evidence that snow-mobile/ hiking trail access will be maintained and access will be unlimited throughout construction and turbine operation

12] Failure to provide a detailed plan(location, extent…) of any new trails that will be built if existing trails are deemed inaccessible because of turbine construction(#, size, timelines for building) or operation AND provide guarantees that new trails won't encroach upon wetlands or other environmentally or ecologically sensitive areas

13] Failure to provide proof that overall physical and mental health and quality of life will not be impacted as evidenced in the lived experience of John Mayfield of Old Barns, living in close proximity to the Millbrook Wind Project

Specific concerns with EA Report

The World Health Organization(WHO) states in their constitutional documents:

Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.
The enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition.

The Proponent has taken a very traditional health effect approach, focussing on injury and illness, rather than a quality of life, or health concerns approach. The WHO and Health Canada endorse the latter, that being the state of complete mental and physical well-being. Health concerns have long been recognized as significant issues to be addressed when considering wind turbine projects and as Jeffrey et. al.(CFPJournal.Vol 59: MAY • MAI 2013 | Canadian

Family Physician) state: adverse health effects due to noise and flicker annoyance for those living near industrial wind turbines are significant.

While a wind turbine syndrome has not been identified, the dangers of chronic low level stress are well documented and should not be trivialized. This Environmental Assessment fails to prove that health effects are minimal, nor does it provide any reassurance of appropriate monitoring for adverse health outcomes such as reduced quality of life, levels of stress, irritability and inability to perform duties at work or at home.

Knppper et.al. in their review concluded health effects are significant, not specific to the turbine itself but through change to the local environment(noise, flicker, visual impact) that results in negative health impact and higher annoyance levels(Environmental Health:Health effects and wind turbines: A review of the literature)

Conversely, Byeongsang et.al found conclusive evidence of health and wellbeing by spending time in undisturbed nature.(Environmental Health and Preventive MedicineHealth and well-being benefits of spending time in forests: systematic review)

This Environmental Assessment concludes that health and other threats are minimal with no need for monitoring or mitigation. Lived experience of those living near existing industrial wind turbines proves this to be false and a dangerously minimalist or understated conclusion.

10.1.1: **electromagnetic fields**- true-no documented risk. Recent studies conform

10.1.2 **Ice throw.** The EA minimizes these risks and does not take into account climate in the area is harsh and variable- a good setup for unpredictable ice build up. Though not near highways or homes, the area is visited frequently by hikers, bikers, ATVs and snow-mobilers. Ice throw is a significant risk to these individuals and should not be minimized. Lack of access to trails because of ice-throw risks poses the potential for other losses: deterioration mental health for those who can't access trails any longer, use of less safe/less well-traveled area, use of land that encroaches further into wildlife corridors

10.1.3: **Electrical Fires**: Risk to human life and property has been minimized. Assumptions made without consideration of deadfall secondary to HurricaneFiona. Ripe for forest fires which would be devastating to the ecosystem,existing wildlife and economic viability of the community. Spread to surrounding communities more likely now.Area is more inaccessible now to firefighting equipment.Ripe for forest fire which would be devastating to the area.

10.2.1 **Electromagnetic interference**: Higgins acknowledges potential negative impact on telecommunications. The Environmental Assessment is weak in that multiple stakeholders have yet to respond. Mitigation is weak, monitoring not suggested. It would be important to identify, isolate and eliminate risks.

10.3.**Shadow Flicker:** Conclusions regarding minimal impact of flicker are concerning as they are based on false assumptions. The Environmental Assessment underestimates the impact of flicker on community members:

- Conclusions regarding lack of impact based solely on modeling rather than real life observations. Modeling was used to bring the flicker effect under recommended max for 3 receptors(ER,EM,EL)!
- Presumes flicker only impactful if direct sunlight straight on to turbines and if > 30 hours per year or > 30 mins per day.

- The EA grossly underestimates hours of sunlight especially during months Nov-April. Underestimate the hours of sunshine per day December(1.86 hours sunshine) through June (7.24 hours). Flicker will play a bigger role than estimated.

- Lived experience not taken in account- Wayfield experience would contradict conclusions

The Environmental Assessment incorrectly concludes minimal disruption for flicker and mitigation/monitoring strategies are simplistic and ineffective. The Proponent plans to use a complaint response strategy' which is vague and lacks details regarding how this will be implemented, who will bear responsibility, what the accountabilities or parameters. The framework for this is missing so it is not understood who and how decisions will be made/enforced. Criteria for eligibility of complaints, framework for evaluating complaints and framework for resolving complaints needs to be specified. So… likelihood the resident will suffer in silence or be silenced.

10.4 **Visual Impact:** There are no provincial rules/guidelines. Each county has its own set of rules that may or may not be based on community needs/preferences, science, lived experience.

Concerns:

- In this case, visual simulation is the basis of recommendations. Process hasn't been validated; Proponent driven so likelihood of visual data accounting for community stakeholder interests isn't as likely if community members were recruited to participate. See Higgins Mountain Visual Analysis provided by Protect Wentworth Valley.

- No vetting through generally acceptable processes such as community wide surveys, focus groups…

- Grossly underestimates the impact of this on the valley. Impacted magnified by the topography. Closer appearing when from top of ridge

- Assumes visual impact on significant during operation of turbine

- Minimizes the impact on night sky even with mitigating strategies to minimize night lighting

- Lived experience not considered e.g. John Mayfield of Old Barns living near the Millbrook Wind Farm

- Minimizes the impact on tourism, rural existence

- No mitigation strategy. No monitoring……

Restrictive overlay should be extended into regular areas.

10.5 Sound

Nissenbaum et. al(Noise & Health, September-October 2012, Volume 14) concluded adverse effects on sleep resulting in increased daytime sleepiness, irritability and mental health issues were evident for those exposed within 1.4 km of turbines. This was written when turbines were much smaller, 1.5 megawatt turbines sited on a ridge line.

Impact of sound in EA considered construction(2 years duration), operation(up to 35 years, 36-40 dBL)). Noise from decommissioning is not even considered.

Concerns:

- Construction phase is 2 years+. Sound levels exceed 85-115 dBL for 2 years- 2023-2025.exceed OHS standards
- At best, construction will be at least 65 dBL during day causing annoyance and if into night, loss of sleep
- Assumption that current sound level makes it okay to add more. D/N account for current intense sound(train, snowmobiles) is episodic and time limited. Other intense sounds from the gravel pit, though not welcomed, have been grandfathered in so not much we can do. Adding to this annoyance is not acceptable
- Mitigation strategy- noise complaint response-inadequate and after the fact. No monitoring

OCC health exposure levels

https://www.ccohs.ca/oshanswers/phys_agents/noise/exposure_can.html

CDC shows evidence that a sound > 70 dBL can cause annoyance. Between 80-85dBL for 2 hours can damage hearing, >100dBL for 15 minutes can damage hearing

hearing[**https://www.cdc.gov/nceh/hearing_loss/what_noises_cause_hearing_loss.html#:~:text=Common%20Sources%20of%20Noise%20and%20Decibel%20Levels&text=A%20whisper%20is%20about%2030,immediate%20harm%20to%20your%20ears**](https://www.cdc.gov/nceh/hearing_loss/what_noises_cause_hearing_loss.html#:~:text=Common%20Sources%20of%20Noise%20and%20Decibel%20Levels&text=A%20whisper%20is%20about%2030,immediate%20harm%20to%20your%20ears)**.**

U.S> occupational health standards limites exposure to 100dBL or more to < 15 minutes per day [**https://www.osha.gov/noise**](https://www.osha.gov/noise)

11: Effects of the Undertaking on the Environment

Overview of errors and inadequacies

1] Definitions for Table 11.1 are listed on page 20 of the Environmental Assessment. The definition for items determined “Not significant” indicates that “Research, monitoring and/or recovery initiatives are not recommended” however Table 11.1 lists all items, exclusive of Climate Change and Economy, as being “Not significant” and then further indicates that some items would require mitigation and/or monitoring. Failure to clarify.

2] Failure to provide evidence that the wind project’s impact on all Valued Components other than Climate Change and Economy are “Not significant”

3] Failure to provide evidence that the project’s impact on Climate Change and Economy are “Significant”

4] Failure to provide evidence that Valued Components deemed to require mitigation do not all need to be monitored

5] Definitions for the term “Reversible” - the residual effect is likely to be reversed after the activity is completed. Yet, there are multiple Valued Components which the “Magnitude of Effects” indicates will sustain either direct or some loss. Failure to explain how direct loss can be “Reversible”?

Specific concerns with EA Report

Table 11.1 Summary

1. Definitions of the Significant Residual Environmental Effect on page 20 utilized in Table 11.1, indicates that items listed as “Non Significant” do not require research, monitoring and/or recovery initiatives yet items listed in the table as ‘Non Significant” are identified as potentially requiring mitigation and/or monitoring. Clarification is necessary.

2. Table indicates that the threat to Nova Scotia Mainland Moose is “Not Significant” and that mitigation was required but monitoring was unnecessary - this appears to be contrary to the Nova Scotia Mainland Moose Recovery Plan

3. Table consistently indicates mitigation required but frequently states that no monitoring of effects is necessary

4. Indicates that the quality of some groundwater wells could be impacted and that mitigation required but only that monitoring “may” be required

5. Only items deemed significant (positive) are climate change and the economy- every single other item was deemed insignificant. Reported postive effect on economy to the extent of the province - no specific comment on the impact locally

6. Mitigation efforts often refer to ensuring the original state will be brought back “to the extent possible” yet also state that the effect is reversible.

7. Acknowledgement that there will be loss of fish and fish habitat, wetlands, and terrestrial habitat yet listed as reversible

8. Minimize loss of habitat required by priority species but does not indicate a plan on how to accomplish

9. No mention of economic contribution to the local economy

10. Sound: construction phase - dBA’s to far exceed provincial and municipal requirements. This noise level, in excess of these standards is deemed “Not significant” and no monitoring required.

11.2 Summary of Mitigation Measures

1) Atmospheric Environment - many mitigation efforts listed are standard workplace practice or common sense and are not specific to a wind farm project - such as ensure Project personnel adhere to safety protocols; ensure equipment meets all provincial emissions standards; recycle and compost workforce waste(i.e. food waste))…

2) Geophysical Environment - 1) After blasting they will recover and revegetate exposed soils - but do not indicate that the revegetation will be with indigenous flora and fauna 2) Include specific mitigation for sulfide bearing materials including rock removal in known areas of elevated sulfide but do not indicate what these mitigation efforts entail.

3) Aquatic Environment- do not indicate that revegetation will be with indigenous fauna and flora. Use of precast concrete cured for 1 week in watercourses and wetlands when the curing process should take a month before safe around aquatic habitat?

4) Terrestrial Environment - incomplete" in-season rare plant and lichen surveys" The original survey of species was done in off-season.

5) Many response plans are yet to be developed. Minimize loss of important habitat but no mention of how that's to be done.

6) Socio-Economic Environment - minimize number of vehicles -impacts roadway flow and air quality - 2,380 trucks alone for concrete plus other construction vehicles and the turbines themselves. A massive industrial site impacting a fragile ecosystem with endangered species and species at risk.

7) Other Considerations -lack of a complaint response protocol

12.0 Effects of the environment on the undertaking

Specific concerns with EA Report

1) Climate Change and Natural Hazards - the construction and operation of the project while being impacted by increased temperatures, blizzards, electrical storms, and wash outs could dramatically impact the local environment by causing ice throw, wildfires, and flooding, potentially affecting local wildlife, flora and fauna.

2] Wider roads, new roads and new cleared areas for infrastructure will create heat sinks and will increase forest fire potential

13.0 ACCIDENTS AND MALFUNCTIONS

Overview of errors and inadequacies

1] Failure to provide proof that fires caused by the industrial wind turbines won't pose a risk to existing forests, habitat and communities with a fire fighting plan to monitor for fires as well to extinguish fires before extensive damage

2] Failure to provide evidence of minimum risk from erosion and sediment as well as a monitoring and mitigation plan

3] Failure to provide evidence that topography, deadfall, waterways/watershed, climate change will not be affected by new turbine size and project size

4] Include section in this to address risk this project fails to meet expectations

5] Green energy solutions are evolving rapidly. Section needed to consider alternative options with timelines as this could impact whether this project is truly viable or sustainable and whether deliverables meaningful in context of evolving options

Specific concerns with EA Report

- The EA omits,underestimates, and understates types of accidents and degree of negative impact
    - e.g. **Turbine collapse on rise: EA** concludes that the likelihood of accident or malfunction is low . Recent report from Bloomberg indicates Wind turbine collapse on the uptick and ties this to the increased size of turbines . The reports state that Multiple turbines that are taller than 750 feet are collapsing across the world . Turbines are falling for the three largest players in the industry including Siemens(manufacturer suggested for Higgins) – ex Kent Hills wind farm NB
    - **Fire:** The EA does not account for deadfall and damage to forest as result of Hurricane Fiona.There is now an abundance of rotting wood along with dying trees and brush. Many areas are completely inaccessible making the threat of fire and the risk of large-scale devastation greater if fire were to start.Access for firefighting is more difficult so the risk of widespread loss of ecosystem, homes, and human life is greater.
    - **Erosion and Sediment**: Mitigation strategies provided in the EA standard for a project of this nature, however weather pattern changes, higher winds, more rain in the past several years combined with deforestation in areas within and surrounding Project area increase risk of flooding,erosion and sedimentation in nearby rivers, streams and lakes. Residents in the area have lived experience with recent flooding and sedimentation following rainfalls in this area. The EA doesn't provide conclusive evidence that there won't be harm caused because of erosion and sediment deposit to waterways in the area and downstream. Community stakeholders need to be assured that there is no risk of damage AND that there will be monitoring to ensure current status is maintained

The pressure to invest in green projects is so intense that breakdown fears haven't yet slowed the flood of money into wind farms, says Oliver Metcalfe, head of wind research at BloombergNEF. The failure issue has become a concern for bankers and other creditors, however, who may begin to demand higher interest rates, he says. "There's a hesitancy among insurers and lenders about these big models that haven't been tested yet," Metcalfe says. "The technology alarm bells are ringing." Bloomberg magazine -January 23,2023

14.0 Cumulative effects

Overview of errors and inadequacies

1] Failure to provide an accurate portrayal of industrial activity in the Wentworth region, nor the impact of the cumulative effect of multiple wind farms and industrial activity

Specific concerns with EA Report

1] The Proponent only addresses past industrial activities in the area in their analysis. They do not include in their review the recently approved Westchester Wind Project or the proposed RES or SWEB Wind Farms which are also hoping to locate in the Wentworth Valley.

2] The Proponent does not consider the 250 mineral claims in the Project area in identifying potential cumulative effect concerns. With both Federal and Provincial support for critical minerals it should be recognised as a potential cumulative effect.

3] The Proponent does not acknowledge the impact of the construction or operations phase in conjunction with other industrial facilities to any of the Valued Components. The community is already impacted by the current industrial activity adding further industrial initiatives will only exacerbate the negative impacts felt.

4] The Proponent fails to acknowledge the cumulative effects of industrial wood harvesting and its proposed wind project.

15.0 Conclusion

Overview of errors and inadequacies

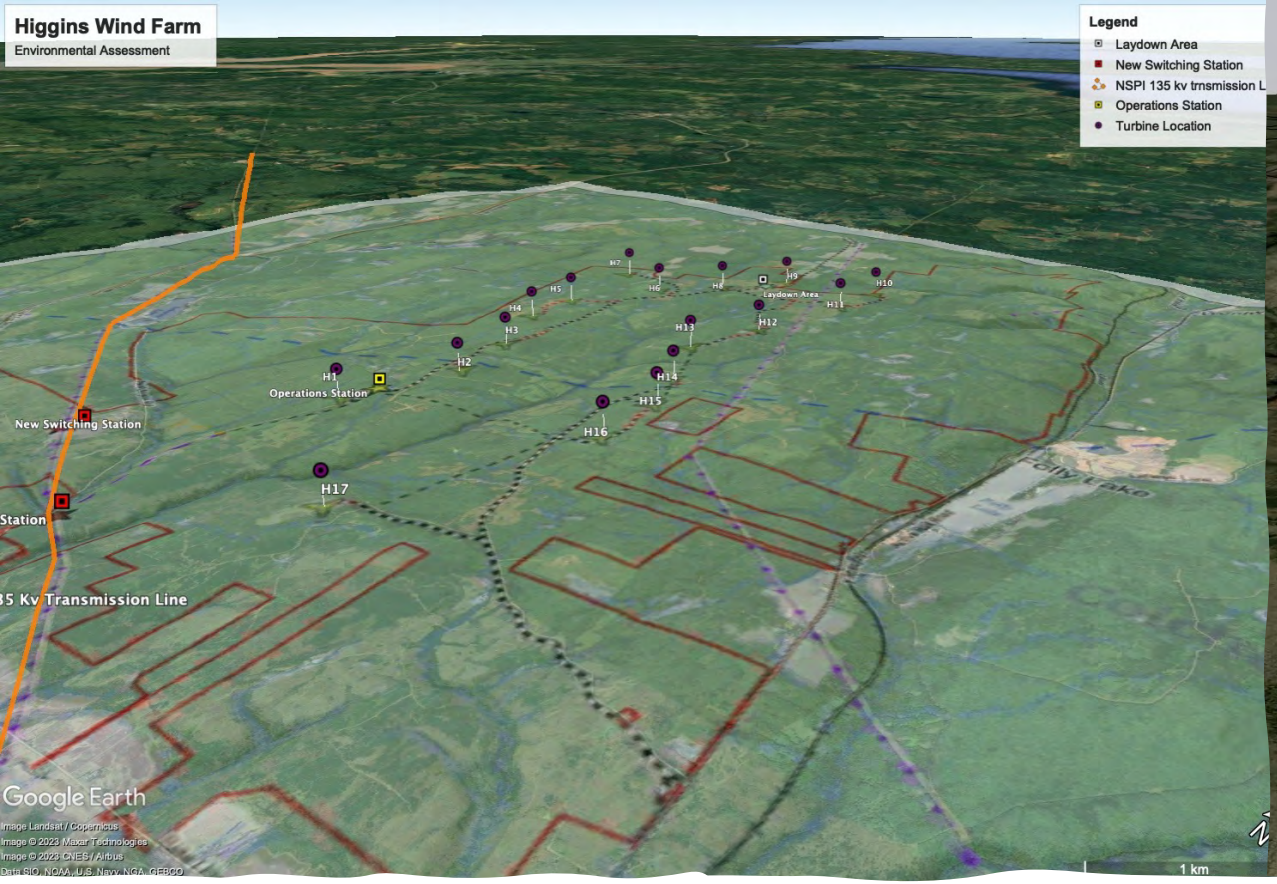
1] This EA fails to provide intent to monitor the impacts of the Project upon all of the Valued Components

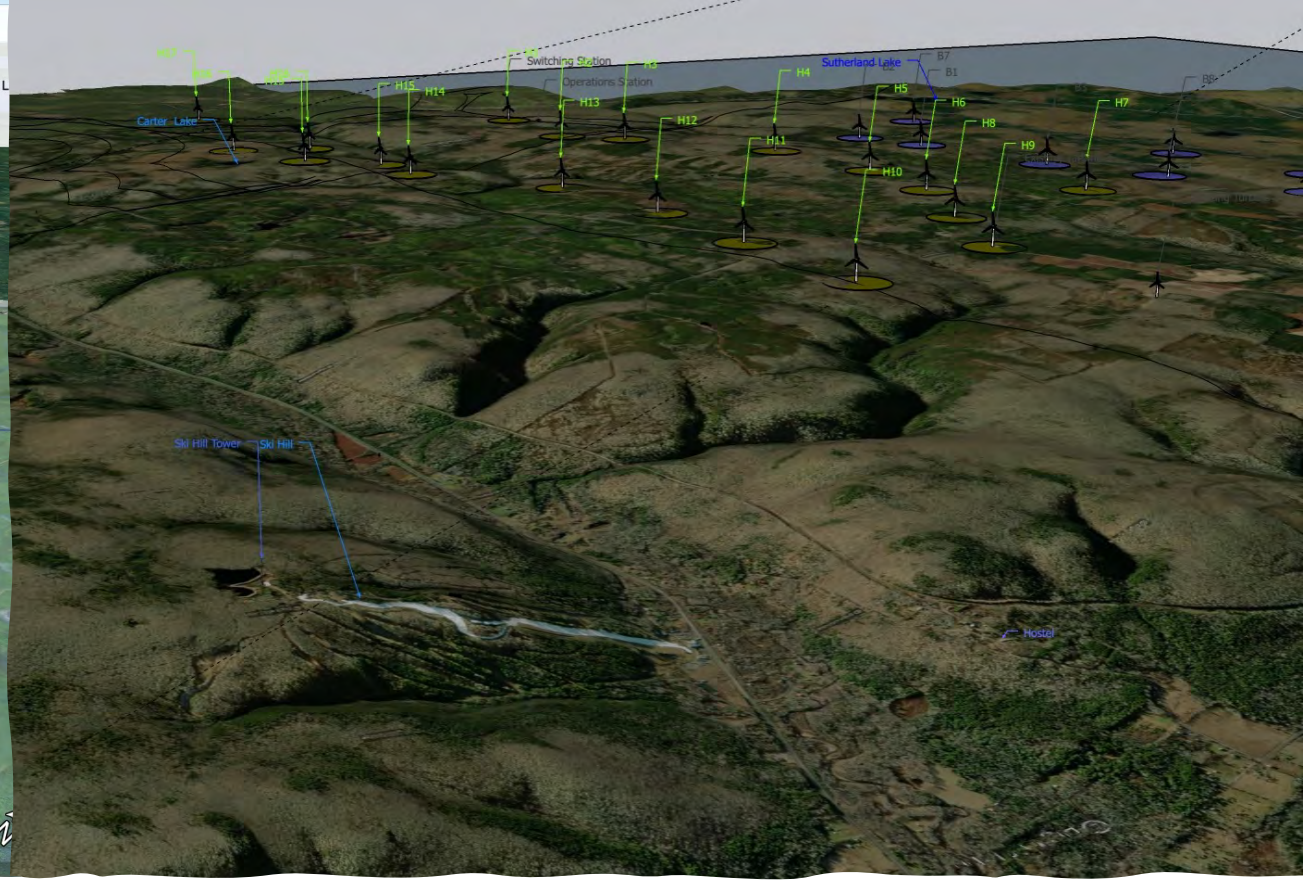
Specific concerns with EA Report

1] The Proponent states " that in consideration of the Project's mitigative and protection measures, adverse residual effects are not anticipated to be significant". The proponent lists all Valued Components exclusive of Climate and Economy as being "Not Significant" and not requiring "research, monitoring and/or recovery initiatives" as per Table 4.3, Definition of Significant and Residual Environmental Effect. This failure to monitor the impact of the Project on the Valued Components means that the Proponent will not know if the Project is causing adverse effects.

2] In Table 11.1, many Valued Components are anticipated to require mitigation yet there is no intent to monitor the success of these mitigation efforts.

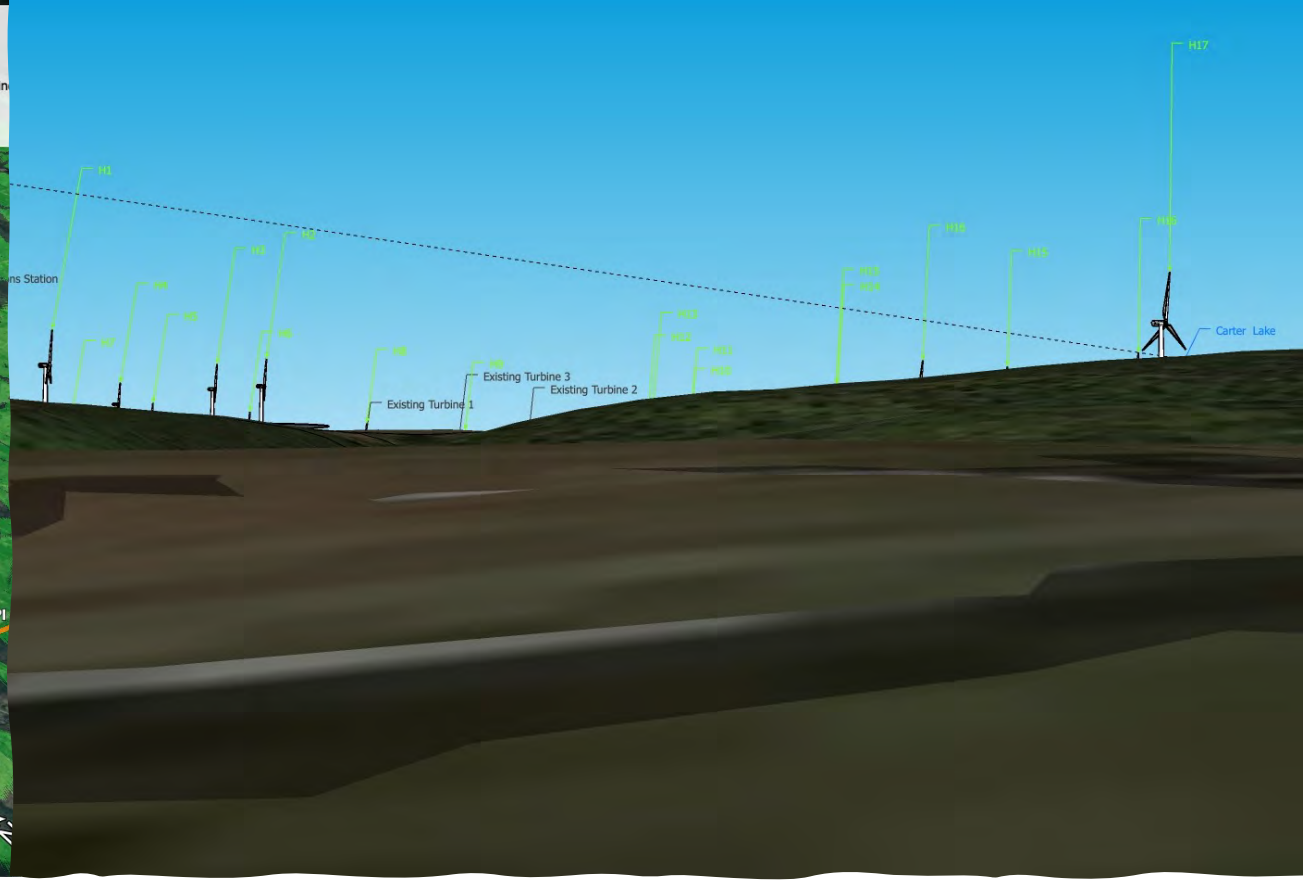
Higgins Mtn Wind Farm Visual Analysis





Methodology

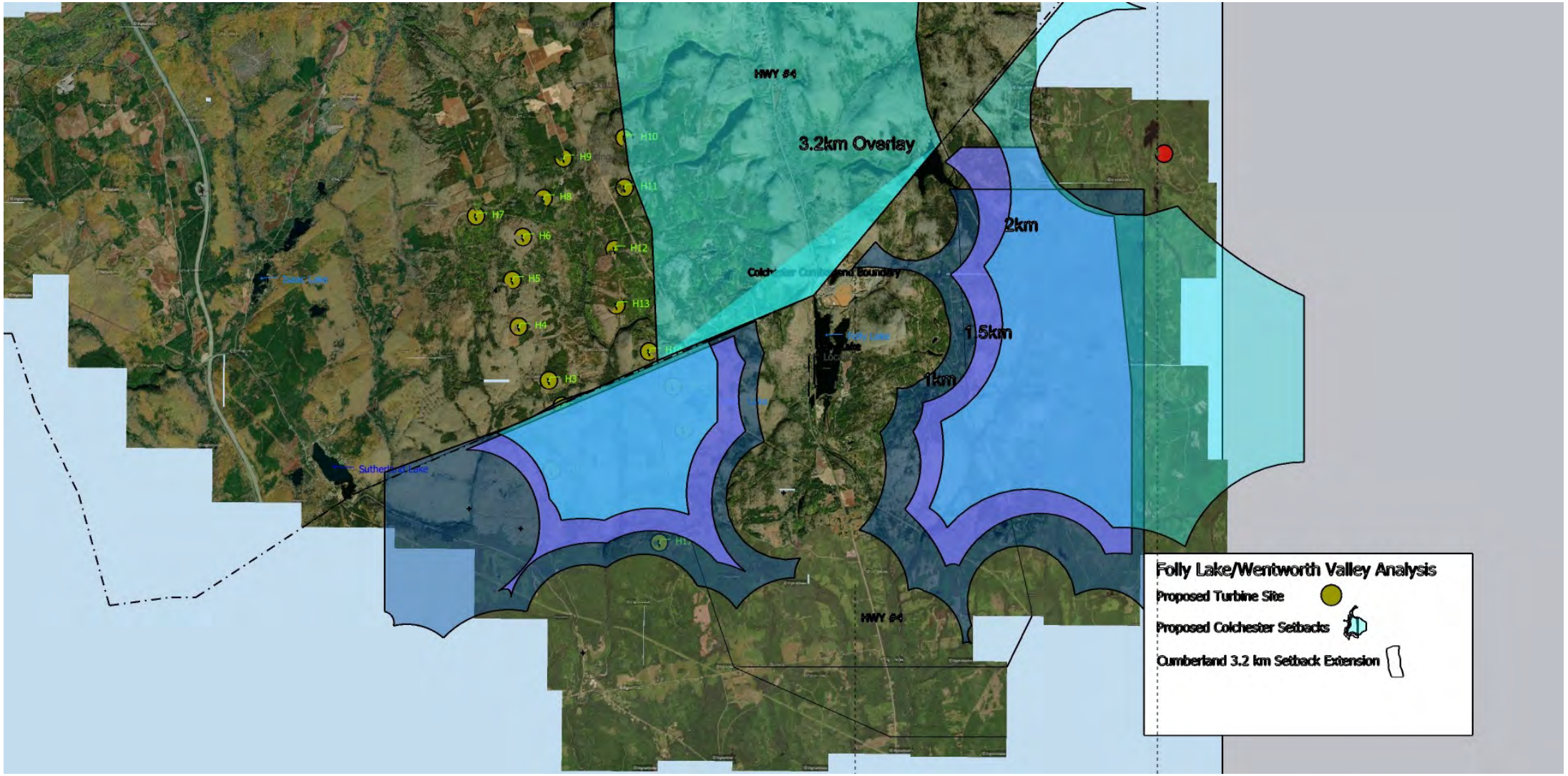
- Community Developed Two Models
  - GIS Model
  - Digital Terrain Model



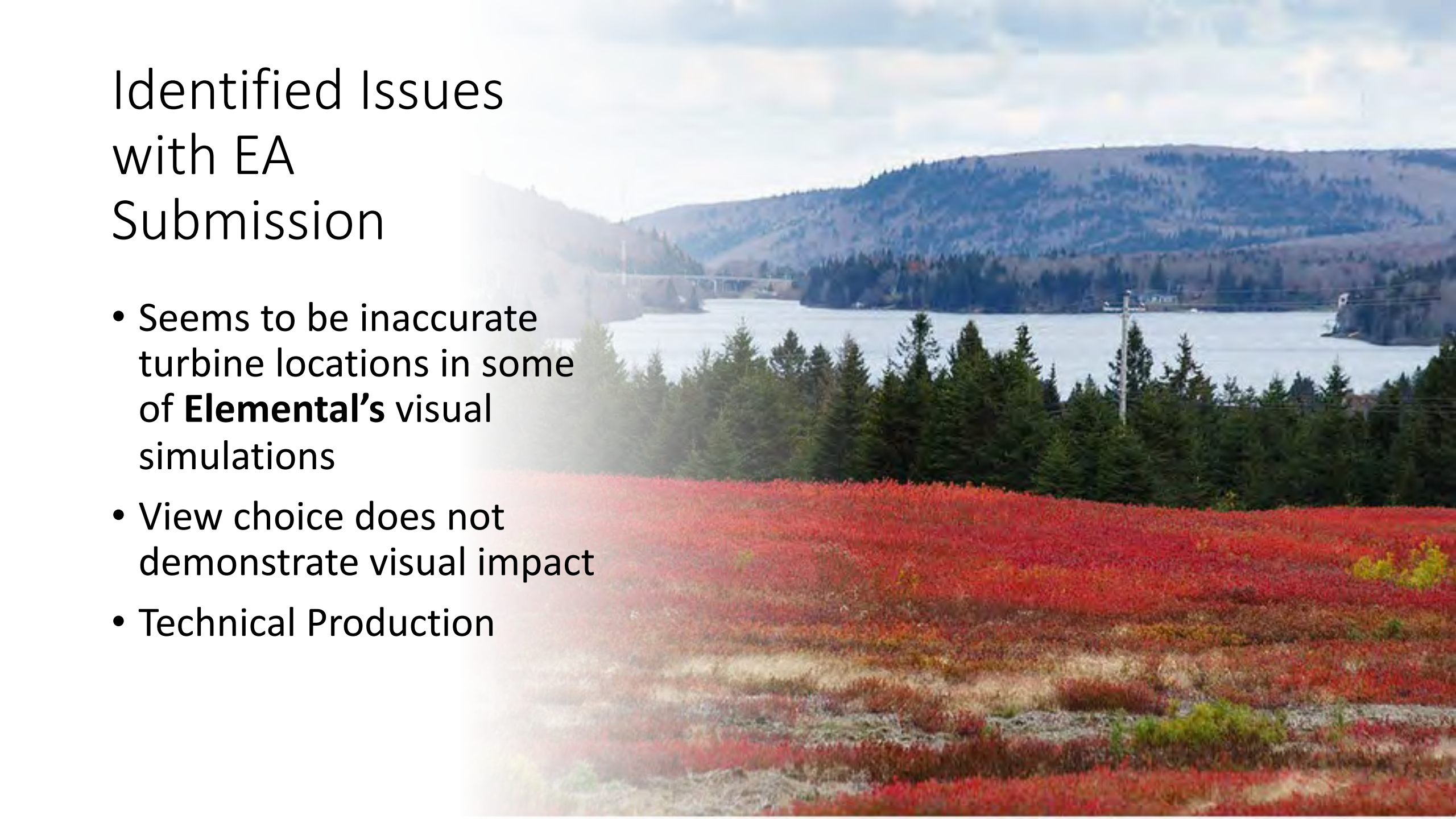
Analysis

- View Shed Analysis
- Measure Proximity
- Visual Access
- Assess Visual Dominance
- Compare to Elemental's EA Submission

Municipal Regulations On Turbine Setback



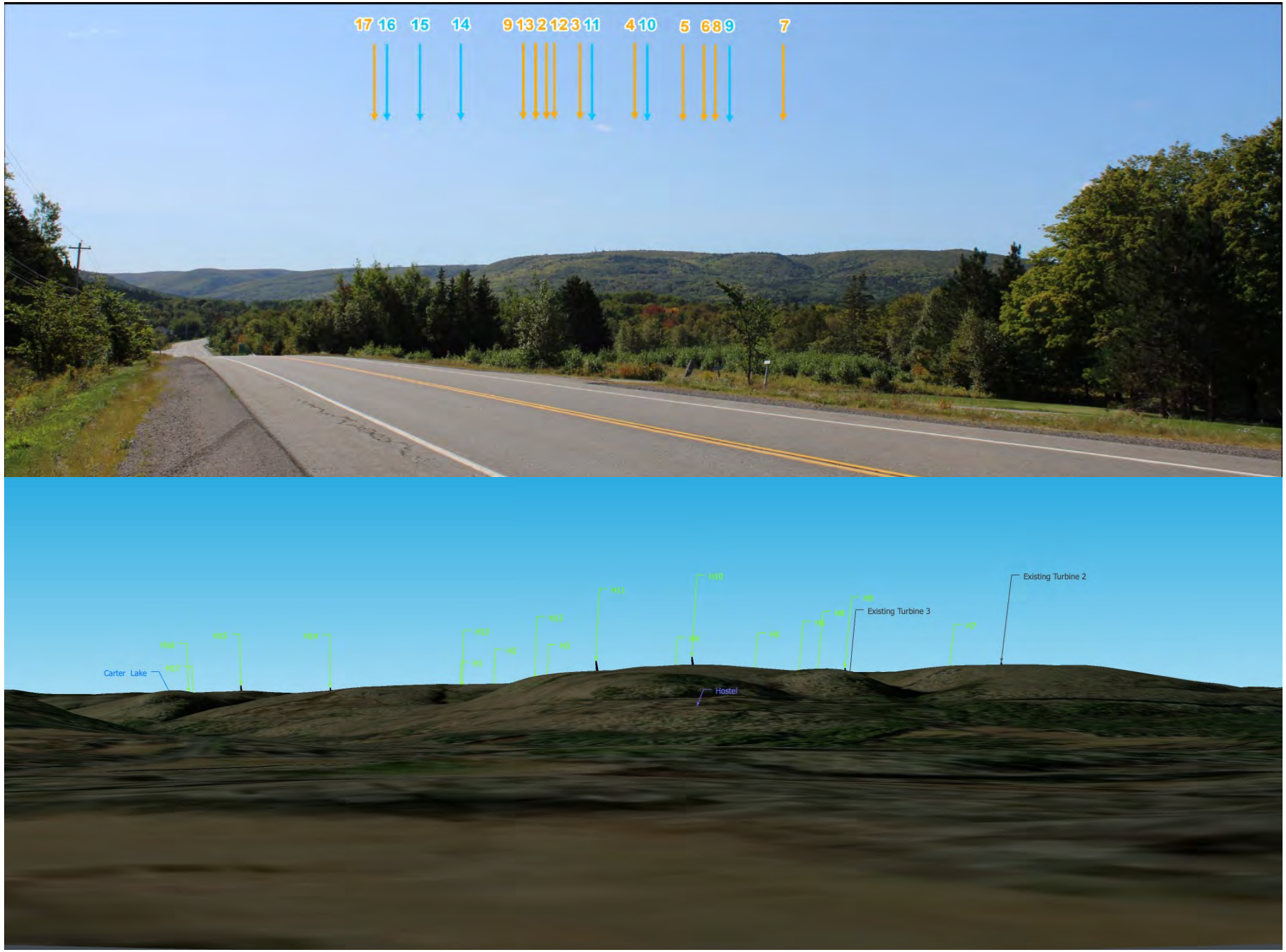
Identified Issues with EA Submission

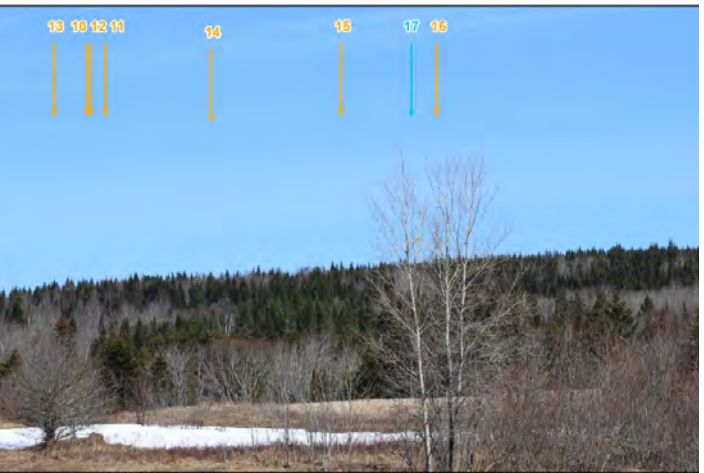


- Seems to be inaccurate turbine locations in some of **Elemental's** visual simulations
- View choice does not demonstrate visual impact
- Technical Production

Elemental Modeling

Community Modeling





Elemental View Choice

- Three simulations focus on low value locations
- Ignored many high value areas requested by Community
- Hiding Turbines
- Photos - Inadequate Depth of Field and Field of View
- Selective Camera Direction

Camera Lens Field of View and Depth of View Matter In Portraying Visual Impact

80mm lens – actual proximity to the viewer

21mm lens - things further away

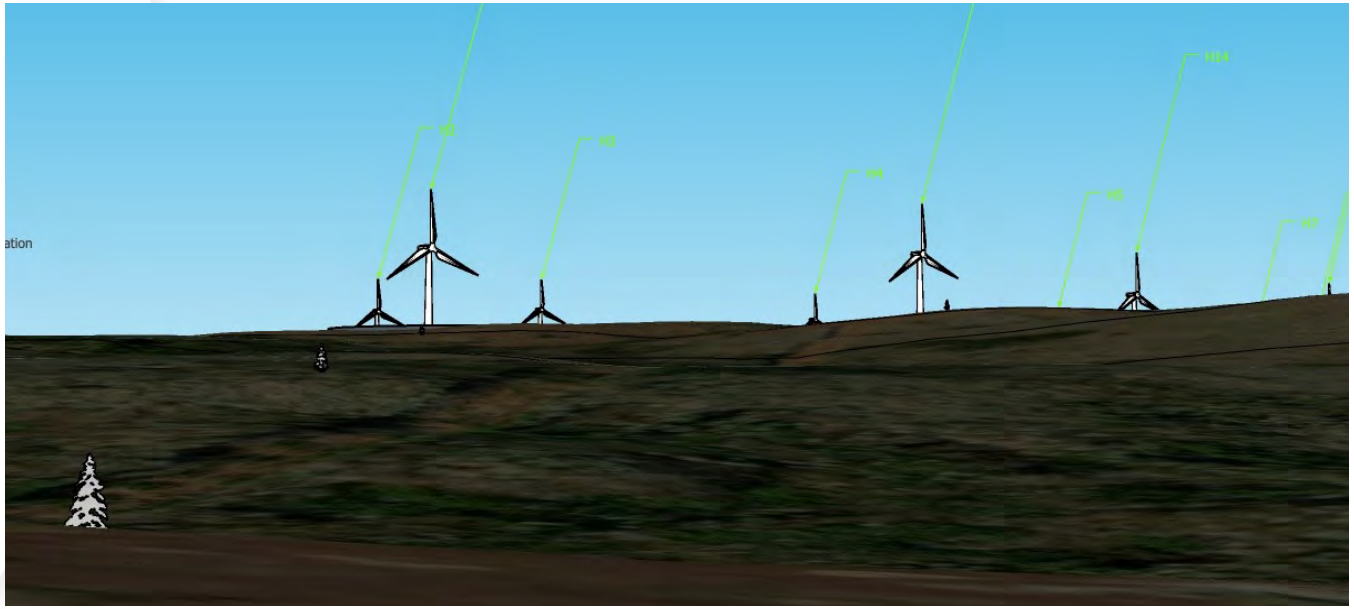
35mm lens

50mm lens

Selective Camera Direction

- Folly Lake
- Issacs Lake
- Londonderry – Baseline Road
- Sutherlands Lake
- Westchester

Folly Mountain - Looking North - Elemental EA submission

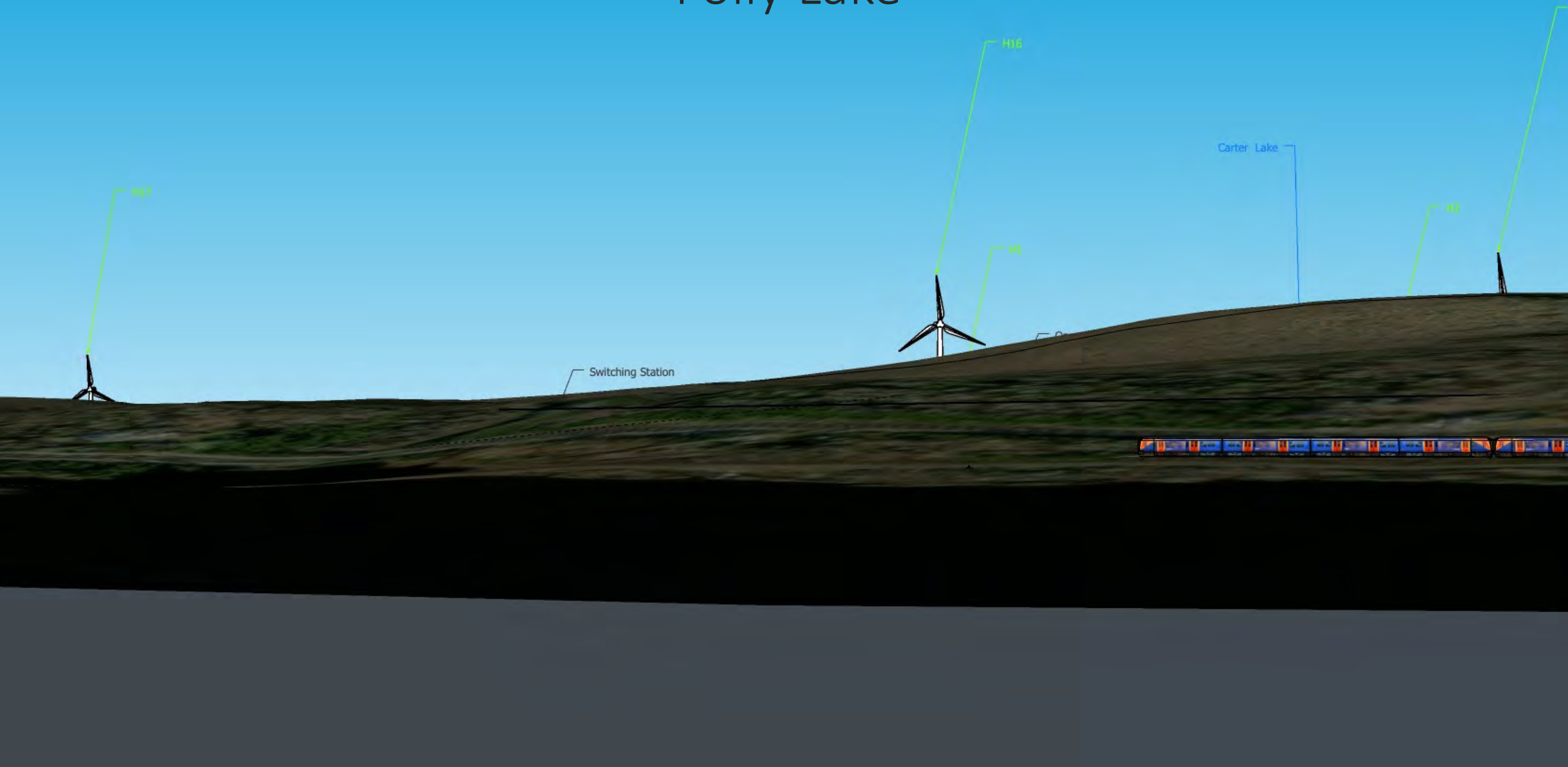


Folly Mountain - Looking West – Community Model

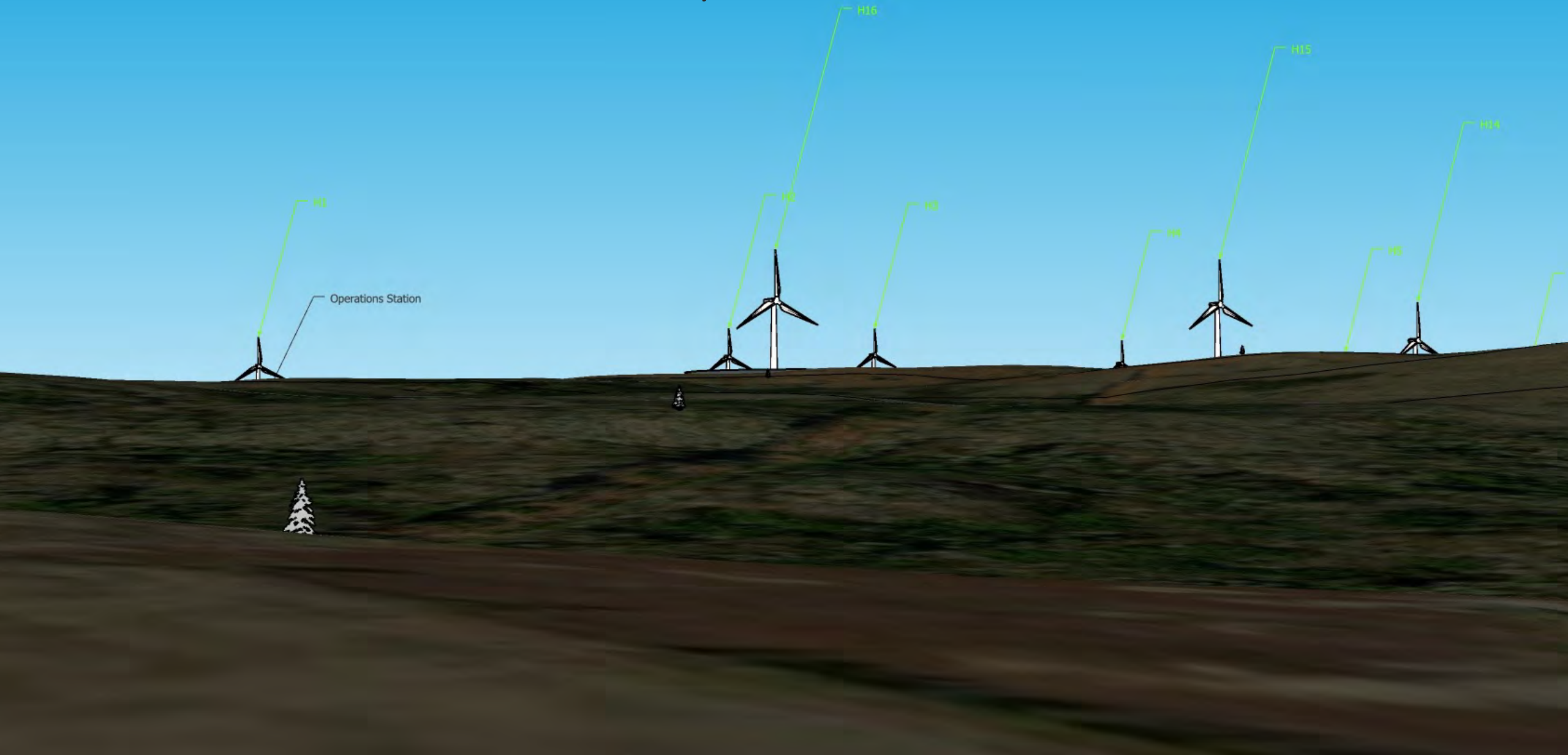
Visual Impact Analysis

- Valley Floor -Lowest Impact – Turbines have been pushed back owing to Cumberland's new bi-law
- Impactful from Folly Lake, Ski Hill, Issacs Lake, Londonderry, the Plateau
- Some Impact from Sutherlands Lake, and Westchester

Folly Lake

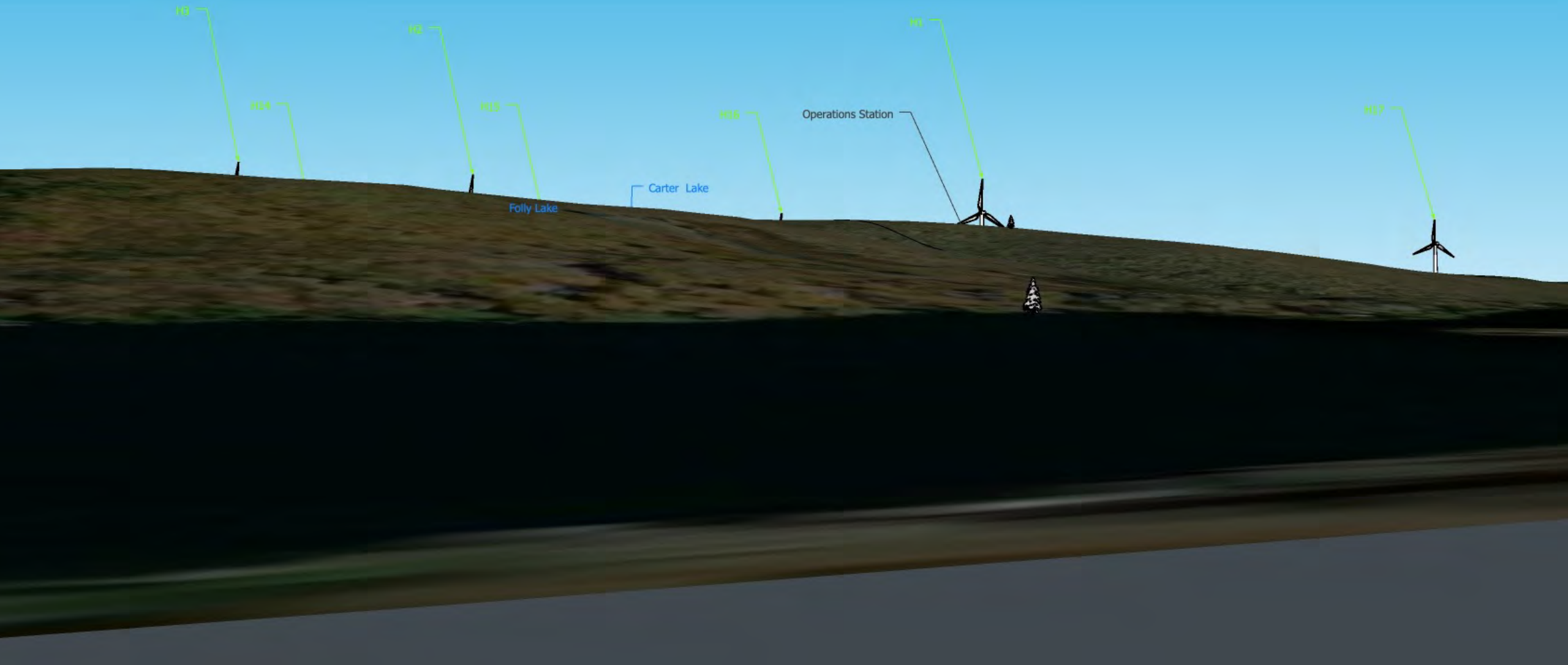


Folly Mountain

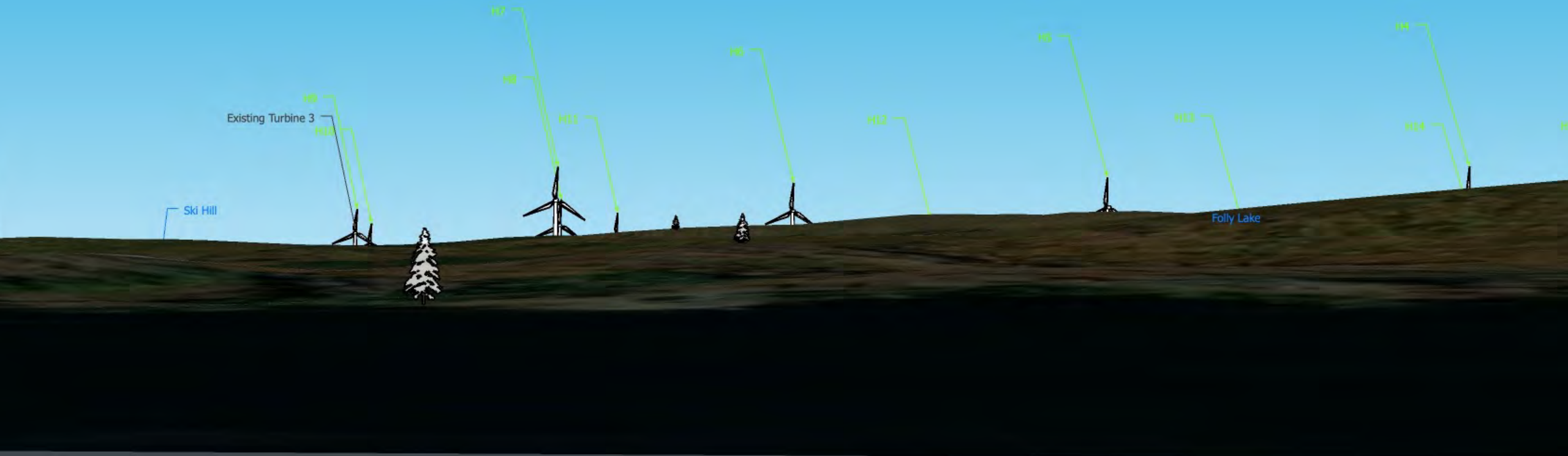


Londonderry – Baseline Rd

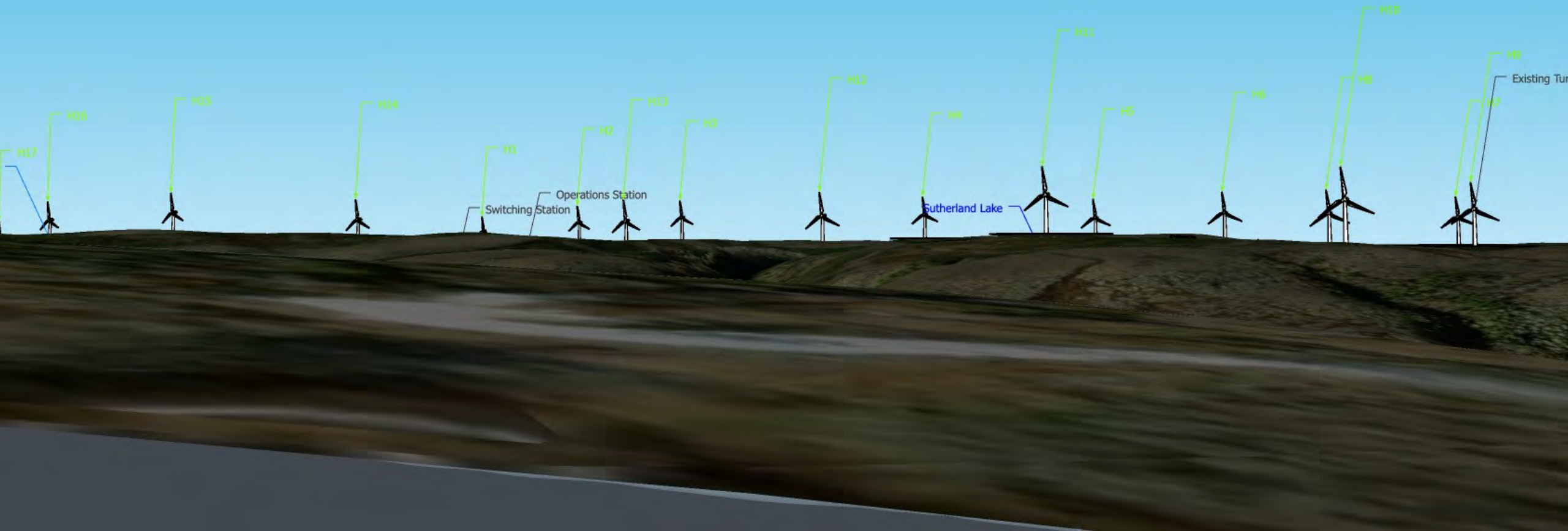
Sutherland Lake



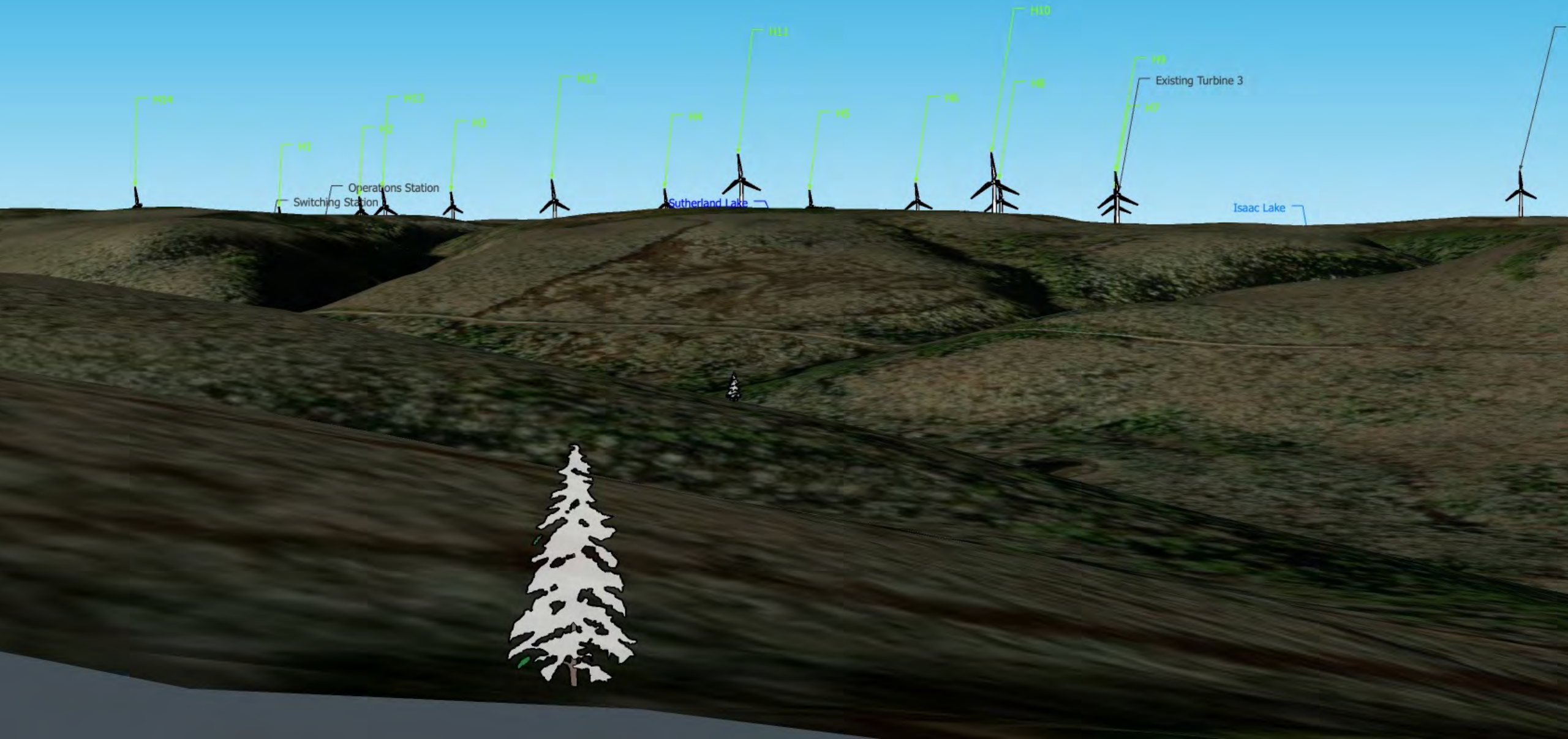
Issac Lake


H7
H6
H5
H4
H8
H9
Existing Turbine 3
H10
H11
H12
H13
H14
Ski Hill
Folly Lake

Top of Ski Hill

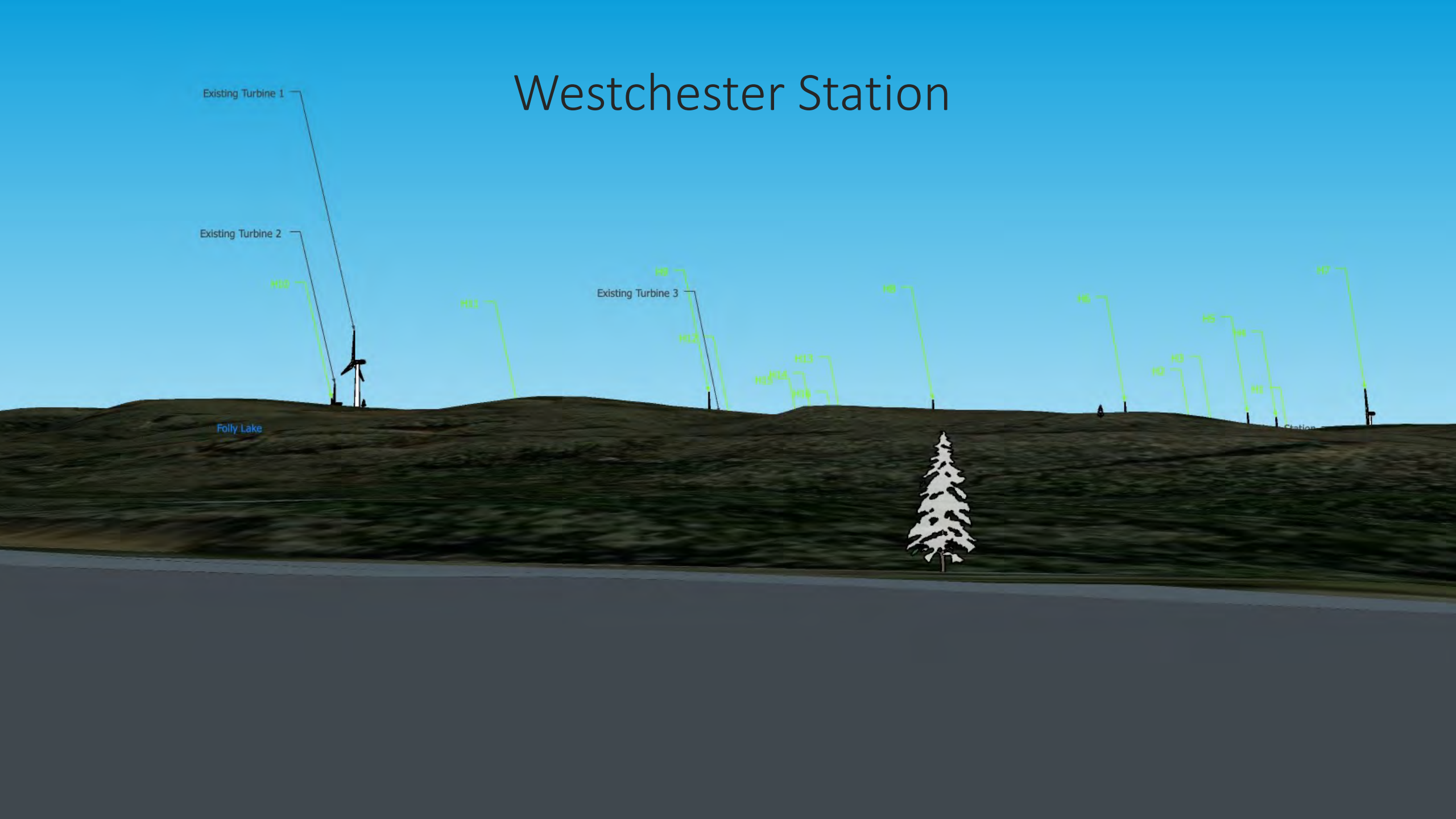


Ski Hill Beaver Lookoff



Wentworth Valley Floor

Westchester Station



Thanks

For more information or to explore a particular location call or text