Accelerating Large-Scale Wind and Solar Energy in New York

PRINCIPLES AND RECOMMENDATIONS

A REPORT FROM THE *RENEWABLES ON THE GROUND ROUNDTABLE*

The Nature Conservancy

ACE NY
ALLIANCE FOR CLEAN ENERGY NEW YORK, INC

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Contents

The Nature Conservancy and the Alliance for Clean Energy New York convened the *Renewables on the Ground Roundtable.* The Consensus Building Institute provided process design and planning, facilitation, and other project support.

- The Nature Conservancy is a global conservation organization dedicated to conserving the lands and waters on which all life depends. Tackling climate change is among the Conservancy's top priorities.
- The Alliance for Clean Energy New York is comprised of clean energy industry and environmental interests that share the mission to promote the use of clean, renewable electricity technologies, and energy efficiency in New York State.
- The Consensus Building Institute empowers stakeholders—public and private, government and community—to resolve issues, reach better, more durable agreements and build stronger relationships.

The Nature Conservancy and the Alliance for Clean Energy New York wish to extend their sincere appreciation to all those who contributed to the Roundtable.

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LIST OF ACRONYMS

CBI	Consensus Building Institute
CEATF	Clean Energy and Agriculture Task Force
DG	Distributed Generation
EJ	Environmental Justice
GWhr	Gigawatt Hour
HCA	Host Community Agreement
IDA	Industrial Development Agency
kV	Kilovolts
LMI	Low and Moderate Income
MW	Megawatt
MWhr	Megawatt Hour
NGO	Non-Governmental Organization
NYISO	New York Independent System Operator
NYSDAM	New York Department of Agriculture and Markets
NYSDEC	New York State Department of Environmental Conservation
NYSDOL	New York State Department of Labor
NYSDPS	New York State Department of Public Service
NYSDTF	New York State Department of Taxation and Finance
NYSERDA	New York State Energy Research and Development Authority
NYSESDC	New York State Empire State Development Corporation
NYSOPRHP	New York State Office of Parks, Recreation and Historic Preservation
NYSPSC	New York State Public Service Commission
PILOT	Payment in lieu of taxes
PSS	Preliminary Scoping Study
PV	Photovoltaic (Solar)
RE	Renewable Energy
RES	Renewable Energy Standard
RoGR	Renewables on the Ground Roundtable
ROW	Right-of-Way
RPTL	Real Property Tax Law
SASS	Scenic Areas of Statewide Significance
SEQRA	State Environmental Quality Review Act

Executive Summary

In 2016, New York State established a Clean Energy Standard, including a Renewable Energy Standard mandating that 50 percent of the state's electricity come from renewable energy sources such as wind, solar, and hydropower by 2030. The Renewable Energy Standard is designed to fight climate change, reduce air pollution, provide a reliable and affordable low-carbon energy supply, and will help New York meet its goals of reducing greenhouse gas emissions by 40 percent by 2030 and 80 percent by 2050.[1]

However, to succeed in meeting the State's "50 by 30" goal, it will be necessary to accelerate large-scale wind and solar power development across New York.

To date, experience shows that getting wind development projects up and running is a lengthy and costly process in New York. Large-scale solar is just getting underway, and projects have yet to go through the approval process. To successfully pick up the pace of renewable energy in New York, it is critical to understand and overcome barriers that create delay and drive up costs.

With an aim of identifying barriers to renewable energy development in New York and developing strategies to reduce those hurdles, The Nature Conservancy (the Conservancy) and the Alliance for Clean Energy New York (ACE NY) convened the *Renewables on the Ground Roundtable.* The Roundtable brought together 37 individuals representing the wind and solar industries, conservation organizations, and land use planning and local government experts. A number of representatives from New York State agencies also participated as impartial observers and provided expertise. The participants worked toward reaching consensus on the issues and solutions and provided comments at every stage of the drafting process, but the Conservancy and ACE NY are responsible for the final content of the report.

The Roundtable members met in person four times, facilitated by the Consensus Building Institute (CBI). Roundtable members also volunteered to participate in eight smaller working groups that met over a nine-month period beginning in November 2016. The working groups met to identify barriers and evaluate issues related to land use, agriculture, community engagement, environmental justice and equity, regulations, taxation, economics, and transmission, and potential solutions to accelerate development of large-scale renewables. Working group recommendations were then considered by the full Roundtable.

Accelerating the development of renewable energy will require the commitment and collective action of diverse stakeholders. It is our hope that this report will stimulate dialogue and action around the issues that were identified as barriers to renewable energy development so that New York State succeeds in meeting its Renewable Energy Standard.

Based on key findings and recommendations regarding large-scale wind and solar development in New York, Roundtable participants developed and agreed on the following principles:

1. NYSPSC Order Adopting a Clean Energy Standard, CASE 15-E-0302 Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and a Clean Energy Standard. http://on.ny.gov/2aKtpgA

1. **Accelerate the Development of Renewables to Meet the Renewable Energy Standard**
   Accelerate construction of cost-effective wind and solar installations while maintaining the protection of natural resources and recognizing community and stakeholder values and environmental justice.
2. **Contribute to the Success of New York's Renewable Energy Standard and Greenhouse Gas Reduction Goal**
   There is an opportunity and an obligation to contribute to the success of the Renewable Energy Standard to reduce greenhouse gas emissions to counter climate change. Achieving these goals will require investment in and public support for large-scale renewable energy facilities as well as distributed resources and greater energy efficiency in New York state.
3. **Increase Understanding of the Economic Benefits of Large-Scale Renewable Energy**
   Promote the economic growth, jobs, health, environmental, and environmental justice benefits at the state and local levels of transitioning to clean and affordable energy.
4. **Assist Local Governments and Fully Engage Communities in Advancing Renewable Development**
   Provide communities and local governments with credible guidance, tools, resources, and support on land-use planning and zoning best practices to proactively plan for renewable energy development.
5. **Increase Awareness of Policies and Practices to 1) Avoid, 2) Minimize, and 3) Mitigate Impacts**
   Increase awareness of this policy framework among all stakeholders to build public confidence in siting practices.
6. **Make New York's Energy Siting Processes More Efficient and Less Expensive**
   Seize opportunities to make the Article 10 and SEQRA siting processes more efficient and less expensive, without sacrificing appropriate environmental review, stakeholder input, or public participation.
7. **Balance Farmland Protection and Renewable Development**
   Provide revenue for farmers while minimizing the removal of productive farmland by providing tools to help achieve and balance both outcomes.
8. **Provide Renewable Energy While Advancing Environmental Justice and Equity**
   Pursue a comprehensive approach by diverse stakeholders that includes partnering with local communities, reduction of harms from conventional energy, equitable sharing of benefits, and fostering economic and energy democracy to reduce environmental injustices and help to ensure the success of renewable energy projects and the Renewable Energy Standard.
9. **Clarify Property Taxation for Renewables**
   Make tax valuation methodologies and implications clear, transparent, and understandable for local jurisdictions and landowners.
10. **Proactively Plan for Transmission**
    The New York Independent System Operator (NYISO), New York State agencies, transmission owners, developers, and stakeholders should work together to identify and address transmission needs while minimizing impacts to environmental and community resources at a pace necessary to achieve the Renewable Energy Standard mandate.

In addition to these principles, the Roundtable participants developed problem statements and specific recommendations for actions by State agencies, local governments and regional organizations, land conservation and environmental organizations, and the agricultural and the renewable energy industries to address the problems. The recommendations are summarized in the matrix in the Appendix.

Introduction

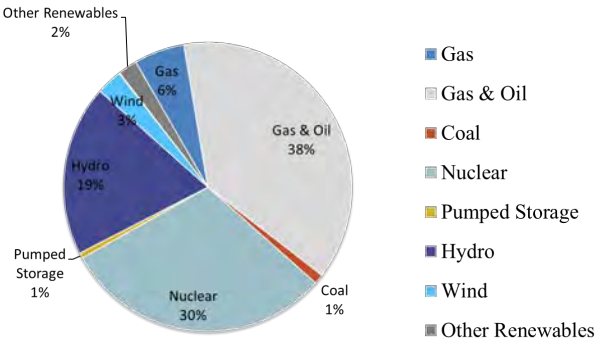
THE CHALLENGE

The State of New York is leading the nation in taking visionary, bold steps to rapidly transition to a clean energy economy. Adopted in 2016, the Renewable Energy Standard is designed to combat climate change, reduce pollution, and ensure a reliable and affordable supply of energy for New York residents. The Renewable Energy Standard requires that 50 percent of the state's electricity comes from renewable energy sources, such as wind and solar, by 2030. Meeting this standard will double the percentage of renewable energy on New York's power grid and will require a rapid increase in the number of large-scale renewable energy projects. (Figure 1) This goal is supportive of the goals of the International Paris Accord, set to hold the increase in the global average temperature to well below 2° C. To achieve the Renewable Energy Standard, a significant acceleration in renewable energy development is required.

The environmental and health benefits of the Renewable Energy Standard for New Yorkers are well documented.[2] Reduction in greenhouse gas emissions will contribute to the fight to mitigate the effects of global climate change, such as increased extreme weather events, increasing summer temperatures, and potential droughts, which affect the lives of people in every part of the state. The use of clean energy—and the resulting displacement of conventional energy production—reduces stress on water supplies and on wildlife and habitat that may be vulnerable to the changing climate. Reduction in air emissions that cause cancer and respiratory illnesses will translate into improved health, health cost savings, and greater employee productivity. Finally, in establishing the Renewable Energy Standard, the State recognized two other important benefits: the regional economic benefits in the form of jobs and related economic activity, and increasing diversity in the state's energy sources to maintain reliability, resiliency, and affordability.

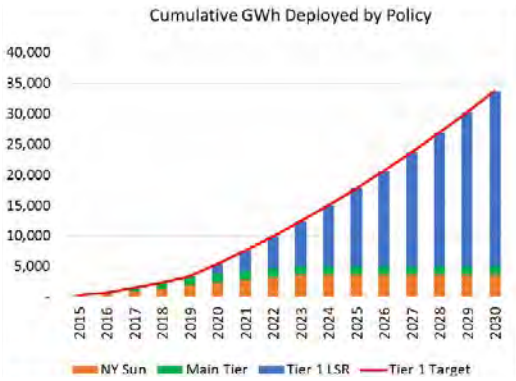
For these reasons, the Roundtable convenors and participants committed to finding viable solutions to accelerating the pace of building new renewable energy projects to meet the Renewable Energy Standard, while preserving environmental and community values.

Figure 1. New York's Electricity Mix: 2016



Source: New York Independent System Operator 2017 Power Trend

Figure 2. Projected Growth in New Renewables



These are modeled estimates for NY Sun, Main Tier (includes renewables built after 2015), and new Tier 1 LSR. Source: Clean Energy Standard Cost Study—April 2017

2. NYDPS Staff Report, Clean Energy Standard Supplemental Draft Environmental Impact Statement, Feb. 23, 2016 http://on.ny.gov/1OoKhR9

ROLE OF THE ROUNDTABLE

The Nature Conservancy and the Alliance for Clean Energy New York convened the *Renewables on the Ground Roundtable* to help advance New York's goal to provide 50 percent of its electricity with renewable energy by 2030. The Roundtable brought together individuals representing the wind and solar industries, conservation organizations, and land use, transmission, regional planning, and municipal government experts to identify barriers to renewable energy development in New York and develop recommendations to overcome them. Additional individuals participated as observers and experts throughout the process, including several individuals from New York State agencies.[3] In addition to developing principles and recommendations for actions to accelerate renewable development, the Roundtable was designed to build collaborative relationships among the diverse interests at the table, with a joint interest in meeting New York's renewable energy goals. This report is the culmination of their work together from the fall of 2016 through the summer of 2017.

NEW YORK'S REFORMING THE ENERGY VISION, CLEAN ENERGY STANDARD AND RENEWABLE ENERGY STANDARD

Governor Cuomo's Reforming the Energy Vision (REV) initiative is a comprehensive energy strategy for New York to transition to a more resilient, affordable, and lower-carbon energy future. As part of REV, New York's Clean Energy Standard (CES) was adopted by the New York Public Service Commission (NYSPSC) in August 2016 to help meet the State's aggressive greenhouse gas reduction goals, to reduce air pollution, and to develop a diverse portfolio of low-carbon energy sources. The CES consists of two parts: the Zero Emission Credits (ZEC) program to support nuclear energy and the Renewable Energy Standard (RES). The Roundtable dialogue focused exclusively on the Renewable Energy Standard and more specifically on the development of large-scale (larger than 2 MW) wind and solar energy projects.

The Renewable Energy Standard requires all of New York's electricity suppliers,[4] referred to as "load-serving entities" or "LSEs," to gradually increase the percentage of the electricity delivered to customers from renewable sources through 2030, including hydropower, land-based and off-shore wind, biogas, sustainable biomass, solar, and fuel cells.[5] To achieve the Renewable Energy Standard, the State will need to increase both the amount of renewable energy generating capacity and the pace of construction of renewable energy projects. To provide context, New York will need renewable generating capacity that can contribute an additional estimated 29,200 GWh to New York's grid by 2030.[6] This capacity can be in New York or imported from adjacent Regional Transmission Organizations (RTOs). It is expected that the majority of this new power will come from wind and solar. For purposes of estimating the additional need, one scenario (of many) estimates New York could develop roughly an additional 3,550 MW of land-based wind, 2,700 MW of large-scale solar, 2,400 MW of offshore wind, and smaller contributions from bioenergy, fuel cells, hydropower, imports, and behind the meter (e.g. rooftop solar) generation. (Figure 2) The final mix of resources will depend on several factors, including how each technology and each proposed project competes. But in this example, New York would need to build an average of 740 MWs of various technologies per year to meet the 2030 goal compared to a rough average of 200 MWs built annually over the past 10 years.

3. See the Acknowledgments page for names and organizational affiliations of participants, observers, experts, and staff.
4. With exception of New York Power Authority and Long Island Power Authority, who are expected to comply but are not regulated by the NYSPSC.
5. The Renewable Energy Standard requires utilities and other load-serving entities in the State to procure Tier 1 renewable energy credits (RECs). RECs are produced by generators using new renewable energy resources. Renewable energy projects that entered commercial operation prior to January 2003 and can demonstrate that the renewable energy attributes of these resources are at financial risk may qualify as Tier 2 Maintenance Resources under the Renewable Energy Standard.
6. Megawatt (MW) is a measure of the maximum capacity of an electricity generator, and Megawatt-hours is a measure of the quantity of electricity generated. In other words, if an electricity generator with 100 MW capacity was operating 24/7 for 365 days of the year, its generation would equal 876,000 MWhr. But power plants do not operate all the time, either because they depend on the sun or wind (for solar and wind farms), or because of maintenance or other outages (for conventional power plants). If a wind farm has a capacity factor of 35%, that means it is projected to operate 35% of the time, generating 876,000*35% = 306,600 MWhr in a year.

SITING ENERGY PROJECTS IN NEW YORK

Experience in siting renewable energy projects in New York has demonstrated that the process can be long, contentious, and resource intensive. Article 10 of the Public Service Law, passed in 2011, lays out the process for permitting new major electric generating facilities (25 MW or greater). Under Article 10, the responsibility for permitting and siting resides with the State Energy Siting Board, which is made up of representatives from five State agencies and two representatives from the municipalities where the project is proposed. Article 10 outlines requirements for public engagement, intervenor funding, and required studies on the environmental, economic, cultural and environmental justice impacts of a proposed project. As of August 2017, no large-scale wind or solar project has completed the new Article 10 process. The time frame for making a decision after an application is complete is estimated to be one year; however, the requirements and process for completing an application can take many years.

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Renewable generation projects less than 25 MW are reviewed under applicable state and local laws, which also trigger review of the potential impacts under the State Environmental Quality Review Act (SEQRA). SEQRA requires a finding that either a project will result in no significant adverse environmental impacts, or that the developer demonstrate that such impacts will be mitigated to the greatest extent practicable. Like the Article 10 process, review and approval of projects under local zoning and SEQRA can be contentious, time-consuming, and expensive.

The advent of significant new large-scale renewable energy development has created challenges for some municipalities. Some towns have passed moratoriums to "pause" renewable energy development within their jurisdictions, to determine what changes to zoning codes are needed to address renewable energy development. Local officials may become official intervenors in the Article 10 siting process and must ensure that municipal residents understand the full implications of renewable development, whether the project is reviewed under Article 10 or SEQRA. Local opposition to large-scale renewables can be a significant obstacle to the successful development of renewable energy; therefore, building public support for large-scale renewables is an important factor for the Renewable Energy Standard to succeed in New York.

DEVELOPMENT OF PRINCIPLES AND RECOMMENDATIONS

In advance of the first meeting of the Roundtable, the project team from the Conservancy and CBI interviewed more than 50 individuals across the state from different stakeholder groups to help inform the scope of the issues and to identify potential participants. Based on the input from this assessment phase, the members of the Roundtable were selected to represent interests from the wind and solar energy industry, land conservationists, the agricultural community, municipalities and

regional planning organizations, and transmission planning experts. Members of the environmental justice movement were invited to participate, but the meeting location and time commitment hindered their full participation. Recognizing their absence, the environmental justice and equity work group reached out to and conducted interviews with representatives from environmental justice groups and reviewed the literature available to inform the report.

A number of representatives from State agencies, consulting firms, and academic institutions also participated as observers and experts throughout the process. Without taking a position on the specific recommendations, they provided invaluable information on how the siting process was working now, what could be, or was already being implemented under existing State law and programs, and what resources were available to inform the discussion. The list of participants, observers, and experts can be found in the Acknowledgments section.

The participants met in person four times over the course of nine months, facilitated by a third party, the Consensus Building Institute. In addition, a number of working groups, made up of a subset of the Roundtable members, were convened by videoconference between meetings to discuss barriers and develop principles and recommendations for consideration by the full Roundtable. The working groups were organized around priority topics identified at the first meeting: Article 10 and SEQRA, Land Use and Planning, Agriculture and Renewables, Community Engagement, Environmental Justice and Equity, Property Taxation and Economic Impacts, Transmission and Interconnection.

At the outset of the Roundtable, participants agreed to abide by the Chatham House Rule[7] to encourage frank and open discussion, and they also agreed to work toward consensus in the development of the principles and recommendations. Consensus, as adopted by the Roundtable members, meant that each participant accepted the overall package of principles and recommendations, although he/she might not fully agree with every individual recommendation. To achieve consensus, the group sought to understand the experience and concerns of all the participants. The final report reflects the results of this joint learning process and the deliberations among the participants. The final report, edited by The Nature Conservancy, the Alliance for Clean Energy New York, and the Consensus Building Institute, is intended to reflect the consensus achieved.

WHAT IS IN THE REPORT?

The Roundtable members developed high-level principles to serve as overarching goals for acceleration of development of large-scale renewable energy in New York. They also drafted problem statements to clarify what is or could become an impediment to meeting the Renewable Energy Standard. The recommendations are specific action items that address the problems or barriers. The core issues addressed in the report are summarized below. The summary of the recommendations can be found in Appendix A.

Article 10 and SEQRA

New York State energy siting laws were originally developed for permitting conventional energy generation facilities, not large-scale renewable generation. Despite this, the Roundtable agreed at the outset to work within the Article 10 and SEQRA statutes to find ways to accelerate development of renewables, and proposed changes only to regulations and programs. We learned from the experience of the Roundtable members that the approval process, particularly for larger projects subject to Article 10, is lengthy, uncertain, and sometimes unsatisfactory for both developers and communities. The recommendations call for specific changes and an ongoing process of evaluation to find continuous improvements in the siting process.

7. Chatham House Rule states that "participants are free to use the information received, but neither the identity nor the affiliation of the speaker(s), nor that of any other participant, may be revealed."

Land Use and Planning

The location of large-scale renewables is guided by several major drivers: the presence of wind and solar resources, available land, proximity to transmission, and the locational value of electricity. New York has affirmative policies and extensive requirements to protect natural resources in any development process, including in the development of renewable energy. The policy to avoid, minimize, and mitigate negative impacts of development is an important guidepost that applies as much to a large-scale solar project as it does to a new housing development or shopping mall proposed within the state. Implementation of these safeguards is the foundation of good siting practices for renewable energy projects. In a strong home rule state like New York, communities need the tools and resources, such as comprehensive planning and zoning ordinances, and expertise in how to use them, to be effective partners in the renewables development process.

Agricultural Land and Renewables

Development of large-scale solar projects is expected to unfold in rural areas and on flat, accessible agricultural land. Development of solar and wind, if well managed, provides an opportunity to maintain productive land for agricultural uses. It could also threaten to reduce the amount of productive agriculture land available in New York. The recommendations are designed to encourage development on non-agricultural land, the least productive agricultural land, and on land where renewables development and agricultural uses can co-exist by avoiding, minimizing, and mitigating impacts.

Community Engagement

Municipalities, local stakeholder groups, and residents play a critical role in the development of any large-scale renewable energy project, and local opposition be a formidable barrier to development of renewable energy. Local officials and residents can have legitimate concerns about the impact of large-scale projects on their community and how their concerns are accounted for in the decision-making process. There is a pressing need to meaningfully include and engage communities in planning for a low-carbon, clean energy economy, including development of large-scale renewable energy projects. In addition, there is a need to provide municipal governments with more resources and technical support. The State and the developer play key roles in both informing and engaging community residents, municipal officials, and other stakeholders in decision-making processes, and are identified as the lead actors for many of the recommendations. There is also an important role that trusted third parties can play to bring interested stakeholders together with trustworthy information and to facilitate constructive dialogue around sometimes divisive issues.

Environmental Justice and Equity

The transition to renewable energy provides an opportunity to reduce the negative effects of conventional electricity generation that have disproportionately affected low-income communities and communities of color in urban areas, and increase equity by ensuring that the economic benefits of renewables are widely distributed. Historically, environmental justice and equity work has focused on urban communities; however, there is a growing awareness of the need to consider environmental justice and equity issues in rural areas where most large-scale renewable energy projects will be sited. To advance environmental justice and equity while providing renewable energy, developers need to work with local communities, reduce harms from conventional energy production, share benefits equitably, and foster economic and energy democracy.

Property Taxes

The current taxation policy for renewable energy projects is not well understood and creates financial uncertainty for both municipalities that rely on property tax revenue to fund schools and other critical services, and developers, who may not know what their economic obligation to the community will be until late in the project development after significant investment

has been made. The Roundtable urges developers and municipalities (or Industrial Development Agencies) to work closely together from the outset to find early agreement about the best way to balance the economic interests of both parties.

Economic Impacts

The economic benefits of renewable energy development are more widely understood and documented at the state level. However, the net economic benefits at the local level, including revenue from land leases and property taxes, preservation of agricultural land, and jobs and economic activity from the construction and operation of the projects, are important to creating an informed public decision-making process. Community ownership of smaller-scale projects can also increase buy-in to new development.

Transmission and Interconnection

The existing transmission system cannot support the scope and location of the renewable generation needed to meet the Renewable Energy Standard most cost-effectively for developers and ratepayers. The transmission planning process should be more policy-driven and proactive in order to encourage development of increased transmission capacity within new or existing rights-of-way in order to bring renewable energy resources to load centers. The current interconnection procedure is too lengthy and resource intensive for developers, and could inhibit the necessary pace of development. New York Independent System Operator (NYISO) is initiating improvements to the process, and the Roundtable urges continued review and streamlining.

NEXT STEPS

By bringing together stakeholders with different perspectives to evaluate a complex set of issues of mutual interest, the Roundtable was able to improve the understanding of the challenges of deploying new renewable energy projects in New York and meeting the Renewable Energy Standard, and identify specific actions that can be taken to accelerate development. The principles and recommendations in this report will be shared with policy makers at New York State agencies that are working to achieve the Renewable Energy Standard. Members of the Roundtable will also share the report with their colleagues and networks who are interested in playing a role in advancing these principles. Roundtable participants hope that, with this shared understanding of problems and barriers and these tangible recommendations, they have laid the groundwork for a robust dialogue and will help to accelerate renewable energy development in New York. Finally, we hope that other states will find valuable insights to support growth of renewable energy outside of New York.

Principles

Roundtable participants developed a set of high-level principles based on key findings and recommendations regarding large-scale wind and solar development in New York. These principles are:

01 Accelerate the Development of Renewables to Meet New York's Renewable Energy Standard

Meeting New York's Renewable Energy Standard will require accelerated construction of cost effective large scale wind and solar installations while maintaining the protection of natural resources and recognizing community and stakeholder values and environmental justice, in keeping with the requirements of New York State Environmental Quality Review Act (SEQRA) and Article 10 of the Public Service Law.

02 Contribute to the Success of New York's Renewable Energy Standard and Greenhouse Gas Reduction Goal

There is an opportunity and an obligation to contribute to the success of the Renewable Energy Standard to reduce greenhouse gas emissions as a means to countering climate change. Achieving these goals will require investment in and public support for large-scale renewable energy facilities as well as distributed resources and greater energy efficiency in New York state.

03 Increase Understanding of the Economic Benefits of Large-Scale Renewable Energy

Large-scale renewable projects can contribute positively to local economies through local and regional hiring and materials sourcing, contribution to the tax base, land lease payments, and indirect economic activity. Promote the economic growth, jobs, health, and environmental, and environmental justice benefits of the transition to renewable and affordable energy.

04 Assist Local Governments and Fully Engage Communities in Advancing Renewable Energy Development

Accelerated development of wind and solar projects will require decision-making at the State and local level; local governments and communities need support to effectively participate. To be knowledgeable and effective partners in siting renewable energy responsibly and contributing to a clean energy future in New York State, communities and local governments need credible guidance, tools, resources and support on land-use planning and zoning best practices to pro-actively plan for renewable energy development.

05 Increase Awareness of Policies and Practices to 1) Avoid, 2) Minimize, and 3) Mitigate Impacts

Article 10 and SEQRA require that impacts from development, including renewable energy projects, be avoided, minimized, and mitigated to the greatest extent practicable. Increase awareness of this policy framework among all stakeholders to build public confidence in siting practices.

06 Make New York's Energy Siting Processes More Efficient and Less Expensive

To accelerate development of large-scale renewables and minimize the costs of achieving the "50 by 30" Renewable Energy Standard, the New York State Siting Board and the NYS Department of Environmental Conservation should seize opportunities to make the Article 10 and SEQRA siting processes more efficient and less expensive, without sacrificing appropriate environmental review, stakeholder input, or public participation.

07 Balance Farmland Protection and Renewable Development

Landowners, farmers and municipalities should be educated on the benefits and impacts of large-scale renewable development to agriculture and have access to resources to help them integrate best practices for mitigating impacts to agricultural lands into planning and zoning. To increase renewable energy installations on farms to meet the RES and provide revenue for farmers while minimizing the removal of productive farmland, the State should provide tools to help achieve and balance both outcomes.

08 Provide Renewable Energy While Advancing Environmental Justice and Equity

Transitioning to cleaner, renewable energy will reduce the negative effects of fossil fuel energy generation that have fallen disproportionately on low-income communities and people of color. A comprehensive approach by diverse stakeholders that includes partnering with local communities, reduction of harms, equitable sharing of benefits, and fostering economic and energy democracy will reduce environmental injustices and help to ensure the success of renewable energy projects and the Renewable Energy Standard, and will provide a safer, more prosperous, and more equitable future for all New Yorkers.

09 Clarify Property Taxation for Renewables

To meet the State's RES, property taxes for renewable energy projects should be affordable and predictable for developers and provide a reasonable contribution to local tax revenues. Tax valuation methodologies and implications should be clear, transparent, and understandable for local jurisdictions and landowners.

10 Proactively Plan for Transmission

Meeting the RES most cost-effectively will require the construction of new transmission and upgrading of existing transmission facilities in NYS. The New York Independent System Operator (NYISO), NY State agencies, transmission owners, developers, and stakeholders should work together to identify and address transmission needs at a pace necessary to achieve the RES mandate.

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Article 10 and SEQRA

PROBLEM STATEMENT

Provisions of the Article 10 process, combined with a community's ability to effectively participate in the process or to administer State Environmental Quality Review Act (SEQRA) and local land use and zoning laws, all impact the likelihood of a renewable energy project moving forward and the ability of the State to meet the Renewable Energy Standard. SEQRA and especially Article 10 processes are time-consuming, expensive, and involve a degree of uncertainty for the developers and intervenors; this has affected, and will affect in the future, the investments made in renewable energy in New York.

BACKGROUND

In New York state, the potential environmental impacts of large-scale renewable energy projects are reviewed for permitting purposes through either the Public Service Law Article 10 process, for projects with a capacity of 25 megawatts (MW) or larger, or through the SEQRA and local permitting process for projects with a capacity smaller than 25 MW. Under Article 10 of the Public Service Law, the New York State Board on Electric Generation Siting and the Environment (Siting Board) also makes the final approval via the issuance of a Certificate of Environmental Compatibility and Public Need, with input from host communities and other stakeholders. Under SEQRA, the findings on environmental impacts are issued by the SEQRA lead agency, which is most often the government of the host community. Once a determination is made that impacts are either non-significant or sufficiently mitigated under SEQRA, a project may be approved under applicable local and state permitting requirements.

Host municipalities' role in the review and permitting process is limited under Article 10, especially compared to SEQRA. The host communities retain responsibility for certain approvals such as road crossings and may have zoning and land use ordinances that affect the siting of renewable energy projects. While Article 10 requires projects to be designed to operate in compliance with applicable state and local laws, it also gives the Siting Board the authority to elect to not apply local laws if they are found to be "unduly burdensome" in view of existing technology or the needs of or costs to ratepayers.[8] The Siting Board, which has the ultimate decision-making power, has seven members, with two representing the local community. Even though Article 10 has provisions for municipalities to participate in the process, municipalities are concerned about how they can most effectively express the values of the communities they represent within the process and

8. Chapter 388 of the Laws of 2011, Article 10 of the Public Service Law. Section 168 (3)(e)

be assured that their concerns are legitimately considered. Although Article 10 requires the developer to make available intervenor funding ($350/MW at the Preliminary Scoping Study phase and $1,000/MW at the Application filing) to hire independent consultants and legal counsel, many municipalities lack the staff, expertise, and adequate funding to effectively participate in the Article 10 process, or in the case of SEQRA, to hire consulting support for municipalities.

From the developers' point of view, the Article 10 process lacks clarity about the degree to which the Siting Board will agree with or overrule local ordinances that have been enacted by host communities. Some local ordinances could severely limit development of a project or stop it outright. Further, the stipulations and intervenor provisions of the Article 10 process create uncertainty as to the scope, expense, and protocols required in the requisite studies and assessments. Lastly, both the Article 10 and SEQRA processes are time-consuming and expensive for both the developer and the intervenors, which affects a company's decision about where to invest and can make it difficult for stakeholders to participate effectively.

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RECOMMENDATIONS

1. Use a Variety of Outreach Tools to Provide Information on Article 10

Municipalities would benefit from more readily available information and training opportunities from trusted and unbiased sources on the development process and requirements set forth in Article 10. New York State Department of Public Service (NYSDPS) should develop information and training materials for municipalities and community groups that explain the role, responsibilities, and opportunities of each of these entities to effectively participate in the decision-making process, and should disseminate those resources as soon as possible, preferably prior to commencement of a specific project siting process.

2. Provide Model Language on Notices

The NYSDPS and the New York State Department of Environmental Conservation (NYSDEC) should develop model language for use by local government for notices that set forth the Article 10 and SEQRA process and opportunities for public input.

3. Clarify "Unreasonably Burdensome" Provision

The Siting Board should request supporting staff to provide legal clarification of Article 10's "unreasonably burdensome" provision regarding zoning ordinances in light of home rule (Article 9). The NYSDPS could, for example, provide examples of local ordinances that have NOT been viewed as unreasonably burdensome in past cases. Clarity would avoid wasted time and resources by municipalities, developers, and other intervenors.

4. Report on and Reduce Time to Complete Article 10 Process

To achieve continuous improvement in the Article 10 process, all stakeholders, including the State agencies, need accurate and up-to-date information regarding the length of time the Article 10 process is taking for current and future applicants. The appropriate State agency should undertake an analysis to determine how long various steps in the process are taking; where improvements can be made; and make recommendations to reduce the amount of time needed to navigate the process.

5. Provide Standard Guidance on Protocols and Methods for Necessary Studies Required by Article 10

To provide clarity about what methods and parameters should be applied in required studies under Article 10, the Siting Board should direct staff to develop, with meaningful stakeholder consultation to seek broad support, appropriate guidance on study methods and parameters.[9]

6. Guidance for Solar Impacts

New York State Energy Research and Development Authority (NYSERDA) or NYSDEC should develop guidance for municipalities and developers regarding evaluation of the impacts of solar in accordance with SEQRA.

9 For instance, NYSDEC has issued guidance for conducting bird and bat studies required. See: http://on.ny.gov/2gVIeQK

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Land Use and Planning

PROBLEM STATEMENT

Wind and solar projects at the scale necessary to meet the Renewable Energy Standard "50 by 30" mandate present a new set of land use considerations. While renewable energy will benefit all New Yorkers, there are local land use impacts to be considered. Many communities currently lack the tools and resources to evaluate and incorporate renewable energy resources into their land use decision-making, which can be a barrier to development.

BACKGROUND

The construction of new large-scale wind and solar projects, stimulated by New York's "50 by 30" policy, will require the attention of local communities, land conservationists, and landowners. Across the state, communities and other stakeholders will decide how to respond to proposed projects and will need the resources and tools to make informed decisions.

Many communities in New York have comprehensive plans, which guide future growth and development and are a tool for creating strategies for encouraging and limiting growth. Comprehensive plans are typically enacted through zoning and other local ordinances. Comprehensive community planning is a proactive rather than a reactive tool, and it benefits the community by identifying places that are appropriate for growth and development and places that the community identifies as important to protect.

For communities that have comprehensive plans, it is likely that their plans were written before renewable energy development was contemplated as a local land use consideration. Thus, many, if not most communities, do not have explicit zoning for renewables. Notably, the rapid proliferation of proposals for solar development in the last two years has caused communities to scramble to put zoning in place–some enacting moratoria on solar development to give themselves time to put enabling zoning in place.

For projects greater than 25 MW, New York State Public Service Law Article 10 requires that projects be designed to operate in compliance with all applicable state and local laws, including local zoning laws. The Siting Board may, however, elect not to apply local zoning ordinances that it finds to be "unduly burdensome" in view of the existing technology or the needs of

or cost to ratepayers.[10] For projects under 25 MW, approvals are generally required under applicable local and state laws, and the potential impacts of a proposal are usually evaluated by the host community, acting as lead agency for review under the New York State Environmental Review Act (SEQRA). SEQRA requires a finding that either a project will result in no significant adverse environmental impact, or such impacts will be mitigated to the greatest extent practicable.

The NY-Sun PV Trainers Network created by New York State Energy Research and Development Authority (NYSERDA) is one valuable resource to address communities' need for tools and resources that deal with solar development.[11] The Network is effective in providing technical support and tools for updating local comprehensive plans and putting solar-friendly zoning in place, while protecting community resources. This program serves as a model that could be expanded to address the land use planning needs related to other renewable technologies. Similarly, NYSERDA recently updated its 2009 Wind Energy Toolkit available to municipalities and community groups, which provides tools and resources for communities.

10. New York State Public Service Law, section 168.e. http://on.ny.gov/2wRXdkW
11. http://on.ny.gov/2wVWdM4

RECOMMENDATIONS

1. Provide Communities with Information on Large-Scale Renewables Potential

NYSERDA should undertake an assessment of the statewide development potential for wind and solar and proactively engage communities in awareness and understanding of this assessment.

2. Support Comprehensive Planning That Includes Renewables Development

NYSERDA, Department of State (NYSDOS), NYSDEC, and other agencies should offer guidance, planning support, incentives, and/or funding for municipalities to create robust comprehensive plans that incorporate renewable energy goals and objectives, and to create zoning and land use provisions that encourage renewable energy projects in appropriate and feasible areas that avoid, minimize, and mitigate impacts.

3. Provide Planning Resources

NYSERDA should evaluate existing substantive and financial resources available for planning and zoning for renewable energy, identify gaps where new resources are needed, and provide funding to address those gaps. NYSERDA should fund and support counties, inter-municipal organizations, regional planning commissions, and other planning entities that are trusted outside parties such as the PV Trainers Network or the New York Planning Federation to provide outreach and education on planning and zoning for renewable energy development.

4. Set Up Help Lines

NYSERDA should support regional planning commissions and other similar entities to provide a "help line" to assist communities with planning and zoning for renewables, and provide technical expertise and support for evaluating proposed projects. (For guidance on how to develop these resources, State agencies could review existing models such as the PV Trainers Network, the Clean Energy Communities Program, or the Governor's storm recovery model of funding pre-selected consultants.)

5. Explore Incentives for Using Previously Disturbed Sites for Solar Development

NYSERDA and relevant State agencies should explore policies, including financial and non-financial incentives, to promote large-scale solar development over parking lots, large industrial or commercial roof areas, and in previously disturbed areas, including State and municipally-owned land, such as transportation rights-of-way, airports, areas around sewage treatment facilities, landfills, brownfields, and previously mined or blighted areas, as a way to reduce use of "green" sites, such as farmland.

6. Provide Guidance on Reducing Visual Impacts of Large-Scale Wind and Solar Projects

NYSERDA, NYSDEC, NYSDOS, and New York State Office of Parks, Recreation and Historic Preservation (NYSOPRHP) should develop guidance on Best Management Practices (BMPs) for reducing visual impacts of large-scale renewables on scenic resources. This effort should build on existing programs, such as the Scenic Areas of Statewide Significance.

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Agriculture and Renewables

PROBLEM STATEMENT

Agricultural land is the source of significant economic activity in New York, but is also under economic pressure. Lease payments from siting wind or solar on agricultural land can provide additional sources of income that may allow landowners to keep land in agricultural production that otherwise would not be economically viable, and farmers should be afforded this option. However, it is critical that potential impacts from renewable energy on agricultural lands be addressed. Some of the concerns about impacts of large-scale renewables development on agricultural land include loss of important agricultural soils; loss of agricultural production; fragmentation of fields and farms; impacts from trenching, erosion, herbicide use, and proliferation of invasive species; soil compaction; and fair treatment of farmers and landowners in the siting and land leasing processes.

BACKGROUND

The agricultural sector is a significant contributor to New York's overall economy, with total production valued at over $5.4 billion annually and total cash income for farmers over $1.4 billion in 2012.[12]

Between 1982 and 2012, nearly seven percent (471,000 acres) of New York's more than seven million acres of farmland were converted to other uses due to various development and economic pressures.[13] Many New York farmers struggle to maintain adequate revenue and decide to sell off land for non-farm purposes. Encouraging renewables for on-farm energy use, providing best management practices for renewable development on farmland, leasing under-utilized marginal land, co-locating farming and renewable energy production on less productive farmland, and providing smart siting information for rural communities can all contribute to meeting the Renewable Energy Standard while supporting the viability of farms in New York state.

Large-scale wind and solar projects will occur primarily in rural areas. Wind and solar projects have different space requirements and therefore have different implications for agricultural lands and farming activities.

12 United States Department of Agriculture (USDA), 2012 Census of Agriculture New York State and County Data—Data accessed 1/20/16 online through National Agricultural Statistics Service Quick Stats Database, http://bit.ly/2xgH6NI

13 Ibid

In New York, most wind installations occur primarily on agricultural lands, with a smaller portion of installations occurring on deciduous and/or mixed forestland.[14] According to the New York State Energy Research and Development Authority's (NYSERDA) Wind Energy Toolkit (2009), wind energy projects are generally compatible with agricultural land uses and may help farmers who lease land to wind developers to preserve their farms by providing them with supplemental income while physically occupying only a small fraction of the land, allowing agricultural operations right up to and around the wind turbines. A survey by the National Renewable Energy Laboratory (NREL) of large wind facilities in the U.S. found that wind projects require between 30 and 141 acres per MW of capacity as a project area, but estimated permanent land disturbance as less than one acre of per MW.[15] New York State Department of Agriculture and Markets (NYSDAM) has detailed guidance on how to minimize the impacts of wind and solar development projects located in New York State certified agricultural districts. These guidelines address siting to minimize impacts on farming, construction impacts, and restoration of agricultural soils.[16,17]

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Agricultural land is also particularly suitable for large-scale solar development because it is flat, open, and relatively easy to develop. Most large solar projects that are currently proposed (but not yet under construction) in New York fall between 2 and 20 MW, although at least one larger installation is proposed. A 2 MW installation with a 13% capacity factor will produce an estimated 2,450 MWh per year and will require about 12 acres of land[18] to support between 6,000 and 8,000 solar panels. Using these same assumptions, a 20 MW project would use approximately 120 acres.

As with wind, leasing land for solar installations can help diversify farm income and support farming operations[19] although it may restrict agricultural operations more than a wind turbine installation. Further, not all agricultural land is suitable for solar development, and leasing land for solar development may have tax implications for the landowner. It is important for landowners to be fully informed as they consider leasing.

Concern about conversion of, and impacts to, active farming and farms that have valuable soils to ensure they remain viable for long-term agricultural use can be addressed in a variety of ways, including best management practices, zoning measures and decommissioning requirements. Consideration should also be given to siting on underutilized lands less suitable for agricultural production, careful placement of roads and other infrastructure, and co-locating some agricultural activities with the renewable energy facilities.

14. Final Generic Environmental Impact Statement In CASE 14-M-0101–Reforming the Energy Vision and CASE 14–M–0094–Clean Energy Fund http://on.ny.gov/2vViuZS
15. Denholm, P., M. Hand, M. Jackson, and S. Ong. 2009. Land-use requirements of modern wind power plants in the United States. Golden, CO: National Renewable Energy Laboratory. Accessed August 14, 2014 at: http://bit.ly/2wv5RpY
16. New York State Department of Agriculture and Markets, Guidelines for Agricultural Mitigation for Wind Power Projects http://bit.ly/2vVs7rh
17. New York State Department of Agriculture and Markets, Guidelines for Agricultural Mitigation for Solar Energy Projects http://on.ny.gov/2vUOXzd
18. Sean Ong, Clinton Campbell, Paul Denholm, Robert Margolis, and Garvin Heath, Land Use Requirements for Solar Power Plants in the United States, Technical Report NREL/TP-6A20-56290, June 2013
19. Landowner Considerations for Solar Land Leases http://on.ny.gov/2x9ukyb

RECOMMENDATIONS

1. Develop Farmland Suitability Framework

NYSERDA and NYS DAM should develop criteria or use existing criteria based on soils, level and type of agricultural activity, and other critical attributes to create a framework to distinguish between valuable farmland and less productive land that may be suitable for solar installations. Other criteria might include whether the land is currently productive; its importance to the local economy; if it is protected or designated by New York State or a local community; and its suitability for long-term production. Such a framework would also provide local communities with helpful information for making local zoning determinations regarding agricultural lands. Criteria such as these could serve as the foundation for a program to incentivize siting of solar installations away from productive farmland. NYS DAM, NYSERDA, and the Clean Energy and Agriculture Task Force (CEATF)[20] should evaluate models that have been developed in neighboring states and across the nation to guide development away from most productive farmland best suited for food production and other crops.

2. Address Barriers and Identify Opportunities for Renewables for On-Farm Use

The Clean Energy and Agricultural Task force, NYSERDA, NYSDAM, and partners should identify barriers and opportunities for the agricultural sector to install more solar energy systems for on-farm use (as opposed to generating electricity for the grid) and should seek the best ways for the agricultural sector to participate in NYSERDA programs to further advance installation of solar renewable energy systems, and should provide guidance on siting for on-farm use while avoiding our most productive farmland.

3. Encourage Co-Location of Solar with Agricultural Operations

NYSERDA and NYS DAM should provide information on the benefits of co-location of both solar installations and farming activities such as grazing animals, planting pollinator-friendly plants, or co-location of crops on less productive farmland, which can aid in securing community acceptance of proposed projects. Proper selection of the types of plants under the solar panels can result in additional benefits such as pollination, increased soil quality, and storm water management. Where it is not practical, vegetative cover should still be maintained to prevent soil erosion.

4. Evaluate Long-Term Impact of Leasing on Farm Operations

NYSERDA, NYS DAM, and CEATF should work with researchers to evaluate and monitor the environmental, social, and economic impact on farm operations of renewable energy leasing arrangements. The state should look at other states with more experience in large-scale development. This research should evaluate how leasing for farmland for renewable energy development contributes to/detracts from preserving farmland. This work would support and inform policy in the coming decade as build-out occurs.

20. The Clean Energy for Agriculture Task Force is a collaborative effort including state agencies, farmers, universities, agriculture organizations, and others to help identify and prioritize clean energy opportunities for New York State's agriculture sector. The Clean Energy for Agriculture Task Force Strategic Plan identifies initiatives to cut energy costs and accelerate the use of clean energy by the more than 35,000 farms across the state. http://on.ny.gov/2wWcoZO

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Community Engagement

PROBLEM STATEMENT

Community opposition to development of renewable energy projects is a significant barrier to meeting the State's Renewable Energy Standard. With more than 1,600 towns, villages, and cities across New York state, there is an inconsistent level of knowledge and understanding of Article 10, State Environmental Quality Review Act (SEQRA), and the benefits, costs, and impacts of renewable development projects at the local level. This is a challenge for developers, municipalities, State agencies, and community members. From the developer's perspective, siting projects successfully takes too long, and engaging each community is typically a time-intensive and labor-intensive process with no guarantee of project completion. Community members, on the other hand, may feel that they are not getting unbiased information from the developer about the costs, benefits, and impacts of the project, and that their interests are not fairly represented throughout the development and permitting process.

BACKGROUND

As a state with Constitutional home rule, communities in New York have considerable say about land use and development in their midst. Solar and wind projects under 25 MW are approved by local town boards or planning boards through a structured process outlined under SEQRA, which gives the local governing bodies authority to request and review studies about the impact of a proposed project. However, Article 10 shifts the decision-making authority for siting renewable energy projects 25 MW or greater to the State Siting Board, which includes two representatives from the affected local communities. Article 10 specifies that the Siting Board may override local ordinances if it finds them to be "unduly burdensome."

New York has 25 operating wind projects that were successfully developed and have been operating for more than 10 years, but renewable energy development continues to be challenging. Bringing a wind project to completion can take many years and may involve community opposition. Whether a project is reviewed under SEQRA or Article 10, case studies of wind projects developed in New York highlight the potential divisions that can develop among community members over the net impacts of large-scale wind projects. Permitting large-scale solar projects is still in the early stages in New York, although at least one project has begun the Article 10 process, and a number of large-scale solar developers have indicated their interest in working in the state.

From the developer's perspective, siting projects successfully takes too long, and engaging each community is typically time- and labor-intensive, with no guarantee of project completion. Some community members may feel that outside developers are proposing projects that could have significant impacts on their community, which they may not support.

Early engagement is highly useful in helping communities understand the process, benefits, and impacts renewable energy projects may have. However, developers are faced with a dilemma about when to engage, as their project may not be well defined in the early stages and local residents want to know specifics. Not providing specifics can lead to mistrust very early in the life of a project, but failing to engage in the absence of specifics can have the same outcome and can lead to lack of support and/or opposition to specific projects or renewable energy altogether.

Despite a developer's best efforts to provide accurate, non-proprietary information on a project, community members may want additional third-party information on the process and the project's impacts. There can be a lack of trust, and residents may lack full knowledge and understanding of the process and opportunities for meaningful community engagement. Although the State plays an important role in providing information and resources, community members may want information from additional sources, beyond the project developer and the State. Intervenor funding paid by the developer to the local government can be used for this purpose, in addition to paying the cost for legal representation in the formal administrative process. Municipal officials may need assistance accessing the information they need, and methods for effectively sharing it with their constituents. Local governments will also benefit from additional support from the State and regional entities that can provide advice, resources, and put municipalities in touch with one another for mutual learning and support.

Finally, the Roundtable recognizes that robust community engagement is key, but even strong community engagement does not guarantee that all community members will support a project.

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RECOMMENDATIONS

1. Support Collaborative Stakeholder Engagement

New York State Energy Research and Development Authority (NYSERDA), New York State Department of State (NYSDOS), New York State Department of Environmental Conservation (NYSDEC), and/or the Empire State Development Corporation (NYSESDC) should fund regional planning commissions or other similar entities as trusted outside parties to support and encourage collaborative stakeholder engagement with respect to renewables planning.

2. Host Early Opportunities to Promote Learning and Dialogue

While it is the primary responsibility of developers to promote their projects, NYSERDA, NYSDOS, NYSDEC, other State agencies, local elected officials, environmental conservation commissions, and other organizations may choose to offer early opportunities for community dialogue in a neutral setting prior to a specific project. Providing opportunities for meaningful community engagement early and often in the process can help improve the receptivity of the community and can increase the likelihood that a project can move forward.

Both in-person and online forums can provide an opportunity for municipal officials to share peer-to-peer experiences related to projects sited in their communities. This type of forum could also allow opportunities to learn from various perspectives (such as a developer, municipal government, a community organization, or a community member), to discuss concerns and questions, to exchange expert knowledge before formal public positions are solidified, allowing greater opportunity for negotiation and compromise as necessary.

3. Build on Existing Community Engagement Programs

To encourage communities to embrace solar and wind power as part of their future community assets and character, and increase the likelihood of successful renewables development, NYSERDA and NYSDEC should work through existing programs such as the Climate Smart Communities Program and the Clean Energy Communities Program to encourage and support robust and proactive community planning that includes the use of tools such as surveys, workshops, and other forms of public engagement to assess the values, preferences, and concerns of the community regarding large-scale renewable energy.

4. Develop Renewables Clearinghouse

NYSERDA should develop a statewide clearinghouse of studies, reports, best practices, and guidelines from across New York and from other areas of the country to help stakeholders, including local officials, learn more about potential benefits and effects of renewable energy projects. Topics could include, but should not be limited to, fiscal impacts for municipalities; benefits and drawbacks to natural resources, farmland, and wildlife; potential noise impacts; and changes to property values. Information should be from credible sources trusted by most stakeholders.

5. Offer Educational Field Trips to Provide Networking and Learning Opportunities

NYSERDA, renewable energy developers, environmental commissions, and environmental organizations should create field trip opportunities around the state for interested citizens and municipal officials to visit large-scale nearby wind and solar projects, to network and interact with local people and project owners to learn about projects firsthand.

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Environmental Justice and Equity

PROBLEM STATEMENT

As New York transitions to a renewable energy economy, there is the opportunity to repair environmental injustice and energy inequity in urban communities, by reducing pollution from conventional energy production, and the associated health impacts, and by providing access to clean and affordable energy for low- and moderate-income people. The development of large-scale renewable energy development, will occur primarily in rural communities in New York, potentially raising a different set of environmental equity issues. Considering environmental justice principles pro-actively at the forefront of renewable development will help ensure that renewable energy development is equitable, and can help garner public support and reduce opposition to projects.

BACKGROUND

Some parts of the state, including New York's large cities, have been historically overburdened by the effects of conventional energy production, air and water pollution, and other environmental degradation. Studies show that in the past, conventional energy production has disproportionately negatively affected communities of color and low-income communities in these urban areas.[21] As New York transitions to a renewable energy economy, there is opportunity to alleviate the significant health impacts associated with conventional energy production in urban areas, its disproportionate impacts on disadvantaged populations, and ensure that the economic benefits of renewable energy are shared equitably.

Historically, environmental justice (EJ) work has most often focused on urban communities; however, there is growing awareness of environmental equity as an issue in rural areas where most large-scale renewable energy projects have been and/or will be sited. Involving residents in renewable energy siting and decision-making processes, and ensuring that economic benefits to community members and landowners through lease payments, PILOTs, and jobs are shared equitably, can lead to greater support for renewable energy projects. Challenges include: barriers to information, resources, access, and participation in renewable energy decision-making processes; and barriers to employment, particularly for historically disadvantaged populations.

21. Wilson, A., Patterson, J., Fink, K., Wasserman, K., Starbuck, A., Sartor, A., ... & Fleming, J. (2011). Coal blooded: putting profits before people. NAACP: Baltimore, MD USA.; Carson, R. T., Jeon, Y., & McCubbin, D. R. (1997). The relationship between air pollution emissions and income: US data. Environment and Development Economics, 2(4), 433-450.; Ash, M., Boyce, J. K., Chang, G., Pastor, M., Scoggins, J., & Tran, J. (2009).

While they go above and beyond the Roundtable's scope, and we recognize the need for more meaningful engagement with the environmental justice movement in developing these ideas, we believe it's important to make note of the following opportunities to increase equity and environmental justice in the transition to a renewable economy:

- Alleviate public health and environmental inequities by exploring opportunities to decommission, retrofit, or re-power conventional energy facilities for renewable energy siting in communities negatively affected by conventional energy
- Ensure, whenever possible, that the benefits of renewable energy directly benefit low-income consumers, people of color, and host communities of renewable energy projects
- For distributed renewables (e.g. rooftop solar), expand renewable energy financing and services such as zero-interest loans and alternatives to traditional credit approval processes to make them accessible to low-income consumers who are traditionally left out.
- Ensure that low-income and marginalized community members have a voice and role in the decisions that affect their lives, and respect the expertise they bring to the table in local projects, community, regional, and state forums, and processes related to renewable energy development
- Facilitate and fund more inclusive renewable energy forums and processes by ensuring participation of EJ and equity experts, residents, organizations, and constituencies
- Reduce barriers to employment opportunities in the renewable energy sector for populations that have been historically disadvantaged, such as but not limited to women, racial and ethnic minorities, low-income people, veterans, people with disabilities, people with low educational attainment, and people with criminal records
- Expand State investment in and support for community solar and distributed renewable energy.

RECOMMENDATIONS

1. Offer Benefits to Host Communities

Developers and municipal leaders are encouraged to consider host community agreements that provide financial or in-kind compensation to the community based on active consultation and co-planning with affected communities, as well as research regarding what has been achieved in other places and what is commensurate with a project's impacts.

2. Ensure Inclusion and Access to Energy Policy, Planning, and Siting Decisions

Developers, New York State policy makers, utilities, elected officials, and nonprofit organizations should ensure the access and inclusion of diverse community members and municipal officials in decision-making processes of renewable energy policy, planning, and siting. The opinions of all involved parties should be considered, including those with less economic and political power. Public events should be scheduled at times and places that are fully accessible, and with community-appropriate translation and interpretation facilities. In addition to holding public events, the above entities should develop and commit to maintaining ongoing community relationships.

3. Recruit Workers from Local Communities

Developers and contractors should make every effort to hire locally for renewable energy projects, with special attention on hiring from populations who have historically been disadvantaged. At each stage of the project, developers and contractors should work with the local community to find local workers and businesses for small to big jobs, such as civil contractors, erosion control, grading, electrical work, landscaping, fencing, land clearing, and catering. For example, developers and contractors should reach out to businesses and the Chamber of Commerce ahead of time so local workers and businesses are ready with bids and not left out; and developers and contractors should offer and promote local job fairs in advance of project development and recruit from local training programs. Working with the local community early will also benefit the developer, as locals have expert knowledge about their communities that can help reduce uncertainty for the project developer.

4. Invest in Training and Education

New York State should continue its efforts[22] to provide funding to train local workers for the renewable energy sector. Likewise, unions, academic institutions, workforce development initiatives, and Boards of Cooperative Educational Services programs should be encouraged to create and invest in education, job training programs and initiatives, and other opportunities for renewable energy professionals. Focus should be placed on jobs related to project development and engineering, along with other opportunities in the renewable energy workforce. The entities above should also develop, promote, and offer scholarships for a range of opportunities for local high school students and residents to participate in job training. These efforts should be in collaboration with existing environmental justice organizations and programs. Those who have gone through green job training should be asked to share their story within their community, and help connect people to similar programs. Programs should provide job fairs with contractors and developers to build a bridge to employment.

22. Announced on June 2, 2017, New York State committed to investing up to $1.5 billion in renewable energy projects to create thousands of well-paying jobs, while providing funding to train workers for lifetime careers in building efficiency, renewable energy, and other low-carbon sectors. Source: http://on.ny.gov/2qO0wCM

5. Support EJ Participation in Renewable Energy Policy, Siting Forums, and Processes

New York State and nonprofit organizations should create opportunities for EJ, equity, and community groups to participate at renewable energy siting forums and processes, including providing funding to facilitate their participation. Right now, participation is self-funded, which is challenging for EJ, equity, and local community groups and their constituencies. Examples of models that could facilitate greater participation include:

- Public/community/consumer advocates throughout the renewable energy development process as a voice for those not at the table
- Intervenor funding (via Article 10) used for EJ/equity participation
- Include diverse EJ advisors in renewable energy policy forums and processes

6. Involve Communities in Considering Renewable Projects on Brownfields in Low- and Moderate-Income (LMI) Communities

Developing projects on sites that have a history of contamination or pollution can add more costs and challenges to renewable energy project siting (e.g. brownfields). However, re-purposing brownfields for renewable energy development may provide opportunities for siting community-shared solar projects, for example, and simultaneously get contaminated land re-mediated, if this is of interest to the community. NYSERDA and the Green Bank could consider providing funding, subsidies, or other strategies for incentivizing siting of renewable energy projects on brownfields in LMI communities, building on the U.S. Environmental Protection Agency's Brightfields Program and New York State's Brownfield Opportunity Area Program.

7. Minority and Women-Owned Businesses

New York State should continue its efforts to expand access for minority-owned and women-owned enterprises and take steps to help level the playing field and enable smaller entities to participate in building the renewable energy economy.

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Property Taxation

PROBLEM STATEMENT

Property tax payments are a significant operating cost for wind and solar projects in New York, and yet are an important source of revenue for local communities to support schools and services. The process of understanding and negotiating a project's tax liability and negotiating mitigation of tax payments through payment in lieu of taxes (PILOT) agreements can be confusing and creates uncertainty for both developers and taxing jurisdictions. If an involved tax jurisdiction or an Industrial Development Agency (IDA) insists upon a property tax payment level that does not reflect the operating economics of a proposed renewable energy project, it will not be built. If the revenue isn't sufficient for the host community, there is less incentive to accept the project

BACKGROUND

Section 487 of the New York State Real Property Tax Law (RPTL) requires taxing jurisdictions to exempt solar and wind projects from the prevailing property tax for 15 years. Local tax jurisdictions also have the choice to opt-out of the Section 487 tax exemption, requiring that the developer pay the full tax liability, or they may enter an agreement for PILOT.

Many small-scale renewable energy installations have in the past received a 15-year tax exemption under Section 487. Most wind projects in the state have negotiated a PILOT with the county IDA, and in many cases, have also negotiated a separate host community agreement with the affected municipalities. There is no experience yet for how IDAs and municipalities are likely to treat large-scale solar energy projects on private land.

Valuation of generating facilities has always been difficult (both as to the scope of property subject to taxation and the valuation of taxable improvements). In addition, there is inconsistent knowledge and experience among assessors and IDAs across the state in interpreting and applying RPTL 487 and executing PILOTs. Thus, developers are often required to negotiate with inexperienced counterparties on a landscape that is uncertain.

Inexperience, the lack of clear valuation guidelines, or opposition to the development could create an effective veto by allowing taxing jurisdiction(s) that insists upon property taxation too high for a renewable generator to be economically viable. Developers will not begin construction of a project with the potential uncertainty of excessive taxation or litigation over these issues.

The current approach also creates challenges for towns and counties that rely heavily on property tax revenues to support local schools and services. These revenues are already constrained by New York State law, which limits the annual increase in property tax to the lesser of 2% or the rate of inflation.[23] Full tax exemption of renewable projects, particularly large-scale projects, could make projects significantly less attractive to cash-strapped municipalities, even if the project does not impose direct expenses on the community.

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23. Schools or special districts may override the cap by passing a law with 60% majority vote by the public, and municipalities may override the cap with 60% support of the governing board.

RECOMMENDATIONS

1. Evaluate Taxation Issues

In its ongoing efforts to reduce soft costs (that is, all costs other than equipment such as solar panel and turbine costs), New York State Energy Research Development Authority (NYSERDA) should evaluate whether taxation is a barrier to development in New York. Tax rates should allow New York state to compete well with neighboring states for renewable energy development capital. NYSERDA should conduct research to better understand existing tax assessment practices in other states, especially neighboring states, and the resulting tax burden.

2. Provide Guidance on Taxation

Because this is a confusing issue, NYSERDA and the Department of Taxation and Finance should develop a clear and concise document that details and summarizes how taxation of large-scale wind and solar projects works in New York. This could also include contextual information of how taxation works for most other significantly sized development projects in New York. Communities and developers should be encouraged to begin early to collaborate on taxation issues, even small-scale projects that are not subject to Article 10.[24]

3. Provide Training on Renewable Taxation

The appropriate state agencies should identify the lead and supporting organizations, such as the New York State Assessors' Association, that could provide consistent training and information to assessors, municipalities, school districts, and IDAs across the state about the application of the real property tax guidance to renewable energy projects and best practices in negotiating PILOTs. In doing so, care should be given to maintaining the integrity of existing tax assessment policies, such as the agricultural tax assessment policy to recoup past credits should a farmer develop their land, with the knowledge that exempting solar development from such a penalty could endanger a program that is essential in ensuring the viability of farms in New York state.

4. Align PILOT and Host Community Agreements with Permitting

PILOT and Host Community Agreements (HCA) should be negotiated in sync with project permitting, so that when a project is successfully permitted, the developer and the involved tax jurisdictions will have certainty about operating costs (for the developer) and tax revenue (for the tax jurisdictions) over the life of the project. That certainty allows each to make important budgeting decisions and for the developer to evaluate a large component of operating cost. Such an approach will facilitate project development decisions and make it easier to procure project financing.

24. NYSERDA has recently issued guidance for the legal framework and parameters that should be considered in negotiating solar PILOTs titled "NY-Sun Solar Guidebook for Local Governments in New York State." http://on.ny.gov/2wTI5nf

5. Avoid Higher Tax Burden on Renewables

Larger-scale commercial projects (over 20 MW) should provide an affordable measure of increased local revenue. However, the method for determining the appropriate amount should avoid placing a higher tax burden per MWh on renewable energy projects compared to conventional fossil generation. Solar and wind generation has a lower capacity factor (average MWh produced/maximum energy output at continuous operation at full nameplate capacity) than conventional energy generation, and solar PV has a lower capacity factor than wind. Thus, the same tax rate per MW of installed capacity will place a much higher burden per MWh on solar than wind, and a higher burden on wind than a natural gas-fired generator.

6. Align Exemptions or PILOTs with Life Span of Projects

Real Property Tax Law 487 allows for opt-out of the exemption from property tax for a 15-year period, at which time the tax status must be reconsidered by the municipality. To increase predictability for developers, it is preferable to extend the opt-out period (or PILOT) to the expected lifetime of the project–20 to 25 years.

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Economic Impacts

PROBLEM STATEMENT

While there is evidence that New York's renewable energy policies have generated net positive economic benefits for the state, stakeholders also want to know what specific costs and benefits a proposed project will bring to their community. Developers are required under Article 10 to provide estimates of the local costs and benefits of a project; however, there is uncertainty in any projection, which can be frustrating to stakeholders and municipal officials who use the information to guide decisions and policies.

BACKGROUND

Analysis prepared for the Public Service Commission (NYSPSC) found that the net economic benefit of the Clean Energy Standard ranges from $83 million to $622 million in the 2020 timeframe.[25] This analysis recognizes the overall benefits of improved public health, increased ecosystem services compared to fossil generation, and mitigation of climate change impacts. The study also discusses the regional economic benefits in terms of changes in employment during construction and operation of large-scale renewable projects and net displaced jobs from other generating resources. However, local economic costs and benefits are less well documented.

New York State Energy Research Development Authority (NYSERDA) recently released New York Wind Energy Guide for Local Decision-Makers,[26] which includes valuable information on local impacts of large-scale wind projects. The report acknowledges that "the community must understand the potential economic impacts of wind projects and issues related to local economic activity, land revenue, property taxes, and property values" in order to make informed decisions about the economic value of a wind project to the community. NYSERDA also commissioned a study in 2013 of the economic impacts of 18 renewable energy facilities under contract with the State. The research looked at spending on jobs, payments to public entities, in-state purchases, and land leases, from development and construction through the first three years of operation. The study found that many of the economic investment impacts are concentrated in the counties around the project, but

25. Draft Clean Energy Standard Supplemental Environmental Impact Statement (Chapter 9) http://on.ny.gov/2wVPTIT
26. http://on.ny.gov/2vQZ45I
27. NYSERDA, Renewable Portfolio Standard Main Tier 2013 Program Review—Direct Investments in New York State

extend across the state.[27] The study concluded that for each $1 invested by the State in renewable energy projects, $3 in direct economic benefits were realized by New York State, and additional indirect economic benefits would result as well.

Article 10 requires developers to estimate local economic impacts under Exhibit 27, including:

- Construction workforce
- Secondary employment and economic activity of construction and operation
- Incremental increase in operational costs to local government (schools, emergency, utilities)

For smaller projects, local governments can request similar information from developers under SEQRA. Independent research on the actual local economic costs and benefits of projects in New York would help both communities and developers make better estimates for future projects

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RECOMMENDATIONS

1. Conduct Study on Economic Benefits of Large-Scale Renewables to Communities

To aid local decision-makers in understanding the full range of economic impacts of renewable energy projects both locally and regionally, NYSERDA should conduct periodic updates to the 2013 Renewable Portfolio Standard Assessment Report as part of the triennial CES reviews to include additional information about the actual (as opposed to estimated) net economic contributions of large-scale investments in renewable projects during their construction and operation phases. The study, which could be an update of the 2013 study for a subset of existing projects in New York, should examine impacts such as those noted in Article 10 (Appendix 27) and additional economic impacts not addressed, including:

- Local and regional materials sourcing
- Agri-business, tourism, historic and cultural resources, and recreation-related businesses and revenue generation
- Cumulative impacts of large-scale renewable energy projects (See Article 10 and SEQRA requirements)

2. Analyze Impacts of Large-Scale Renewables on Property Values

NYSERDA should collect and analyze information on actual property value trends of properties adjacent or nearby to large-scale renewable energy projects in the Northeast and the effectiveness of mitigation measures on property values. Communities can make more informed decisions if they have credible information about the impact of different types of projects on property values and effective mitigation measures if appropriate. These analyses are complex and the results often controversial, so conducting trusted and credible analyses will require agreement among the stakeholders on the approach and data to use.

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Transmission and Interconnection

PROBLEM STATEMENT

Transmission capacity in New York is not adequate to support the renewable development needed to meet the State's Renewable Energy Standard in the most cost-effective manner. The current market-driven model does not encourage a comprehensive approach for planning and development of new or expanded transmission in light of public policies like the Renewable Energy Standard, which may result in transmission becoming a bottleneck for renewable energy development. Even if transmission needs are identified to facilitate the Renewable Energy Standard, transmission facilities face a lengthy and difficult approval process, even within existing rights-of-way (ROW). Lack of community support can add many years of delay.

Article VII, which governs the process for siting transmission facilities, is overseen by the New York State Public Service Commission(NYSPSC) and has different public engagement and filing procedures than Article 10. This can lead to difficulties in considering siting of renewable energy projects and the need for supporting transmission in a coordinated approach. Typically, development and permitting for transmission facilities can take longer than development of renewable energy projects, which also points to the need for a more proactive and coordinated approach. Secondly, New York Independent System Operator's (NYISO) interconnection process is also a lengthy and expensive process for a developer to navigate and can an impediment to meeting the Renewable Energy Standard.

BACKGROUND

The NYISO "Power Trends 2017" report, an annual assessment of the state's power grid, suggests that the Renewable Energy Standard cannot be met cost-effectively without construction of new transmission lines or upgrading existing ones. "All of New York's existing major hydropower resources and wind power projects, and nearly all currently proposed land-based wind power projects, are located in northern and western regions of the state—hundreds of miles from the high-demand metropolitan regions of southeastern New York," the report states. Despite the State's efforts to maximize distributed generation and lessen the need for new transmission, NYISO states that expansion of the transmission system in certain key locations could facilitate interconnection of new wind and solar resources in areas not already served by the high-voltage transmission system. However, further analysis is required to identify those specific needs and whether needs can be met with non-wires alternatives and the use of existing ROW.

The need for new transmission or upgrades to existing facilities is currently planned through the NYISO Comprehensive System Planning Process. The cyclical two-year processes examine requirements based on reliability, economics, and as a result of public policy. Additionally, the NYISO assesses the need for transmission additions or upgrades in conjunction with each generation interconnection request.[28]

As part of the public planning process, the NYISO solicits comments and proposals for policy-driven transmission needs and presents the proposals for review by the NYSPSC. In the current public policy transmission needs process, commenced in 2016, numerous stakeholders have argued that the "50 by 30" Renewable Energy Standard constitutes a public policy requirement and that the NYSPSC should broadly evaluate the need for the upgrade/expansion of some existing transmission lines and the construction of new transmission lines to achieve the Renewable Energy Standard.[29]

Public Service Law Article VII prescribes the process for reviewing and approving siting, design, construction, and operation of gas and electric transmission facilities with a design capacity of 100 kV or more extending for at least 10 miles, or 125 kV and over, extending a distance of one mile or more. The New York State Public Service Commission (NYSPSC) makes the final decision regarding siting applications.[30] Like Article 10, Article VII provides intervenor funding but does not require the same level of stakeholder engagement. In fact, the NYSPSC must hold a hearing for each application, but does not specify what type of hearing or that the hearing must be open to the public.

The NYSPSC established an expedited (10-month) process for Article VII applicants who propose to construct major electric transmission facilities within existing utility or state-owned rights-of-way (ROW) rather than opening new ROWs as long as the facilities are designed to meet the existing height and width of existing facilities in the ROW.[31]

The development of transmission lines can result in some of the same kinds of environmental and community impacts, public opposition, and lengthy review times that the development of renewable energy generation can bring. If upgraded and new transmission is necessary to meet the goals of the Renewable Energy Standard, then policies and practices must be put in place to eliminate barriers to accelerated transmission development, so long as such proposals are appropriately designed and sited to avoid, minimize, and mitigate environmental and other impacts and incorporate meaningful stakeholder consultation.

If transmission is accessible, renewable energy developers must also follow certain procedures and undergo certain studies in order to interconnect with the grid.[32] NYISO recently proposed a number of changes in their policies and procedures to improve the efficiency of the interconnection process while maintaining necessary reliability, and developers are supportive of changes that make the interconnection process more efficient and less lengthy. Proposed administrative changes, study process improvements, and clarifications are designed to make the application process for interconnection easier, faster and more flexible for developers and possibly lower cost for ratepayers.[33, 34]

28. As part of the generation interconnection process, the NYISO conducts three studies: a local feasibility study, a system reliability study, and a class-year study. In class-year studies, the NYISO identifies new transmission needed to accommodate the interconnection of multiple generators in the interconnection queue and assigns the cost of the transmission to the generators. Once the need is identified and generation developers agree to accept the costs, the NYISO will solicit proposals from transmission owners and developers to build the facilities.
29. The NYSPSC is looking at the need for transmission to support development of offshore wind, increased imports from Hydro Quebec, and more land-based renewable energy in the western and northern parts of the state. (2016 Public Policy Transmission Needs Planning Process Case 16-E-0588)
30. The law requires an applicant to apply for a Certificate of Environmental Compatibility and Public Need and meet the Article VII requirements before constructing any such facility. To grant a Certificate, NYSPSC must determine: the basis of the need for the facility; the nature of the probable environmental impact; the extent to which the facility minimizes adverse environmental impact; the extent to which the facility minimizes adverse impacts on active farming operations; what part, if any, of the line shall be constructed underground; the extent to which the facility conforms to the long-range plan for the electric power grid and interconnected utility systems to serve the electric system with economy and reliability; that the location conforms with state and local laws deemed applicable; and that the construction and operation of the facility is in the public interest.
31. NYSPSC Case 14-T-0017
32. See NYISO's Open Access Transmission Tariff (OATT) at Attachment Z—NYISO Small Generator Interconnection Procedures and Attachment X—NYISO Standard Large Facility Interconnection Procedures.
33. and 34. http://bit.ly/2gXbzdv

TRANSMISSION RECOMMENDATIONS

1. Proactive Transmission Planning

More proactive transmission planning is needed to ensure the state's Renewable Energy Standard is met most cost-effectively, while maintaining a reliable and safe electricity grid. The State should prioritize planning for transmission considering the recognized transmission needs for the Renewable Energy Standard.

2. Scenario Planning and Analysis as a Tool

The use of scenario planning as a tool can support public policy makers and transmission planning. Scenario planning entails the development of alternative futures based on a range of assumptions to help evaluate the implications and support long-term planning decisions. Scenarios should be developed for near-term, medium-term, and long-term transmission and energy needs connected to the Renewable Energy Standard. Scenarios should include evaluation of non-wires alternatives (e.g. efficiency and distributed energy resources), and analysis of scenarios should include the costs and benefits of siting new transmission on the local economy, community, and environment. Additionally, scenario planning and analysis should engage stakeholders in evaluation of transmission needs.

3. Evaluating Generation and Transmission Needs in Parallel

Article VII and Article 10 have significantly different timelines and different decision makers. To ensure timely and effective review of renewable energy projects that require new transmission capacity, the New York State Department of Public Service (NYSDPS) should work with other State agencies to find ways to align the two processes as much as is possible.

4. Expedited Review in Existing ROWs

When feasible, developers should take advantage of the expedited review process established by the NYSPSC in Case 14-T-0017 and site major electric transmission facilities within existing ROWs, where the proposed facilities are designed to be no taller or wider than existing facilities.

5. Guidance on Transmission Siting

NYSERDA, NYSDEC, and NYSDOS should develop guidelines for developers and stakeholders on environmentally and culturally sensitive siting and design of major new electric transmission facilities. As part of the guidelines, NYSPSC should encourage developers to locate new facilities within existing ROWs (e.g. electrical, broadband, or major highway ROWs), including facilities that exceed the existing height and width allowances. Likewise, the State should encourage developers to consider underground transmission as an alternative to new, above-ground major electric transmission lines when it is cost-effective, to avoid impacts in and on sensitive visual resources.

6. Underwater Transmission Siting

Developers who propose new major electric transmission lines that include construction under water bodies and water courses in New York state should site and design such proposals to avoid, minimize, and mitigate impacts to environmental resources and navigation to the greatest extent practical by avoiding areas such as Significant Coastal Fish and Wildlife Habitat, public water intakes, harbors, boating channels, and other critical areas.

INTERCONNECTION RECOMMENDATIONS

1. Improve the Interconnection Process

The Renewables on the Ground Roundtable (RoGR) supports NYISO's efforts to improve and accelerate the interconnection process. Roundtable participants did not take a position on any proposal currently under consideration; however, as experience with Article 10 and interconnection demands increases, NYISO should continue to evaluate opportunities to both reduce the time and cost of the interconnection process and align the interconnection process with Article 10 to the extent possible. Streamlining the process for both transmission owners and developers could reduce the soft costs, particularly for smaller projects.

2. Provide Interconnection Information

NYSPSC should require utilities to make information available regarding the hosting capacity of three-phase transmission lines and substations for planning and zoning for renewable energy at the local level.

Appendix

MATRIX OF RECOMMENDATIONS

The matrix on the following pages organizes the recommendations by the type of action required (Policy, Technical Guidelines, Education and Outreach, Community Planning Support, Develop Resources, Training, and Research) and is not intended to reflect relative priority.

POLICY

Ref #	Recommendation	Lead Implementers	Timeframe
A3	Clarify "Unreasonably Burdensome" Provision	NYSDPS	Short Term
A4	Report on and Reduce Time to Complete Article 10 Process	NYSDPS	Ongoing
LU5	Explore Incentives for Previously Disturbed Sites for Renewable Energy Development	NYSERDA	Short Term
AG3	Encourage Co-Location of Solar with Agricultural Operations	NYSERDA, NYSDAM	Ongoing
EJ2	Ensure Inclusion and Access to Energy Policy, Planning, and Development Decisions	NYSERDA, NYSDPS, NYSDEC, Developers, NYS, Elected Officials, and NGOs	Ongoing
EJ5	EJ Participation in Renewable Energy Policy	NYSERDA, NYSDPS, NYSDEC, and NGOs	Ongoing
EJ6	Explore Incentives for Using Brownfields in LMI Communities for Renewable Energy Development	NYSERDA, NYSDEC	Ongoing
EJ7	Expand Access for Minority- and Women-Owned Businesses	NYS	Ongoing
PT4	Align PILOT and HOST Community Agreements with Permitting	Local Government	Ongoing
PT5	Avoid Higher Tax Burden on Renewables	Local Government	Ongoing
PT6	Align PILOTs with Project Life Span	Local Government	Ongoing
T1	Initiate Proactive Transmission Planning	NYSDPS, NYSDEC, NYISO	Short Term
T3	Evaluate Generation and Transmission Needs in Parallel	NYSDPS, NYISO	Short Term
T4	Provide Expedited Review in Existing ROW	NYSDPS	Ongoing
T6	Address Underwater Transmission Siting	NYSDPS, NYSDEC	Ongoing
I1	Improve Interconnection Process	NYSDPS, NYISO	Short Term

KEY

A= Article 10 LU= Land Use and Planning AG= Agriculture and Renewables CE= Community Engagement EJ= Environmental Justice and Equity
PT= Property Taxation E= Economic Impacts T= Transmission I= Interconnection

	Ref #	Recommendation	Lead Implementers	Timeframe
TECHNICAL GUIDANCE	A2	Provide Model Language on Notices	NYSDPS, NYSDEC	Short Term
	A5	Provide Standard Guidance on Protocols/Methods for Studies Required by Article 10	NYSDPS, NYSDEC	Short Term
	A6	Provide Guidance for Solar Impacts	NYSERDA, NYSDEC	Short Term
	LU6	Provide Guidance on Reducing Visual Impacts	NYSERDA, NYSDEC	Short Term
	AG1	Develop Farmland Suitability Framework	NYSDAM	Short Term
	PT2	Provide Guidance on Taxation	NYSERDA, Dept of Taxation and Finance	Short Term
	T2	Conduct Scenario Planning and Analysis	NYSDPS, NYISO	Short Term
	T5	Provide Guidance on Transmission Siting	NYSERDA, NYSDPS, NYSDEC	Short Term
EDUCATION AND OUTREACH	A1	Provide Communities Information on Article 10	NYSDPS	Short Term
	AG2	Address Barriers/Identity Opportunities for Renewables in Ag Sector	NYSERDA, NYSDAM, CEATF	Short Term
	CE1	Support Collaborative Stakeholder Engagement	NYSERDA, NYSDEC	Ongoing
	CE2	Host Renewable Energy Workshops/Online Forums	NYSERDA, Community/Regional Organizations	Short Term
	CE3	Build on Existing Community Engagement Programs	NYSERDA, NYSDEC, Community/Regional Organizations	Short Term
	CE5	Offer Educational Field Trips	NYSERDA, Renewable Energy Developers	Ongoing
	EJ3	Recruit Workers from Local Communities	Developers and Contractors	Ongoing
COMMUNITY PLANNING SUPPORT	LU1	Provide Communities with Information on Renewables Development	NYSERDA, University Programs	Short Term
	LU2	Support Comprehensive Planning Including Renewables	NYSERDA, NYSDEC	Short Term
	LU4	Set Up Help Lines	NYSERDA	Short Term
DEVELOP RESOURCES	LU3	Provide Planning Resources for Renewable Energy	NYSERDA, Academic Partners	Short Term
	CE4	Develop Renewables Clearinghouse	NYSERDA	Short Term
	EJ1	Provide Benefits to Host Communities	Developers and Municipal Leaders	Ongoing
	I2	Provide Interconnection Information	Utilities	Short Term
TRAINING	EJ4	Invest in Training for Renewable Energy Professionals	NYSERDA, NYS, Unions, Academic Institutions, Workforce Development Initiatives, Boards of Cooperative Educational Services	Ongoing
	PT3	Provide Training on RenewableTaxation	NYSERDA, NYSDTF, NYSDOL	Short Term
RESEARCH	AG4	Evaluate Long-Term Impact of Leasing of Farm Operations	Academic Partners, CEATF	Ongoing
	PT1	Evaluate Taxation Issues	NYSERDA, NYSDTF	Short Term
	E1	Update Study on Economic Benefits	NYSERDA	Ongoing
	E2	Analyze Impacts of Large-Scale Renewables on Property Values	NYSERDA, Academic Partners	Short Term

KEY

A= Article 10 LU= Land Use and Planning AG= Agriculture and Renewables CE= Community Engagement EJ= Environmental Justice and Equity PT= Property Taxation E= Economic Impacts T= Transmission I= Interconnection

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GLOSSARY OF TERMS

Article 10

Article 10 provides for the siting review of new and repowered or modified major electric generating facilities in New York state by the Board on Electric Generation Siting and the Environment (Siting Board) in a unified proceeding instead of requiring a developer or owner of such a facility to apply for numerous state and local permits.

Article VII

Public Service Law Article VII prescribes the process for reviewing and approving siting, design, construction, and operation of gas and electric transmission facilities with a design capacity of 100 kV or more extending for at least 10 miles, or 125 kV and over, extending one mile or more.

Capacity Factor

The ratio of the average load carried by a power station or system for a given period to the rated capacity of the station or system for the same period.

Community

Local residents and their elected officials.

Conventional Energy Production

Production of energy from non-renewable sources.

Distributional Equity

Programs and policies that result in fair distribution of benefits and mitigation of burdens across all segments of a community, prioritizing those with highest need.

Greenhouse Gas (GHG) Emission Reduction Goal

New York State goal of 40 percent reduction from 1990 levels by 2030.

Home Rule

In New York, the power to enact local laws is granted by the State Constitution, and referred to as home rule.

Host Community Benefit Agreement

A Community Benefit Agreement (CBA) is a contract signed by community groups and a developer that requires the developer to provide specific amenities and/or mitigations to the local community or neighborhood. In exchange, the community groups agree to publicly support the project, or at least not oppose it.

Megawatt (MW)

A megawatt is a unit for measuring power that is equivalent to one million watts. One megawatt is equivalent to the energy produced by 10 automobile engines.

New York Green Bank

New York Green Bank is a state-sponsored, specialized financial entity working with the private sector to increase investments in New York's clean energy markets, creating a more efficient, reliable, and sustainable energy system.

Procedural Equity

Inclusive and accessible engagement and representation in processes to develop or implement programs and policies.

Renewable Energy Standard

The Renewable Energy Standard is a mandate established by the Public Service Commission that New York State achieve 50 percent renewable power by 2030 ("50 by 30").

Section 487 of the Real Property Tax Law

Provides tax exemption for wind and solar projects.

Stakeholder

A stakeholder can be a person, agency, or entity with an interest or investment in something and who is impacted by and cares about its outcome.

Stipulations (Article 10)

Conditions agreed upon by applicants and intervenors in an Article 10 proceeding.

Structural Equity/Environmental Justice

Decisions are made with a recognition of the historical, cultural, and institutional dynamics and structures that have routinely advantaged privileged groups in society and resulted in chronic, cumulative disadvantage for subordinated groups.

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