Great Lakes Wind Feasibility Study

Public Feedback Session Report

Prepared for:

New York State Energy Research and Development Authority

New York, NY

Prepared by:

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Keywords

Great Lakes Wind

Offshore Wind

Turbine

Visualization

Feasibility Study

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Acronyms and Abbreviations

BIPOC	Black and Indigenous People of Color
GHG	Greenhouse Gas
MW	Megawatts
NOAA	National Oceanic and Atmospheric Administration
NREL	National Renewable Energy Lab
NYOGS	New York State Office of Government Services
NYSDOS	New York State Department of State
NYSDEC	New York State Department of Environmental Conservation
NYSERDA	New York State Energy Research and Development Authority
PSC	Public Service Commission
R&D	Research and Development
USFWS	US Fish and Wildlife Services
USGS	United State Geological Services

Executive summary

NYSERDA is in the process of conducting a Great Lakes Wind Feasibility Study (Study) in accordance with the Public Service Commission's Order 862. This order is intended to align the State's Clean Energy Standard with the requirements in the Climate Leadership and Community Protection Act (Climate Act), including achieving 100% zero-emission energy by 2040. It instructs NYSERDA to conduct a study of the feasibility of adding Great Lakes wind energy to New York State's renewable energy portfolio. The Study includes considerations of environmental, maritime, economic, and social impacts, as well as the associated costs and benefits of developing wind energy in the Great Lakes.

Throughout the Study, NYSERDA has engaged with members of the public via informational webinars, email, and regular website updates. To ensure the Study's scope incorporates local knowledge and includes topics of interest to local communities, NYSERDA hosted a public feedback session via Zoom on June 9, 2021 and accepted written public comments through the following week. One hundred and ten community members attended the session. Following the event, NYSERDA received 62 written comments, 11 of which came from participants of the feedback session Comments largely focused on the role of wind in New York's renewable energy transition, decision-making, siting considerations, environmental impacts, and socioeconomic impacts. The majority of oral commenters expressed support for the Study and indicated the importance of responsible siting and local economic benefits. Written comments generally opposed wind in the Great Lakes and recommended Study content to demonstrate its potential impacts.

Following receipt of this public feedback summary, NYSERDA will provide this report to the Study research team for review to ensure topics of interest are considered in the Study. NYSERDA will also make the report publicly available on a webpage dedicated to the Great Lakes Wind Feasibility Study and will include it in the filing to the PSC.

1 Introduction

On June 9, 2021, the New York State Energy Research and Development Authority (NYSERDA) hosted a Public Feedback Session to inform their ongoing Great Lakes Wind Feasibility Study (Study). This report summarizes the objectives of that session, the oral public comments received during that session, and the written public comments received the week following. NYSERDA and its Study team will utilize this report to ensure the Study includes relevant local knowledge of the Great Lakes and addresses areas of interest to local communities.

The report is organized into four sections. This section, Section 1, Introduction, introduces New York State's climate and renewable energy goals and the scope of the Study, including additional public engagement efforts. Section 2, Public Feedback Session Overview, provides details on the purpose, format, and attendance at the public feedback session on June 9. Section 3, Public Feedback, summarizes the oral and written comments received. Section 4, Study Considerations, provides an overview of topics of interest that could be incorporated into the Study or addressed through other means. Section 5, Next Steps, highlights how NYSERDA intends to utilize the feedback received as it proceeds with the Study.

1.1 Great Lakes Wind Feasibility Study

In 2019, New York State passed the Climate Leadership and Community Protection Act (Climate Act). The Climate Act sets nation-leading climate targets, including:

- 85% reduction in greenhouse gas (GHG) emissions by 2050;
- 100% zero-emission electricity by 2040;
- 70% renewable sources of electricity by 2030;
- 9,000 megawatts of offshore wind by 2035;
- 3,000 megawatts of energy storage by 2030;
- 6,000 megawatts of solar by 2025;

- 22 million tons of carbon reduction through energy efficiency and electrification.

Following passage of the Climate Act, New York's Public Service Commission (PSC) released Order 826 to expand the State's Clean Energy Standard to align with the renewable energy targets in the law. As part of this order, the PSC directed NYSERDA to study the feasibility of wind energy in the Great Lakes, with a focus on Lake Erie and Lake Ontario. Specifically, NYSERDA was instructed to consider the environmental, maritime, economic, and social issues related to potential Great Lakes wind projects, as well as the market barriers and costs of deploying wind in the Great Lakes. This is intended to assess both the viability and value of including Great Lakes wind as a resource towards meeting the requirements of the Climate Act.

To conduct the Study, NYSERDA is engaging with three contractors – National Renewable Energy Laboratory, Pterra Consulting along with the Brattle Group, and Advisian – throughout 2021. Their scope of work includes a review of environmental conditions, regulatory processes, available and emerging technologies, grid interconnectivity, port use, business opportunities, current lake uses, and social impacts. It is anticipated that the final Study will be filed with the PSC in early 2022, at which time the PSC will determine if wind energy development in the Great Lakes is a feasible option now, in the future, or not at all.

1.2 Ongoing Public Engagement Efforts

The Climate Act intends to empower every New Yorker to fight climate change at home, at work, and in their communities, and NYSERDA is committed to ensuring that members of the Great Lakes communities are engaged throughout the Study process. It is essential that the public both understand the scope of the Study and have the opportunity to provide their input. To assist with meeting these objectives, in addition to the public feedback session, NYSERDA is hosting a series of informational webinars over the course of the Study's development in 2021. NYSERDA also routinely responds to questions posed by members of the public interested in or concerned about the Study and its potential impacts on the future of wind in the Great Lakes. These efforts are described briefly below. Additional details, including presentation slides, recordings and frequently asked questions documents, can be found on https://www.nyserda.ny.gov/All-Programs/Programs/Clean-Energy-Standard/Important-Orders-Reports-and-Filings/Great-Lakes-Wind-Feasibility-Study.

1.2.1 Informational Webinars

Ahead of the public feedback session, NYSERDA hosted two public webinars on the Study. The first, held on March 19, 2021, provided introductory content on NYSERDA, New York's Clean Energy Standard, and PSC Order 826. It also covered the Study's scope of work, including specific technical, environmental, and social components included and opportunities to be engaged in the study process. The second, held on May 19, 2021, provided more details on the scope, progress made to date, and the methodologies being used by researchers. The public was provided the opportunity to ask questions of the researchers on those methodologies. NYSERDA also presented on the public feedback session.

A third public webinar was held on August 10, 2021. This was another opportunity for NYSERDA to share Study progress. This webinar also included an overview of the public feedback session and topics of interest to the public. Another webinar is planned for the fall 2021, ahead of the Study's completion later this year.

1.2.2 Frequently Asked Questions

NYSERDA understands that community members have significant interest in the Study's scope and findings, as well as the potential next steps for deployment of wind energy in the Great Lakes. NYSERDA endeavors to answer questions received via email or at public engagement events to ensure everyone is informed about the Study. To assist with this effort, the Study team has developed a Frequently Asked Questions document available at https://www.nyserda.ny.gov/All-Programs/Programs/Clean-Energy-Standard/Important-Orders-Reports-and-Filings/Great-Lakes-Wind-Feasibility-Study and attached as Appendix A. This document covers questions regarding the study process and scope, including: how wind energy in the Great Lakes could align with the State's renewable energy goals, the potential impacts of such development potential energy costs, impacts to natural resources, and engagement with neighboring jurisdictions, among other topics.

2 June 9, 2021 Public Feedback Session Overview

NYSERDA conducted the public feedback session to offer stakeholders and community members the opportunity to provide input on the Study's components. This was intended to ensure that the Study includes relevant local knowledge of the Great Lakes and surrounding communities and to identify topics of interest to inform this process and identify potential future research. Feedback will be incorporated into the Study by NYSERDA and the three engaged contractors.

To make the community aware of the public feedback session, NYSERDA announced it as part of their second informational webinar three weeks prior and distributed registration information multiple times via electronic media, including emails, web postings, and social media, in the weeks and days leading up to the event. Members of the public were able to sign up to receive the Zoom link via Eventbrite.

NYSERDA began the session with a 15-minute overview of the Study, including a discussion of frequently asked questions. Once the overview was completed, Cadmus, who facilitated the event, presented the purpose of the public feedback session and provided ground rules for participation. Participants who registered in advance provided comments for up to two minutes and were encouraged to submit any additional comments beyond their time via email. Participants who did not previously register to speak were encouraged to sign up via the chat and put in the queue and allotted two minutes to speak. All participants who pre-registered and who signed up during the webinar were able to provide comments. Additional details on the session are included in Table 1 below.

Table 1: Feedback Session Overview

Date & Time	June 9, 2021 from 6:00PM – 8:00PM
Platform	Zoom
Panelists	Abbey DeRocker, NYSERDA Assistant Director, Large-Scale Renewables Adrienne Downey, NYSERDA Principal Engineer, Offshore Wind Sherryll Huber, NYSERDA Project Manager, Offshore Wind Gregory Lampman, NYSERDA Program Manager, Environmental Research
Registration Numbers	151 registrants 110 attendees
Commenters	25 commenters

NYSERDA held a one-week comment period following the event for participants and other members of the public to provide additional feedback. During this period, an additional 62 comments were received, 11 of which came from attendees of the feedback session.

3 Public Feedback

Feedback presented in this report comes from two sources: the oral comments delivered during the public feedback session on June 9, 2021 and the one-week written comment period following the session. Comments received via these two sources generally fell into the following categories: role of wind in New York's renewable energy transition; decision-making; siting considerations; environmental impacts; and socioeconomic impacts.

Commenters at the June 9 session were largely supportive of NYSERDA conducting the Study, and most commenters expressed support for wind energy under appropriate conditions. They stressed that wind projects need to be sited responsibly and support the local economy. Commenters offered feedback on the economic and environmental impacts that should be assessed and noted that the Study should be put in the context of climate impacts and the need to transition away from fossil fuels.

Those who submitted written comments following the public feedback session generally expressed disapproval of the concept of wind energy being sited in the Great Lakes and urged NYSERDA not to pursue its implementation. Many offered arguments for why they believe siting wind in the Great Lakes is inappropriate or outside the bounds of NYSERDA's authority. They provided suggestions on what the Study should include, highlighting the potential risks and downsides of wind deployment in the Great Lakes.

Table 2 summarizes themes from the input received. A more detailed overview of all comments relevant to the Study is included in the subsections below. It is important to note that the summary below represents the perspectives and opinions of the commenters, given their understanding of wind benefits and impacts. NYSERDA and its technical experts will assess all feedback, to determine whether it is factual and relevant to the Study's scope and, if so, how it should be incorporated. NYSERDA will also assess how to address feedback that may be outside the scope of the Study but important for any potential future action on wind development in the state.

Table 2: Feedback Themes

Role of Wind in Energy Transition	• Consider wind development in the context of mitigating future climate impacts, including to the Great Lakes, and creating energy independence

	• Provide context on the role that wind in the Great Lakes plays in achieving overall Climate Act commitments, including assessment of if additional energy production is needed upstate • Compare wind energy with other potential renewable energy sources
Decision-Making	• Report data sources and methodologies to ensure the public understands the science and facts that form the basis of the Study • Provide information on professionals internal and external to state government working on the Study • Conduct additional public outreach • Consider support for and opposition to Great Lakes Wind in the region • Consider lessons learned from Block Island Wind Farm
Siting Considerations	• Site "responsibly" • Consider viewshed and property values • Maintain consistent standards with wind located in other parts of the state, including ocean wind of the coast of Long Island • Comply with Public Trust Doctrine and Rivers and Harbors Act of 1899 • Consider the appropriateness of different wind technologies (e.g., suction, floating)
Environmental Impacts	• Assess wind impacts on wildlife, soil sediment, local ecosystems, sensitive habitat, drinking water, and public health. • Cease utilizing Great Lakes natural resources for energy production • Assess the likelihood of contamination from wind turbines or manufacturing • Include plan for decommissioning turbines in an environmentally sensitive way
Socioeconomic Impacts	• Developing wind in the Great Lakes should create significant economic benefits that accrue to the local region • Consider jobs impacts, including assessment of impacted industries, wages and career growth potential, increased regional investments, domestic supply chains, unionization, and export opportunities • Evaluate programs necessary for training and expanding the domestic workforce • Minimize and mitigate negative impacts on environmental justice and Black and Indigenous People of Color (BIPOC) communities • Analyze the potential for Community Benefits Agreements • Analyze impacts on lakeshore tourism (e.g., businesses running sportfishing and boating recreational activities) and fishing • Ensure switching to wind does not increase energy costs

3.1 Role of Wind in Energy Transition

Numerous commenters highlighted that it is important to consider wind development in the Great Lakes within the context of a transition away from fossil fuels. They recommend that the Study include potential impacts from wind technology alongside the climate and environmental impacts mitigated by reducing

fossil-fuel usage. One commenter noted that wind also has geopolitical benefits associated with energy independence.

Multiple commenters anticipate that wind technology will be essential to achieving the Climate Act and that siting wind in the Great Lakes should play an important part in that. One highlighted that wind would be important in achieving not only New York's clean energy goals but also electrification and peak load management. That said, some commenters expressed concerns about prioritizing wind technology in New York State. One commenter highlighted hydropower as an abundant resource in the region that should be considered as an alternative. Another commenter highlighted the lack of wind during the summer months, questioning whether the anticipated wind would be sufficient to justify installing turbines.

Lastly, one commenter noted that NYSERDA recently supported removal of the Fairways North and South lease areas by the federal Bureau of Ocean Energy Management, based on the rationale that there is more than enough capacity in the Hudson North and Hudson South areas of Long Island. They urged that this rationale should also apply to the Great Lakes, noting that there is a surplus of nuclear and hydro clean energy in Western New York and questioning whether additional wind capacity is needed in the region.

3.2 Decision-making

Commenters stressed the importance of having individuals with the appropriate expertise conducting the analysis of wind in the Great Lakes, including ensuring that the correct agencies across governments are involved and that any future decision-making be based on science. One commenter highlighted that because disruption of the lake bottom has the potential to disturb lake sediments and impact the lake's food web, a combination of the New York Department of Environmental Conservation, United State Fish and Wildlife Service, and United States Geological Service should be engaged. An additional commenter inquired whether the Study included appropriate expertise on migratory birds and butterflies. One commenter requested that resumes of the project team be made available and that NYSERDA include what connection team members have to the region. Another commenter recommended that NYSERDA not only obtain all necessary and relevant data and identify all methodologies, but also indicate when information is incomplete or unavailable. They suggested that NYSERDA acknowledge scientific disagreement and data gaps, but also evaluate intermediate adverse impacts based on approaches or methods generally accepted in the scientific community.

Multiple commenters noted that they appreciated the stakeholder engagement NYSERDA was conducting as part of the Study. Others highlighted that NYSERDA should conduct additional outreach to ensure community members are aware of the Study. They stressed that community engagement and support are essential. They stated that other studies that previously showed wind to be technically feasible in the Great Lakes were derailed because there was not enough buy-in from the community. They highlighted this as a reason for more active engagement with community members, even during this early stage of the process. Another commenter recommended NYSERDA review previous wind evaluations and open them up for public review. Finally, a commenter noted that community engagement would be essential to designing an approach that creates equitable economic opportunity.

3.3 Siting Considerations

Many commenters noted that they support wind that is sited "responsibly," but few articulated the specific criteria for evaluating responsible siting. Commenters disagreed on the potential impact of Great Lakes Wind on viewshed and property values. Some stressed that turbines could create a visible obstruction of long-value beaches and from lakefront properties and encouraged measures to maintain the natural aesthetics of the lake vistas. Others stated that studies of existing offshore wind development show they have not impacted property values. Numerous written comments were received that stressed that there should be consistent siting standards across New York to ensure equitable implementation in offshore ocean wind and wind in the Great Lakes. One commenter raised the issues of both the Public Trust Doctrine, which requires public access to public lands and waters, and the Rivers and Harbors Act of 1899, indicating that they felt these two State requirements limit the ability to utilize the Great Lakes for the purpose of wind energy generation. Another commenter stated concern that there are unidentified shipwrecks in the Great Lakes, and that placing turbines could potentially be a desecration of those locations.

Additional commenters recommended NYSERDA consider the range of offshore wind technologies and their associated siting impacts. This included placing turbines through suction or gravity to the lakebed or by utilizing floating turbines to avoid drilling, blasting, or pile driving which may disturb sediments. Commenters also recommended investigating alternative onshore locations to place turbines, such as northern New York State, where there is open land.

3.4 Environmental Impacts

The public provided comments regarding turbine impacts on the environment and wildlife, including avian species and their migration patterns, bat species, disturbance of lake bed and waters, local

ecosystems, and marine life. Commenters also raised concerns about the potential for oil leaks, microplastics, chips, paint erosion, oil droplets, toxic rare earth molecules, BPA in epoxy, wear and tear, and ultraviolet rays pollution. They recommended that sensitive habitat areas be avoided to protect wildlife before, during, and after construction. Additional commenters raised concerns about the infrasound and vibrations in the Great Lakes, stating that there are currently no studies identifying these impacts on marine life. Another commenter noted that turbines create low-frequency noise that is "heard" by fish, which could lead to soft tissue damage, internal bleeding, and death to fish and marine life in proximity to the turbines. Others contradicted these comments, highlighting that the Block Island Wind Farm has been beneficial to aquatic life, acting as an artificial reef, attracting fish, and encouraging spawning.

Commenters also raised concerns about effects on the quality of drinking water, as many municipalities rely on the Great Lakes for clean water for their public water systems. Of particular concern to these commenters is how sediment disruption during construction and repair, or due to lubricant spills, could affect this fresh water source. The public also commented on how the turbines should be disposed of after being worn out, highlighting that they are not recyclable. Commenters expressed concern over whether disposal sites would be located in the lake itself or if turbines would be taken out to another site (landfill) and disposed of there.

Finally, multiple commenters highlighted a long history of adverse environmental impacts in the Great Lakes due to their utilization for energy production and commerce. Some of these commenters stressed that wind development should help address these historical harms, while one stressed that New York should end its natural resource exploitation of the Great Lakes. Another commenter noted that there should be an analysis of the cumulative impacts and adaptive management strategies.

3.5 Socioeconomic Impacts

The majority of commenters highlighted the significant potential impact of Great Lakes Wind on economic development opportunities in the region. Many commenters are enthusiastic about the prospect of creating long-term, good-paying jobs that are well suited to the industrial background of the region. They highlighted that the region should become a hub for developing and installing turbines, providing jobs across skillsets and employment levels. They noted that there is an opportunity for New York to export these products as other states and Canada seek similar technologies. Multiple commenters representing trades stressed that Great Lakes Wind jobs should be union jobs. Others highlighted that NYSERDA should analyze the potential for Community Benefits Agreements and local communities'

economic and social benefits. Others highlighted that the Study should consider developer considerations, the expansion of domestic supply chains, and the inclusion of fair labor practices. All those that referenced jobs stressed that these benefits should accrue to the local community. One commenter noted that efforts should be taken to avoid, minimize and mitigate negative impacts to environmental justice and black and indigenous people of color (BIPOC) communities. Another commenter noted that NYSERDA should create an offshore wind economic development plan in collaboration with the local community. A final commenter highlighted that the communities that currently host nuclear facilities that are being decommissioned should be prioritized for the benefits of new wind generation.

Commenters disagreed on the potential impact to tourism and the fishing industry, with some expressing concerns about both being impacted by industrializing the shorelines, while others cited Block Island as an example of increasing tourism and fishing.

Finally, the public provided comments stressing that the switch to wind power should not result in an increase to ratepayers. One commenter referenced a United State Department of Energy study that found there are significant additional costs to offshore wind compared with other renewable energy technologies. Others stressed that the implementation of wind energy should reduce ratepayer costs.

4 Next Steps

NYSERDA values the public input received during the Feedback Session and following public comment period. Upon receipt, NYSERDA will provide this summary report of public feedback to the researchers conducting the Study. Together, they will seek to address items that are within the Study's scope and identify topics that may require further consideration beyond the Study. Items that require clarification with the public will be added to the Frequently Asked Questions document kept on the Great Lakes Wind Feasibility Study website. This summary report will also be made publicly available and included as an appendix to the filing of the Study with the PSC.

Should the PSC direct NYSERDA or other New York State agency to take future action on the development of Great Lakes Wind, by law, the State would undertake a robust regulatory process that includes public feedback at multiple points and via multiple avenues.

For those who would like to provide additional feedback about the Study, please send emails to greatlakeswind@nyserda.ny.gov.

Appendix A. Public Feedback Session Slide deck

See attached

Appendix B. Frequently Asked Questions

See attached

CADMUS

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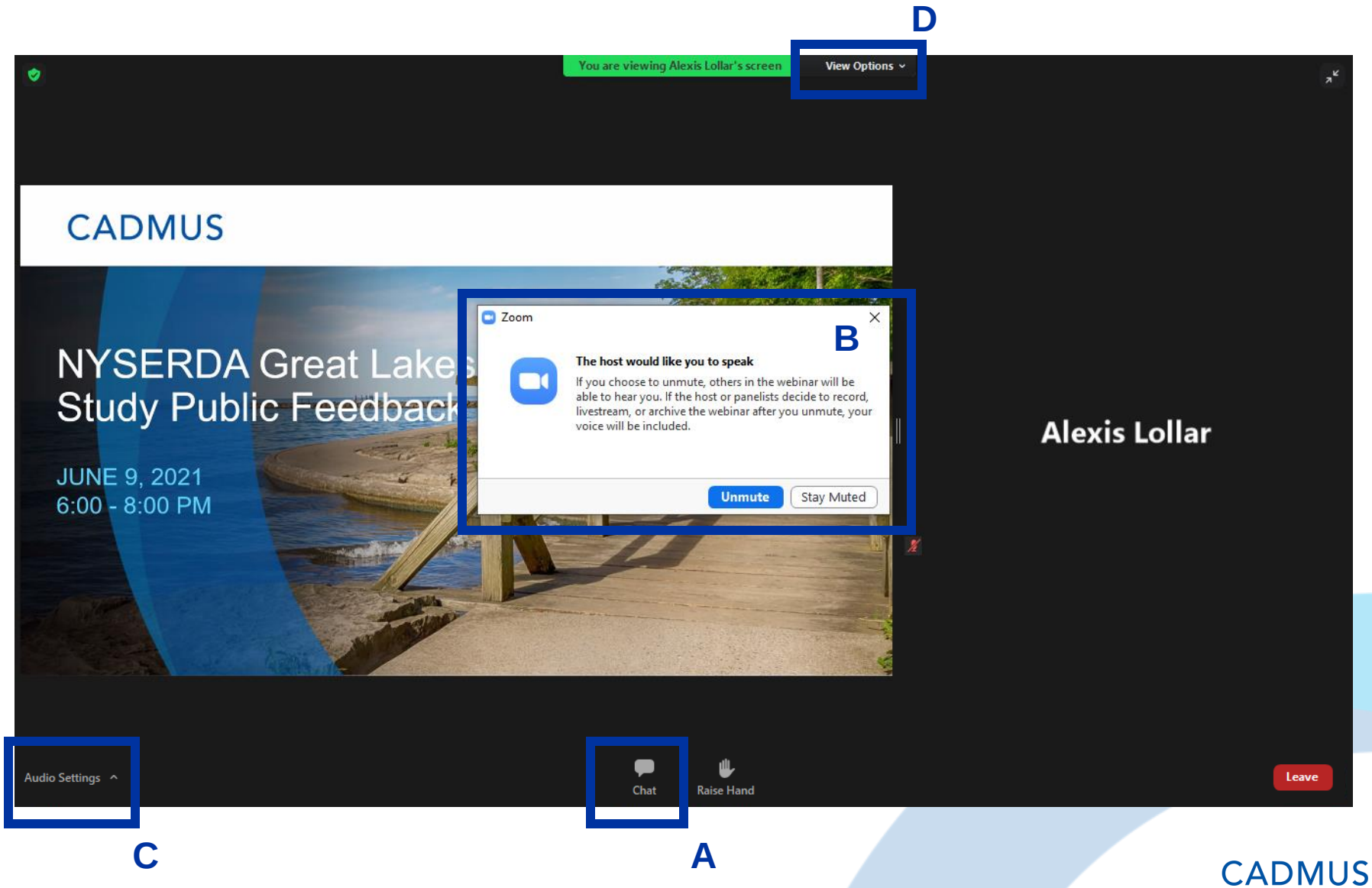
NYSERDA Great Lakes Wind Feasibility Study Public Feedback Session

JUNE 9, 2021
6:00 - 8:00 PM

Zoom Overview

A. Use the **Chat** feature to register to speak or to provide comments
B. At your time to speak the host will invite you to speak, you will see a pop-up box inviting you to speak and **unmute**
C. To adjust your audio, select the **audio settings** button to open the menu
D. To adjust the way you are viewing the slides and the panelists on video select **View Options**



Agenda

Great Lakes Wind Feasibility Study Public Feedback Session

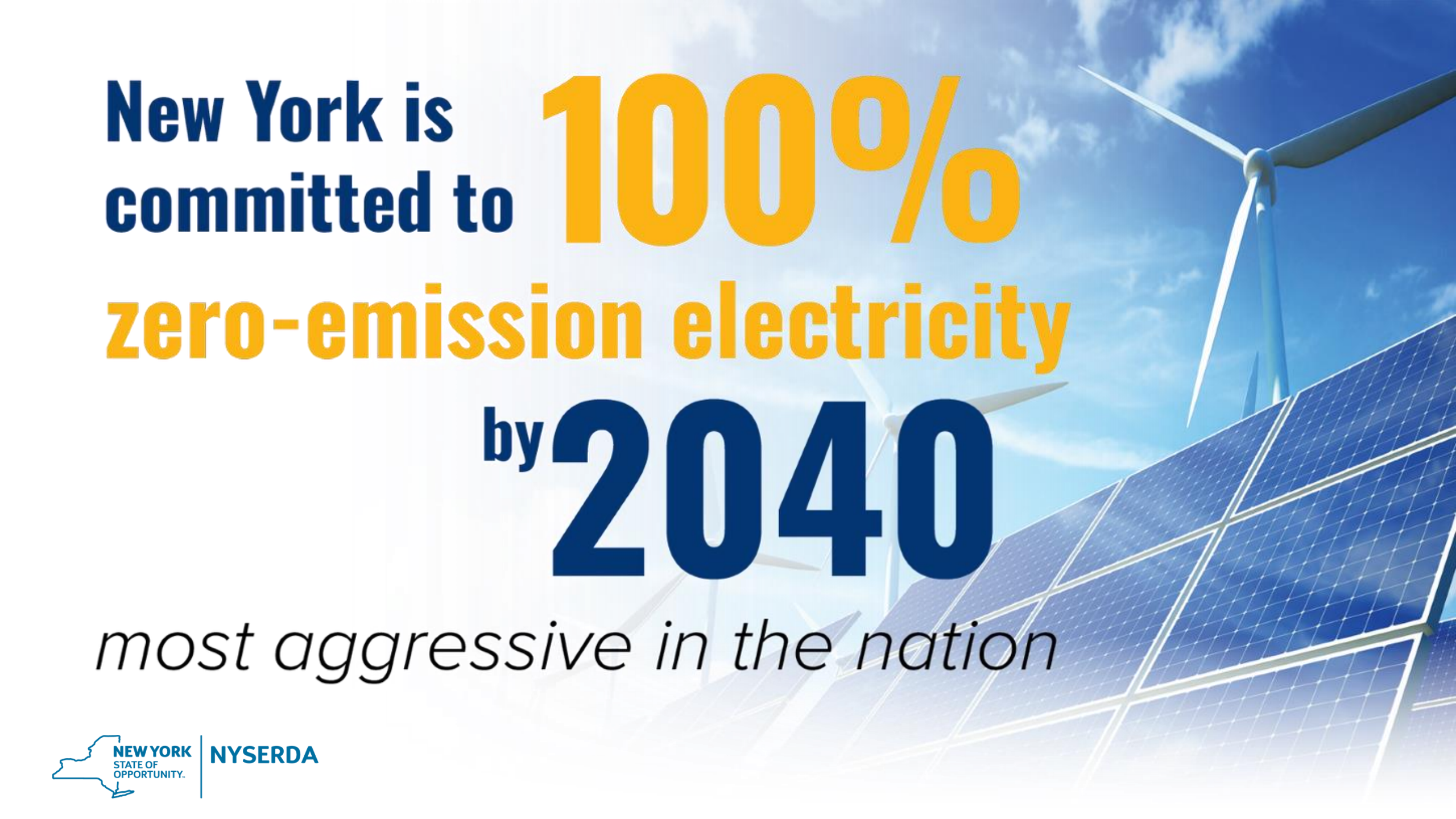
6:00-6:05 p.m. Welcome & Introductions

6:05-6:15 p.m. Feasibility Study Overview

6:15-6:20 p.m. Comment Period Overview

6:20-7:55 p.m. Comment Period

7:55-8:00 p.m. Closing


New York is committed to 100% zero-emission electricity by 2040
most aggressive in the nation
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NYSERDA

Public Service Commission Order

Published 10/15/2020

Directs NYSERDA to:

> Conduct a feasibility study for wind energy generation in the Great Lakes

> Commence work with 180 days of order within $1 million budget

Fishing during sunrise on Lake Erie

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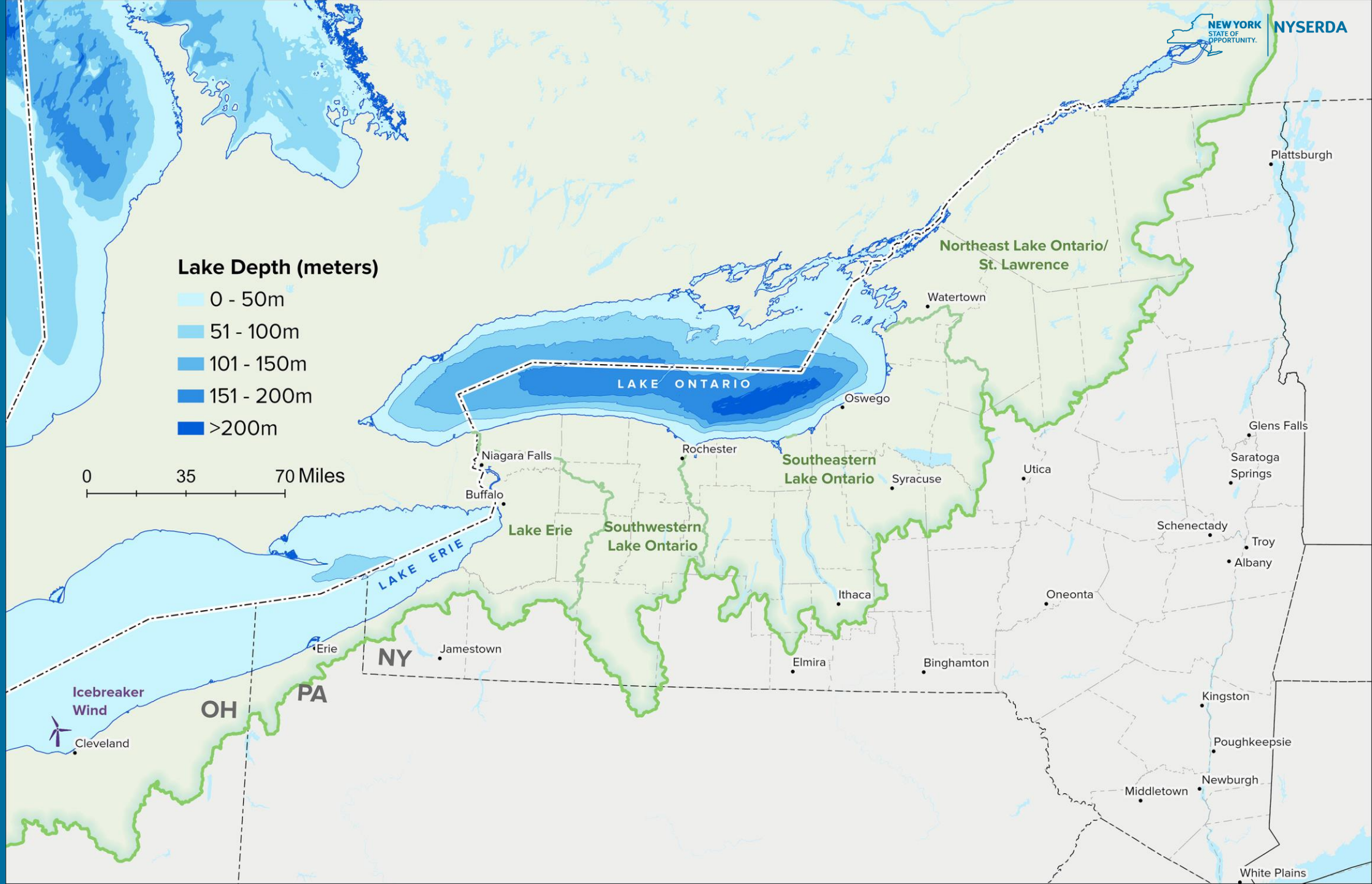
Great Lakes Wind Feasibility Study



Great Lakes Wind Feasibility Study
Public Feedback Session

Purpose:

To offer an opportunity for stakeholders in potential Great Lakes Wind to provide feedback on the Study and components

To ensure the scope of the Study includes relevant local knowledge of the Great Lakes and surrounding communities

To create a record of initial comments on the Study and incorporate topics of interest

NYSERDA Team:

Greg Lampman
Adrienne Downey
Abbey DeRocker
Sherryll Huber

Research Team:

National Renewable Energy Laboratory (NREL)
Advisian Worley Group
Pterra Consulting and Brattle Group

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Study Overview

Great Lakes Wind Feasibility Study

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Great Lakes Wind Feasibility Study

Study will include:

- Technology (e.g., icing considerations) and timelines
- Weather, windspeeds
- Environmental conditions
- Cost projections, power production estimates
- Ports and related infrastructure
- Economic development opportunities, jobs
- Environmental justice
- Regulatory and permitting processes
- Resource users, wildlife and potential conflicts (e.g., wildlife, shipping, fishing)
- NYISO Grid interconnection, energy deliverability
- Public Feedback

Photo credit: Pori Offshore Wind Farm taken by Soumen HyÖtotuuli courtesy of Ken Croasdale to NREL

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Great Lakes Wind Feasibility Study

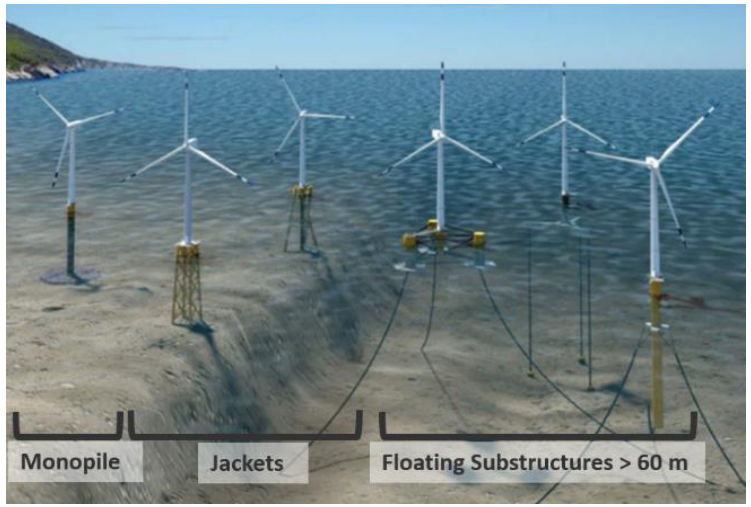
Technology, Costs, Economic Development

Contracted Principal Investigator:

National Renewable Energy Laboratory (NREL)

Feasibility Study Overall Coordination & Final Synthesis Report

Topics to be covered in Study:



Source: NREL

Wind Plant Technology Review

> Evaluation of site conditions
- Characterization of Ice Climate
- Lake bottom soil conditions
- Bathymetry and waves
- Great Lakes Wind Resource

> Technology Options
- Infrastructure: Assessment of Physical Constraints
- Existing Technology Assessment
- Future Technology Assessment
- Geo-spatial analysis of gross energy capacity, local generation capacity, and physical site assessment

Great Lakes Wind Feasibility Study

Technology, Costs, Economic Development

Topics to be covered in Study (Cont'd):

Costs and Cost Reduction Pathways and Production

> Fixed and Floating Scenario Development

> Costs and Sensitivity Study

> Power Production Estimates

Economic Development and Workforce Opportunities

> Jobs and Economic Development Impacts Modeling (i.e., JEDI model)

> Workforce Assessment

> Port Infrastructure Considerations

NREL Transforming ENERGY

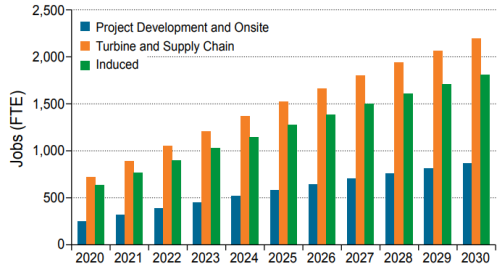


Figure 1. Estimated number of jobs supported by offshore wind deployment from 2020 to 2030 in the Great Lakes region (moderate scenario)

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Great Lakes Wind Feasibility Study

Electric Grid Interconnection

Contracted Principal Investigator:

> Pterra LLC

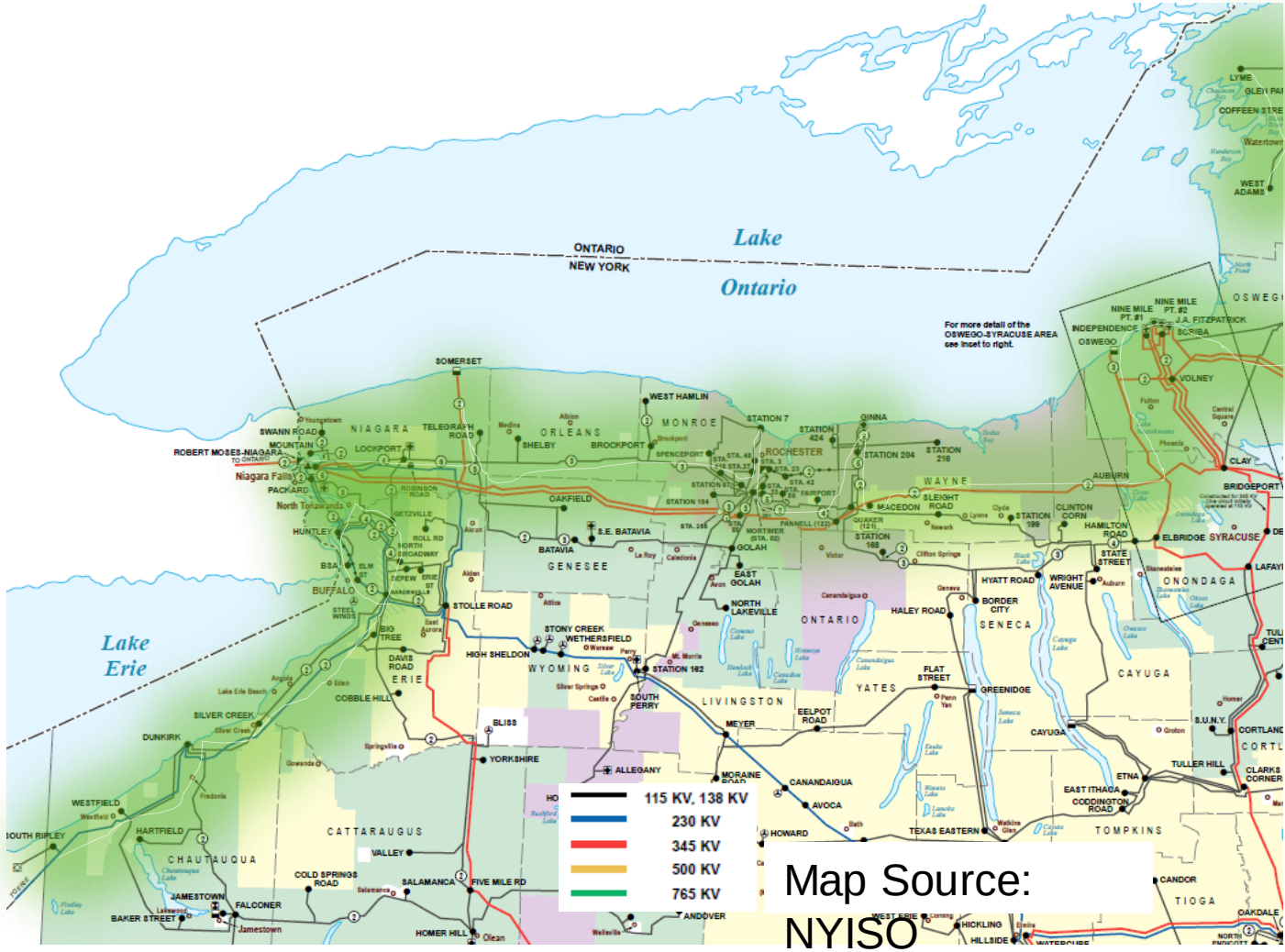
> Brattle Group

Topics to be covered in Study:

> Feasibility of interconnecting of Great Lakes Wind resources to New York Electric Power System

> Identify points of interconnection to the land-based power system

- the capacity that can be connected
- any congestion or curtailment risks
- any needed electric transmission upgrades



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Great Lakes Wind Feasibility Study

Permitting, Environmental, Viewshed

Contracted Principal Investigator:
Advisian Worley Group

Topics to be covered in Study:

Federal, State, and Utility Permitting Study

> Develop a table to indicate the permit multi-state requirements

> Permitting thresholds and findings

- Wildlife
- Habitat
- Risks and opportunities created by authorization processes
- Options that could creating efficiencies and reducing conflicts

Geophysical and Geohazards Study

> Present site conditions

- Active processes and interactions
  - Sediment transport
  - Offshore wind technology structure

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Great Lakes Wind Feasibility Study

Permitting, Environmental, Viewshed

Topics to be covered in Study (Cont'd):

Relative Risks, Mitigations, and Benefits

> Potential risks (wildlife, uses, communities)

> Assessment of stressors, receptors, impacts, and mitigations

> Historic/cultural areas, potential conflicts

> Assessment of public health benefits

Visual Impact Study

> Visualization map of potential Lake Erie wind

> Visualization map of potential Lake Ontario wind

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Public Input

Great Lakes Wind Feasibility Study

What we have heard so far

- Communication preferences include email updates, website resources, and public feedback session
- Interest in potential project details and technological solutions to ice floe and ice cover
- Viewshed impact and concerns of lakeshore residents
- Impacts to wildlife including fish and birds
- Discussions with neighboring states, countries, and indigenous nations
- Reaching rural communities
- Legacy sediment pollution and impacts to fresh water supplies
- Differentiation between offshore wind in the Atlantic Ocean and the Great Lakes
- Interest in economic opportunities
- Types of uses that are appropriate for public lands

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Public Input

Great Lakes Wind Feasibility Study

How will public feedback be used?

- Summary report from this session will be shared with Study researchers
- Inclusion of topics of importance to be addressed under existing Study scopes or recommendations for more research
- Summary of public feedback throughout the year will be shared with Public Service Commission and delivered with the Study

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Comment Period Overview

Purpose

Great Lakes Wind Public Feedback Session

- For stakeholders to **share verbal comment** with NYSERDA and community members on the Great Lakes Wind Feasibility Study
- To add input to the Study by ensuring topics that are important to you are covered within this Study
- This is a feedback session only
- All comments received this evening, and in writing for 7 days following the webinar, will be incorporated into **a summary report that will inform study next steps**
- Comments and questions are welcome throughout the year at greatlakeswind@nyserda.ny.gov

Comment Process

Great Lakes Wind Feasibility Study Public Feedback Session

- Nearly 30 people have pre-registered to make comments
  - Additional registrations are welcome in the chat

- Cadmus will call on pre-registrants to unmute and provide comment, followed by those who indicate interest in the chat as time allows.

- Each person will have **up to 2 minutes**
  - If you have additional comments to make beyond your allotted time, please input those into the chat or send them to greatlakeswind@nyserda.ny.gov and we will capture them

Comment Etiquette

Great Lakes Wind Feasibility Study Public Feedback Session

- NYSERDA and Cadmus are **committed to creating an environment in which everyone is comfortable sharing and exchanging ideas with their neighbors** about the potential future of Great Lakes Wind

- Those speaking play a critical role in achieving this environment by **remaining respectful in the delivery of their comments**

Comment Period

2 minutes for comments

1 minute remaining

30 seconds remaining

Time expired – please wrap up

Closing

Public Resources

Great Lakes Wind Feasibility Study

> Written comments for this report:
Due June 16, 2021 (7 days)

> Email NYSERDA GLW Team:
greatlakeswind@nyserda.ny.gov

> **Sign-up for email updates**

> Website:
nyserda.ny.gov/Great-Lakes-Wind-Feasibility-Study

> Additional Public Webinars on Study Progress

- August 10, 2021 10:00am
- October 20, 2021 3:00pm
- Early 2022: Final Report Public Webinar

Young girls walking along a rocky beach on Lake Erie

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Thank you

For more information, please contact:

NYSERDA Great Lakes Wind Team
greatlakeswind@nyserda.ny.gov

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Great Lakes Wind Feasibility Study

Frequently Asked Questions

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What is the purpose of the Great Lakes Wind Feasibility Study?

To achieve the ambitious goals of New York's Climate Leadership and Community Protection Act (Climate Act), the New York State Public Service Commission (PSC) directed NYSERDA to investigate the feasibility of including Great Lakes wind power in the State's clean energy portfolio. The main purpose of the Great Lakes Wind Feasibility Study is to objectively collect as much information and data as possible so that an informed decision can be made about whether or not wind energy should be pursued in the Great Lakes.

When will the Study be completed?

The draft study is expected by Fall 2021 and a final version of the study will be filed with the Public Service Commission by early 2022.

How will you get public feedback?

Based on feedback received during the first Great Lakes Wind informational webinar held on March 19, 2021, we will be using a number of different methods to ensure stakeholders' comments and concerns are heard and considered in the study preparation. These include direct email communication, website resources, and additional question and answer sessions within future webinars. In addition, a dedicated Virtual Public Feedback Session will be held on Wednesday June 9, 2021. Please check the website for more information on next steps.

Where can I go for the most up-to-date information on the Study?

There will be quarterly, virtual updates through informational webinars that will highlight the latest findings from the study research team. These updates will also be posted to NYSERDA's Great Lakes Wind webpage. A recording of each webinar, as well as the slide deck presented during each webinar are available on the website among other resources. Please sign up for the email list on the webpage for other announcements and opportunities to learn more about the study.

What happens after the Study is completed?

The final Great Lakes Wind Feasibility Study will be formally filed with the Public Service Commission along with options and/or suggestions from NYSERDA based on the information and conclusions of the report. The Public Service Commission will determine next steps in the context of the State's renewable energy policies based on the findings of the Study and feedback provided by NYSERDA.

Will you be studying impacts to bird and potential bird collisions?

The Study considers current environmental conditions and uses – including wildlife habitats, migration patterns, potential risks associated with a "stressor and receptor" analysis and potential mitigation measures.

Will I be able to see the turbines from my home and/or the shoreline?

The Great Lakes Wind Feasibility Study is a foundational, feasibility study and does not commit the State to a posture of developing wind projects on the Lakes. Currently, there are no turbines in New York State's Great Lakes to see. As part of the Study, a visual impact study of potential turbines is being conducted. The visual study will include consideration of the potential distance from the shore and consider turbine size but will not make recommendations. There will be special focus on direct viewshed impacts from points of interest (public spaces, tourist destinations) and population centers (cities, lakeshore properties).

How will NYSERDA design these wind turbine towers to be impervious to large amounts of ice floes?

NYSERDA is not designing wind turbine towers but is developing a feasibility study that includes an assessment of icing issues and technology solutions in Lake Erie and Lake Ontario.

What is the expected cost for wind projects in the Great Lakes? What changes will I see in my energy bill?

Cost is an important topic that is being explored in the Feasibility Study. This Study will not be affecting current energy costs.

What impact will this have on recreational fisheries and fish populations?

An assessment of fisheries impact and opportunities is included in the Feasibility Study.

How does the New York State Offshore Wind Master Plan relate to this feasibility study?

The Offshore Wind Master Plan (OSW MP) has no impact on this Feasibility Study. The OSW MP was designed to understand how to advance the State's original goal of 2,400 MW of offshore wind by 2030, reflecting State policy for offshore wind in the Atlantic Ocean as of 2018. The State's current active policy for offshore wind is now 9,000 MW of offshore wind by 2035, which addresses a goal for projects in the ocean only. Great Lakes Wind Feasibility Study is designed to understand the opportunities and risks associated with Great Lakes Wind, not advance a predetermined development goal of wind wind resources from the ocean.

How do you plan to get feedback from both supporters and opposers to Great Lakes Wind?

The Great Lakes Wind Feasibility Study is an initial assessment which includes cataloging the various opportunities and challenges of Great Lakes Wind. Where the Feasibility Study is technical in nature, NYSERDA is eager to cultivate an understanding of stakeholder views alongside the study to thoroughly understand the various perspectives and opinions from the public on the creation and contents of the Study. Additionally, formal public comments will be collected on the Study by the Public Service Commission through the State Administrative Procedures Act, or SAPA process if the Commission elects to take steps after the Feasibility Study has been filed.

Under the Climate Leadership and Community Protection Act (CLCPA), New York State is committed to use 70% renewable energy by 2030. Given that goal, what is the overall power need for the State of New York in 2030 and of that how much (megawatts and number of turbines) does NYSERDA plan to be sourced from Great Lakes wind?

New York State continues to grow a strong pipeline of renewable energy projects to meet the CLCPA goal that at least 70 percent of New York's electricity come from renewable energy sources by 2030 and a 100% zero emissions electrical grid by 2040. We need a diversity of projects and technologies to ensure a resilient grid for the future and one that serves all New Yorkers.

Why do we need wind energy in the Great Lakes when the energy demands are downstate (New York City)?

Diversification of the renewable energy portfolio with Great Lakes Wind could offer New York State an additional resource to support a diversified supply mix to support the energy needs of the entire state. The Great Lakes Wind Feasibility Study is an effort to understand this potential resource and how it could support our suite of cost effective and responsible potential solutions to meet our ambitious clean energy goals while building grid resilience through diversified resources. This Feasibility Study will help provide this type of information so that informed decisions can be made about what projects can be pursued that will add to New York State's grid resilience.

Can't you just add more wind turbines in the ocean to meet the State's energy goals?

New York needs a diversity of projects and technologies to ensure a resilient grid. Therefore, we will need to consider a number of large-scale renewable energy project options including solar, wind, energy storage, and other innovative technologies. At least 9,000 MW of Offshore Wind are being being actively developed in the Atlantic Ocean by 2035 to support our State's clean energy goals. Great Lakes Wind may offer an additional resource in complement to offshore wind and other on-shore renewable technologies to meet our goals.

How many megawatts of installed capacity are expected?

An assessment of potential hosting capacity will be included in the Feasibility Study.

How will the Study be different than the Great Lakes Offshore Wind Project (GLOW) completed ten years ago?

The Great Lakes Offshore Wind Project (GLOW) was a competitive solicitation issued by the New York Power Authority (NYPA) in 2009 for proposals to develop a wind project in Lake Erie or Lake Ontario of 120-500 megawatts of capacity. The solicitation received five proposals but was ultimately canceled by NYPA in 2010. In contrast, this Great Lakes Wind Feasibility Study is not a request for proposals, or a directed effort to build projects. It is an effort to review existing data, analyze new information and gather some initial public feedback to present the feasibility of Great Lakes Wind for possible additional clean energy resource opportunities to the Public Service Commission. It should be noted that a lot has changed in the time since GLOW was being considered more than a decade ago. Advancements in technology (both onshore and offshore wind and solar), as well as a shift in State energy and climate policies, have led to the consideration of Great Lakes Wind as part of the renewable energy portfolio for New York State.

Will there be consideration of coordinating permitting processes with neighboring states, Ontario, and the national government of Canada about the possibility of Great Lakes Wind?

Yes, NYSERDA is currently having conversations with these other entities. An assessment of regulatory control at the local, county, state, regional, national, and international levels is included in the Feasibility Study.

Will the study contact Indigenous Nations with ancestral connections to Lake Ontario-related cultural resources in order to understand their impact on this feasibility study?

An assessment of cultural resources is included in the Feasibility Study and New York State is currently in contact with indigenous nations to understand areas of importance and sensitivity.

As a source of drinking water for many New Yorkers, what type of polluted sediments exist in Lake Erie and Lake Ontario that could potentially be exposed during surveying or construction activities?

New York State values its freshwater resources and recognizes the importance of water quality to New Yorkers. An investigation of how Great Lakes Wind could relate to water quality considerations is included in the Feasibility Study's assessment of sediment disturbance and mapping of known sediment contamination.

How will wind energy help reduce the use of fossil fuels?

Great Lakes Wind has the potential to help support our statewide clean energy goals and decarbonization goals. New York's 100 percent zero emissions by 2040 targets are aimed to ultimately facilitate the responsible retirement of aging fossil fuel plants in our state - including highly polluting peaker plants. Our clean energy goals are expected to deliver more than $11 billion in societal benefits in the form of carbon and health benefits to New Yorkers.

Great Lakes Wind may be a possible clean energy solution, but what is New York doing to make sure the grid is ready?

In pursuit of the Climate Act goals, New York State is planning for the future grid. In April 2020, New York State enacted the Accelerated Renewable Energy Growth and Community Benefit Act as landmark legislation aimed at improving the siting and construction of large-scale renewable energy projects in an environmentally responsible and cost-effective manner. Additionally, in January 2021, NYSERDA and the Department of Public Service published a comprehensive Initial Report of the New York State Power Grid Study to accelerate the planning and build out of bulk and local transmission and distribution infrastructure to ensure that renewable energy can be reliably and cost-effectively delivered to power New York homes and businesses. NYSERDA is now working with the Department of Public Service to cultivate stakeholder feedback on this plan. The goal is to find the best approach to ensure that wind energy can interconnect with the grid in a timely and cost-effective way.

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