

SAVE ONTARIO SHORES, INC.

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LYNDONVILLE, NY 14098

June 28, 2022

NYSERDA
17 Columbia Circle
Albany, NY 12203-6399

RE: Draft Scoping Plan, Chapter 13 - Electricity

To whom it may concern:

Save Ontario Shores Inc. was founded in 2015 in response to a proposed land-based industrial wind project in the towns of Yates in Orleans County and Somerset in Niagara County. For over seven years we have gathered information, provided educational presentations, and advocated on a local and statewide level to ensure that the needs and concerns of our rural residents regarding industrial renewable projects were being heard. We have actively participated in both Article 10 and 94c proceedings. We have hundreds of supporters and are 100% locally funded.

Our extensive experience with siting large scale renewables in rural towns and our location gives us a unique perspective and we appreciate your consideration of our comments on Chapter 13 of the Draft Scoping Plan.

Sincerely,

/s/

Kate Kremer
Vice President
Save Ontario Shores, Inc.

Chapter 13 - Electricity

Land-based wind

The amount of land-based large-scale wind is not found in the main portion of the Draft Scoping Plan document (the Plan) but is found in a chart in Appendix G, Section I, page 45:

9.5-11 gigawatts (GW) of new land-based industrial wind generation capacity by 2050 - the equivalent of 9500-11000 megawatts.

This amount of land-based large-scale wind would require up to 1.1 million acres of leased land which, given New York geography and population density, is beyond New York State citizens' willingness to accept. The more that these large-scale projects are built, the harder it will be to site more of them as the "easy" locations are taken and the projects move closer to wilderness areas, wildlife management areas, parks, Native American lands and populated areas. It is not reasonable to expect that towns must carve out 1.1 million acres to be industrialized for electricity generation. This is the equivalent of 1700 square miles.

The problem with this massive amount of industrial wind is that it's extremely land intensive. In addition to setbacks for safety and noise, turbines need to be spread out so they each have sufficient wind. Each megawatt requires 80 to 100 acres and as the turbines get larger, they require more space between them. This amount of land-based wind would require between 760,000 and 1,100,000 acres of land. This will come from approximately 47-55 land-based industrial wind projects (assuming 200 megawatt projects) that would be built in 50-150 rural towns (assuming 1-3 towns per project).

Given the enormous opposition to almost all the existing and proposed land-based industrial wind projects, it is hard to overstate the division caused, the distraction from pressing rural needs, the money and time that will be expended by rural citizens in their attempt to save what will likely be over 100 towns from industrialization.

In addition, there is a plan that New York State will import 6.4 GW of land-based industrial wind energy. Using 80 acres per turbine, which is a low estimate, this additional energy would require another half million acres of land. Given that some of our existing industrial wind energy "renewable energy credits" are being sold to other states so that they do not have to build their own unpopular wind projects, it is reasonable to ask where this substantial imported wind energy will come from and how the State can ensure the purchase of imported land-based industrial wind. There are no answers in the appendices. How was this projection generated? What is the likelihood that NY will not be able to import sufficient land-based wind generation to meet this substantial goal?

It is unrealistic to rely upon this scale of in-state and imported land-based wind power given the extensive land requirements and widespread opposition.

Large-scale solar

The Draft Scoping Plan (the Plan) includes 60-65 GW of solar which will require large-scale solar on agricultural land that is already less available due to other causes. An estimated 225,000 to 315,000 acres will be required to meet this goal in the coming years. Climate change is likely to increase the need for viable agricultural land.

The Plan is not clear about how much of the 60-65 GW of solar will be from large-scale industrial solar projects. That is because many of the charts do not distinguish between distributed solar (generally located close to where it is used and often found on rooftops and businesses) and industrial solar. However, the total number of 60-65 GW for all types of solar by 2050 is staggering.

There is a statewide goal of 10 GW of distributed solar by 2030. If the State achieves 20 GW distributed solar by 2050, that leaves 45 GW of industrial solar, at 5-7 acres per MW requiring 225,000-315,000 acres of land for industrial solar. This equals 350-490 square miles of industrial solar projects. (See https://s30428.pcdn.co/wp-content/uploads/sites/2/2022/01/NY-Smart-Solar-Siting-on-Farmland_FINAL-REPORT_1.31.22.pdf page 10, foot note 2 for solar acres needed per MW.) If each project is 200 MW, then we will need 225 solar projects to meet this goal. One of the largest solar projects in the state is the Cider Solar project proposed in Genesee County. It is a 500 MW industrial solar project that is planned to use about 3000 acres of farmland.

The cheapest location for industrial solar is farmland located near transmission lines. New York lost a quarter million acres of farmland between 2001 and 2016 to development. (See https://farmlandinfo.org/wp-content/uploads/sites/2/2022/01/NY-Smart-Solar-Siting-on-Farmland_FINAL-REPORT_1.31.22.pdf page 8.) This quantity of large-scale solar will double the ongoing loss of agricultural land at a time when climate change is increasing the value of our agricultural region with plenty of water.

There is no effort in the Plan to spread the land-intensive burden of these projects across the state. There is a problematic regional impact as the developers will want land that is easily accessible to transmission lines, leading to some counties with many industrial landscapes and a reduced percentage of farmland.

Due to the state Office of Renewable Energy Siting (ORES) “Uniform Standards and Conditions” these counties and the host towns will have almost no local ability to limit the number or size of the projects. The Climate Action Council does not acknowledge the degree to which ORES has limited the participation of local governments and community groups in siting decisions. The “Development Mapping” listed in Chapter 13 on page 162 will be a waste of town resources as developers, particularly land-based industrial wind developers, have financial reasons for siting decisions and little incentive to consider local concerns when planning a large-scale renewables project.

There is a substantial conflict between industrial solar and agriculture that the Plan does not highlight and does not adequately attempt to solve. As farmland becomes scarcer and the need for this land increases with New York's plentiful water supply and warming temperatures, what will happen? It appears that the Climate Council has gone to great lengths to make projections in some areas and ignore others. What are the projections for agricultural needs in New York over the next several decades? What are the projections for land needs associated with migration? Housing? Development? Will the State be willing to eliminate all development of housing or businesses on agricultural land so that there is sufficient land for solar development without decreasing agricultural land precipitously?

Solar panels are not the only competition for agricultural land. But they are proliferating the fastest and they have the State regulatory system in ORES to ensure that the scale is tilted their favor. The impacts to the State economy and food resources could be grave.

The saying, "if it looks too good to be true it probably is" rings true here. There needs to be a much more careful review of what doubling the agricultural loss over the next decades will mean for New York State. Sacrifices will be made. Let us know what you propose that they be and we can comment on that. The Plan lacks details regarding the difficult choices that its implementation will require.

Most of the land for massive large scale solar will come from active farmland, significantly reducing this important economic and societal resource at a time when local food sources are in great demand.

Rural communities

The Draft Scoping Plan (the Plan) is ignoring the land limitations and the impacts to rural communities that exist in its recommendation to site so many large-scale land intensive renewable projects in New York. The state plans to "educate" the public and provide economic incentives in hopes of gaining more support. These actions will not change the basic geographic limitations and the negative impacts to intangibles such as open space, quiet nights, and close community relationships that drive the opposition to large-scale renewables.

Together land based wind and industrial solar would require up to 1.4 million acres of land to be industrialized and leased for electricity production. These will be large areas of the state changed from rural agricultural to rural industrial. This does not include the extensive transmission systems that will be required.

One of the strategies listed in Chapter 13, page 154, is "Support Clean Energy Siting and Community Acceptance". This includes public education as one component of this strategy.

It is not reasonable to expect that any amount of education will make it appear reasonable for towns to carve out 1.4 million acres to be industrialized for electricity generation.

Rural communities reject the stereotype that they are uninformed about climate change. They reject the premise that a “statewide public education campaign to inform New Yorkers about the climate crisis” and the benefits of large-scale renewables will make industrialization of their communities acceptable. We have been at the receiving end of developer tactics where negative impacts are downplayed and benefits are inflated to “sell” the project. We have received through Freedom of Information Requests documents that show how state agency employees have been influenced by developer lobbyists and have shown disregard for citizen concerns and for any information that is not acceptable to the developers.

To reach its renewable energy State mandate, New York State has created ORES to assure that any renewable energy developer that applies to the State for a permit will get a permit, although there may be some conditions included in the permit. And the State through its discounting rate and formulas will determine how much money the town will receive to compensate for the industrialization of its town, for the noise, the lights, the loss of wildlife and all the comes with this industrial development. And the ORES permitting process has been established to happen quickly with little time, few procedures and limited opportunities for a community to discover problems and raise them. There will be no need for town cooperation. The system is set to produce these projects rapidly without the blessing of the town or residents.

The recommendations for town and county “planning and education” serves only to distract from the reality of the system that excludes local government from any authority or choices regarding large-scale renewable projects. The Climate Council needs to do more work on this topic. It appears that they are not familiar with the recent ORES review process and regulations for large scale projects.

The suggestion that village, city, or town residents, employees or elected officials can meaningfully impact a large-scale energy project is misleading. They can only impact projects with small energy generation.

It is foolhardy to base an energy plan on intermittent renewable energy sources that may displace a significant number of rural residents.

Gap in energy generation

The Draft Scoping Plan (the Plan) moves New York away from stable reliable energy generation. The Plan’s “scenarios” all have a gap in electricity generation during the winter that they propose to fill with currently unavailable but hoped-for future developments like green hydrogen or better batteries which would require even *more* wind and solar. A plan without sufficient reliable power is not a reasonable plan. (If reliable nuclear power were part of the Plan, more large-scale renewables may not be needed to achieve the Climate Act’s targets.)

The Climate Action Council must not recommend the elimination of natural gas, a firm reliable electricity source without immediately replacing it with a system that is equally reliable.

Even in the unlikely event that the State can build out 1.4 million acres of electricity generation, under this Draft Scoping Plan the grid would still fail without substantial undeveloped baseload electricity generation. The below quote along with Figure 34 in Appendix G, Section I, page 47, show a 21-27 GW Zero-Carbon Firm Resource need. This is a “yet to be developed” hydrogen generation method with a backup plan: future development of better batteries and overbuilding industrial wind and solar to fill those batteries.

“Wind and solar resources are foundational to New York’s decarbonization goals and provide over 75 percent of annual generation.”

“However, as indicated by the gray contributions in the weekly generation chart, there are also many weeks in the year – especially during the winter – in which the contributions from renewables and existing clean firm resources are not sufficient to meet demand. During cold weeks, as a result of the electrification of building heating needs, electric demand will be much higher in the winter than it is today. Winter months also often coincide with extended periods of low renewable output. During a week with persistently low solar and wind generation, additional firm zero-carbon resources, beyond the contributions of existing nuclear and hydro, are needed to avoid a significant shortfall; Figure 34 demonstrates the system needs during this type of week.”

(See Appendix G, Section I, page 49.)

Gray in Appendix G, Chart 34, indicates electricity need that will not be met without some form of additional “firm capacity”. It may be hard to see in the lower chart in Figure 34 but there are only 11 weeks that show no gray at the top of the column indicating that extra firm capacity is not needed. For most of the year *all the Draft Scoping Plan scenarios have a shortfall* where the State does not know how it will provide for energy needs.

The system of renewables that is laid out in the Plan has a very large deficit that must be filled with some form of firm capacity and right now the only zero emissions option for this quantity of generation is nuclear.

This firm nuclear capacity can be placed on the bottom of Appendix G, Chart 34, (along with existing nuclear and hydro) and it can provide energy to make up for the intermittent renewables. *It will also reduce the overall need for intermittent renewables*, saving precious land for agriculture and forests and reducing the need for sprawling electricity generation.

“Green” hydrogen is green because the very energy intensive process to create it is powered by renewables. That is wind and solar. If this is not feasible then build out more wind and solar projects specifically to fill batteries. Either one of these options means that in addition to the 1.4 million acres of industrialization the Plan requires more land for more land intensive renewables.

Is there no end? Does the Scoping Plan anticipate that there could be a land requirement that is not achievable? The Climate Council has carefully selected the areas that will be “projected” and the topics that will not. Realistic estimates of acquisition of land, including permitting, for large scale renewables that are the cornerstone of the Plan have not been studied. Our

assessment is that the Climate Council has underestimated the rural opposition to large scale projects and has failed to acknowledge the negative impacts of industrializing 2.2 million acres (including the hundreds of thousands of acres for green hydrogen or renewables for batteries and the half a million for imported land-based wind generation.)

The Plan must provide options for the possibility that New York does not meet its renewable energy targets, and must recommend technology that is in existence today, such as nuclear, for firm capacity. Hoping that something will be developed is not a reasonable plan. Planning for increased land-based wind and solar in addition to the existing unreasonable proposal is outrageous and not grounded in reality.

Conflict between industrial renewables and forest preservation

The Plan does not address the glaring conflict between the need to preserve (and increase) carbon sequestration by New York's lands and forests, and the clearing of lands and forests for land-based wind and industrial solar projects. Existing permitted projects have cleared thousands of acres of forested land. The new wind and solar projects proposed under this plan will require clearing tens of thousands more.

Chapter 5.3 lists the following strategies (among other items):

1. Electrification in buildings and transportation
2. Zero emissions electricity
3. Maximizing carbon sequestration in New York's lands and forests

(See Chapter 5, page 31)

Our comments on the above three strategies are as follows:

1. One major component of the plan is to electrify energy use by eliminating natural gas and gasoline. This means that electricity will provide the energy to heat homes, operate vehicles, and run all the appliances now operated by gas. These efforts will double the electricity needs of New York State in the next decades.
2. The second component of the plan is to have 75% of this electricity generated by wind and solar projects. Some of the wind projects will be offshore and some of the solar projects will be on rooftops. However, the increase in electricity use is going to be so great that the plan relies for much of its energy on land intensive wind and solar projects.
3. An additional strategy is to stabilize and increase forested land in the State to provide carbon storage in the land and trees. Yet the high need for land for renewable energy generation *will conflict with this effort. The already permitted Alle-Catt Wind project will result in the deforestation of 1500 acres.* And there are many projects that have been permitted in recent years that are adding to this amount. And yet the Plan recommends generation that will require two hundred fifty 200 MW solar and fifty 200 MW wind

projects or a larger number of smaller projects. This will create an enormous pressure for land, including a need to clearcut forested land.

The Plan fails to admit or manage the conflict between setting aside forests for carbon storage and clearcutting for the transmission lines, utility scale wind and solar projects and their associated roads and transmission lines.

By including these three goals – 1) to electrify everything 2) to increase large-scale on-shore wind and solar and 3) to increase carbon storage in land and trees, and by not acknowledging the extent to which they conflict with each other, the Plan is not being honest or transparent. By not stating the problems we hamper our ability to solve them and we remove the opportunity for citizens to offer ideas and alternatives.

It makes no sense to cut down mature forests to make room for wind and solar projects. But the demand for renewables is already causing this to happen.

Substantial risks

In Appendix G, the Draft Scoping Plan (the Plan) acknowledges but does not highlight or include in the summaries the serious risks with the Plan's proposed transformation of our energy systems.

The below quote is buried in Appendix G, Section I, page 85. It lists the very serious risks in the Plan.

Although benefits and costs are in the same range across mitigation scenarios, risk levels differ by scenario. Although all scenarios involve a high degree of transformation across strategies and sectors, very high levels of transformation increase risk of delivering GHG emission reductions. Types of risk include reliance on technologies in early stages of *development* which require substantial innovation (e.g., negative emission technologies, carbon capture and storage, advanced low-carbon fuels), reliance on widespread adoption of technologies that are in the early stages of *deployment* (e.g., zero-emission vehicles, heat pumps), and reliance on strategies that require the highest levels of transformation of social institutions and business models (e.g., land use patterns, mobility practices, waste management).

What is the backup plan if technology does not develop in a timely fashion or world tensions reduce needed raw materials? What is the backup plan if residents fail to accept the industrialization of over one million acres in small towns across the State?

There are options. Nuclear is one of them. Failing to seriously review substantial investment in nuclear energy is an error in this plan.

There has been a failure to clearly enumerate and highlight the risks of this extremely aggressive plan considering the use of unproven and controversial technologies and the requirement for massive tracts of land. The uncertainty associated with this risk puts the future of the state's economy into question.

