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**Climate Change and Biodiversity:
The Impact on Indigenous Peoples**

**Expanding the Role of New York's
Office of Renewable Energy Siting
to Meet Climate Change Targets**

EELS Fall Meeting

Expanding the Role of New York's Office of Renewable Energy Siting To Meet Climate Change Targets

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New York enacted the visionary Climate Leadership and Community Protection Act (CLCPA) in 2019 with the understanding that New York must rapidly increase its renewable energy capacity and decarbonize its power grid to have a realistic chance at combating the effects of climate change. Among the CLCPA's mandates, New York is required to produce 70% of its electricity from renewable energy sources by 2030. In addition, by 2040, all of state's electricity must be zero-emissions.¹

Recognizing that not in my backyard (NIMBY) opposition and slow wind and solar facility permitting processes would hinder New York's ability to reach these goals, the state Legislature established the Office of Renewable Energy Siting (ORES) in 2020. ORES is authorized to approve all state permits and environmental reviews of renewable energy systems, such as solar and wind farms, that generate at least 25 megawatts of electricity. In addition, the law imposed a one-year deadline for ORES to carefully review and decide on completed siting permit applications and gave ORES the power in making its siting permit determinations to preempt conflicting local ordinances that are burdensome in light of the CLCPA's grid decarbonization mandate. ORES has issued 14 permits since its creation, but there remain signifi-

cant challenges in meeting New York's CLCPA targets. Specifically, a renewable energy supply chain squeeze resulting from fluctuations in supply and pricing of necessary components, among other things.

Renewable energy product manufacturing and assembly facilities are integral parts of renewable energy projects, but due to domestic demand spikes and import headaches, more of these facilities will be needed for New York to meet its CLCPA clean energy mandates. To bring the necessary facilities online in time, and to reduce the permitting timeline risk that can dissuade private investment, the New York Legislature should consider expanding the jurisdiction of ORES to include siting of renewable energy product manufacturing and assembly facilities. Applying the ORES streamlined approach to renewable energy product manufacturing and assembly facility siting could only help New York hit its CLCPA targets and it makes sense since these facilities are integral parts of renewable energy projects.

With a focus on wind and solar energy, this article will outline renewable energy supply chain challenges and analyze both the current structure and scope of ORES and potential mechanisms for expanding the agency's jurisdiction to

cover renewable energy product manufacturing and assembly facilities.

Renewable Energy Supply Chain Squeezes

New York has ambitious near-term goals for replacing its fossil fuel electricity sources with renewable energy—as do other states, and the U.S. at large.² Unfortunately, domestic supply chains are not adequate to meet a sharp increase in demand and international supply chains, facing demand increases of their own, may prove unreliable.³

The current solar energy supply chain is extremely dependent on imports and supply chain issues have already strained solar energy production in New York. The majority of photovoltaic panels in the U.S. contain crystalline silicon modules, which are made by processing high-purity silicon into thin wafers and processing these into interconnected solar cells.⁴ China produces 97% of silicon wafers and 75% of the silicon solar cells incorporated into solar modules in the U.S. are made by Chinese subsidiaries in southeast Asia.⁵ The 16% of photovoltaic panels in the U.S. that do not use crystalline silicon instead use thin-film cadmium telluride modules; all of these are supplied by a single American company that produces only one third of them in the U.S.⁶

According to the U.S. Department of Energy (DOE), China’s “unpredictable trade relationship with the United States” poses a significant risk of disruption to the crystalline silicon module supply chain.⁷ Indeed, Tesla had to temporarily shut down solar roof production at its Buffalo facility in 2021 because of “the unavailability of solar cells,” which it attributed to a U.S. Customs and Border Protection detention order on cells and solar modules.⁸ Notably, in recognition of the need to shore up the domestic solar energy supply chain, the federal Investment Reduction Act of 2022 contains a tax credit bonus for renewable energy sources that meet domestic content requirements for manufactured components, as well as steel and iron.⁹

Offshore wind presents unique supply chain challenges and opportunities. Though offshore wind turbines operate in the open ocean, offshore wind operations rely on three types of onshore facilities. First, marshaling ports, where major components can be staged and assembled. Second, fabrication ports, where components too large for road or rail can be loaded directly onto vessels. Third, operations and maintenance ports, which house offices, parts warehouses, and vessels needed for ongoing site operations.¹⁰ Because of travel costs, these facilities are ideally and generally located on waterways within a reasonable distance of the project area.¹¹

According to the National Renewable Energy Laboratory (NREL), a research and development center within DOE, to reach the Biden Administration’s announced national wind

energy target of 30 gigawatts by 2030, at least 34 new manufacturing facilities will be required to produce the necessary offshore wind components, from blades and towers to export cables and mooring chains.¹² The NREL warns that reliance on European turbine components will be risky because other countries’ ambitious offshore wind deployment targets will create substantial demand for European imports.¹³ Governor Kathy Hochul has also recognized the looming offshore wind supply chain crunch, and in 2022 announced a \$500 million investment proposal for offshore wind ports, manufacturing, and supply chain infrastructure, to be administered by New York State Energy Research and Development Authority (NYSERDA).¹⁴ Indeed, in October of 2023, Danish wind developer Ørsted announced it was halting two major offshore wind projects in New Jersey due to a combination of macroeconomic factors including “supply chain bottlenecks” on monopiles and other components.¹⁵

Unlike offshore wind, the onshore wind supply chain in the U.S. is relatively mature. The U.S. has 500 manufacturing facilities specializing in wind turbine components such as blades, towers, generators, and turbine assembly, and several of these are located in New York.¹⁶ DOE notes that while the U.S. can produce all major components of an onshore wind turbine, it still relies on other nations for supplies of specific subcomponents that are not domestically available.¹⁷ It also notes that existing facilities will need to be retooled as turbine sizes increase and that larger turbines will increase process requirements. In addition, transportation costs will increase in a manner that will advantage manufacturers closer to the energy production facilities where the turbines are to be deployed.¹⁸

Supply chain challenges are exacerbated by the slow and complex environmental review and permitting processes required to open new renewable energy product manufacturing and assembly facilities in New York. One representative example may be found in the Port of Albany’s efforts to build an offshore wind manufacturing facility on an adjacent stretch of unoccupied land on the Hudson River in the Town of Bethlehem, New York. The Port of Albany started the permitting process immediately after initiating the project in 2018 to prepare the site for manufacturers that plan to build turbine towers for a wind farm off the coast of Long Island. It took the project three and a half years to move through the State Environmental Quality Review Act (SEQRA) process and win approval from the Town of Bethlehem’s Planning Board and Zoning Board of Appeals.¹⁹

The project also required permits from the New York State Department of Environmental Conservation (DEC), the New York State Office of General Services (OGS), the New York State Department of State (DOS), and the US Army Corps of Engineers.²⁰ By the time these permits were

granted, the projected cost of the project had increased from \$350 million to over \$600 million due to a combination of inflation, supply chain disruption, and rising interest rates.²¹ Work on the site is ongoing, but it will not be complete in time to supply the offshore Long Island wind farm that was supposed to be its first customer.²²

The Office of Renewable Energy Siting

New York passed the Accelerated Renewable Community Benefit Act (the “act”) creating ORES as part of the 2020-2021 budget.²³ Codified in Executive Law § 94-c, ORES is tasked with the siting of “major renewable energy facilities,” which are defined as “renewable energy systems” with a nameplate generating capacity of 25 megawatts or more, as well as co-located energy storage systems and electric transmission lines less than ten miles in length that are needed to integrate the energy system to the grid.²⁴ The act defined “renewable energy system” to include systems that generate electricity from solar thermal technology, photovoltaics, onshore and offshore wind, hydropower, geothermal technology, and fuel cells which do not use fossil fuel resources in the process of generating electricity.²⁵

The act operates by creating a new permit—a “siting permit”—and requires such a permit for the operation of all major renewable energy facilities.²⁶ Notably, the siting permits issued are exempt from SEQRA.²⁷ Within 60 days of an application for a siting permit, ORES is required to notify the applicant whether the application is complete.²⁸ ORES is required to make a final permitting decision within one year of this determination, except in situations where the proposed project is on “an existing or abandoned commercial use,” such as a brownfield or former industrial site, in which case the determination must be made within six months.²⁹ If ORES fails to make a final siting permit decision within these timeframes, then the siting permit is deemed to have been automatically granted.³⁰

ORES is required to provide a public notice and comment period of at least 60 days and the law provides a mechanism for municipalities to advise ORES if the proposed facility is not designed or sited in compliance with local laws and regulations.³¹ However, in determining whether to issue a final siting permit, ORES may elect to preempt “any local law or ordinance which would otherwise be applicable if it makes a finding that, as applied to the proposed major renewable energy facility, it is unreasonably burdensome in view of the CLCPA targets and the environmental benefits of the proposed major renewable energy facility.”³² This gives ORES significant preemption power and defines “CLCPA targets” to mean the requirement that 70% of New York’s energy will come from renewable sources by 2030 and that by 2040 the statewide grid will be emission-free.³³

ORES faced its first major challenge just over a year after its creation. A coalition of upstate towns filed suit against ORES shortly after it issued extensive regulations implementing its siting permit program in March of 2021.³⁴ In *Town of Copake et al. v. Office of Renewable Energy Siting*, the towns claimed that ORES’s regulations violated SEQRA, exceeded ORES’s statutory authority, and were not promulgated in compliance with the State Administrative Procedure Act (SAPA). The towns also claimed that the regulations violated the state constitution’s Home Rule provisions, which provide a grant of power to local governments but also impose certain restrictions on the Legislature’s power to act in relation to local government affairs. The Albany County Supreme Court rejected all these claims.³⁵ On appeal, the Appellate Division affirmed the lower court and subsequently denied the town’s motion for re-argument or, in the alternative, for permission to appeal to the Court of Appeals.³⁶

Having survived a major challenge to its authority, ORES continues to streamline permit applications for major renewable energy facilities. As of October 2023, ORES has issued permits to 14 facilities—13 solar farms and one wind project—which are set to produce a combined total of 2,127 megawatts.³⁷ This is an excellent start, but New York can and must go further if it hopes to decarbonize its electricity grid and comply with the mandates of the CLCPA.

Expanding ORES To Help Meet the CLCPA Mandates

The Legislature should consider expanding the jurisdiction of ORES to include facilities that manufacture and assemble components for renewable energy facilities. Streamlining the permitting process for these additional types of renewable energy facilities would benefit renewables developers that are facing an unprecedented supply chain squeeze and help New York meet the targets set forth under the CLCPA.³⁸

ORES currently has jurisdiction only over major renewable energy facilities and associated storage and transmission projects. Based on the narrow definition of “major renewable energy facility,” any attempt by ORES to issue permits for renewable energy component facilities, or to issue regulations providing for such issuance, would exceed its statutory authority. Accordingly, to bring renewable energy manufacturing and assembly facilities within the scope of ORES, the law must be amended.

California provides one possible template. In 2022, California followed New York in adopting legislation to streamline the permitting of major renewable energy projects. Analogous to the act, California’s law assigns centralized permitting responsibility to the California Energy Commission and supersedes all local permitting and ordinances.³⁹ One major difference between the New York and California laws

is that California covers a broader range of facilities. Along with renewable energy facilities, storage systems, and transmission lines, California’s law also covers projects for which the applicant has certified that a capital investment of at least \$250 million will be made over a five-year period that are “for (A) the manufacture, production, or assembly of an energy storage system or component manufacturing, wind system or component manufacturing, and solar photovoltaic energy system or component manufacturing, or (B) the manufacture, production, or assembly of specialized products, components, or systems that are integral to renewable energy or energy storage technologies.”⁴⁰

Washington state also passed a similar law in 2022 that expands the streamlining authority of the existing Washington Energy Facility Site Evaluation Council. The law now covers “clean energy product manufacturing facilities,” which are defined to include facilities that exclusively or primarily manufacture “equipment and products used to produce energy from alternative energy resources” such as wind, solar, geothermal, renewable natural gas (i.e., landfill gas), tidal, and hydrogen energy.⁴¹ So far, Washington and California are the only states that have made renewable energy manufacturing facilities eligible for permit streamlining.

Here in New York, the law should be amended to include projects for the manufacture, production, or assembly of components or specialized products for wind energy systems, solar photovoltaic energy systems, and energy storage systems. Copying California’s five-year capital investment minimum of \$250 million would be well suited for major wind energy manufacturing and assembly projects—the Port of Albany project mentioned above is expected to cost \$604 million—but an even lower threshold would be better to encourage the development of mid-size operations, specifically, the manufacturing of necessary component parts. More aggressively, the Legislature could go beyond wind and solar manufacturing and follow Washington’s example by expanding streamlined permitting to cover manufacturing facilities for geothermal, tidal, hydrogen, and other renewable energies. There may also be significant utility in expanding the law to include other support facilities, such as maintenance facilities and renewable storage component facilities.

When it comes to both the changing climate and New York’s CLCPA mandates, the clock is ticking. By amending the law to authorize ORES to streamline the siting of new renewable energy manufacturing and assembly facilities, the Legislature could ease the supply chain crunch threatening New York’s ability to achieve its CLCPA mandates and help New Yorkers share in the benefits of the green transition.



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Endnotes

1. N.Y. Pub. Serv. Law § 66-p(2).
2. See, e.g., CA S.B. 100 (2017-2018) (all of California’s electricity to come from carbon-free sources by December 31, 2045); The White House, *FACT SHEET: President Biden Sets 2030 Greenhouse Gas Pollution Reduction Target Aimed at Creating Good-Paying Union Jobs and Securing U.S. Leadership on Clean Energy Technologies* (Apr. 22, 2021) (“The United States has set a goal to reach 100 percent carbon pollution-free electricity by 2035 . . .”).
3. U.S. Dep’t of Energy, *America’s Strategy to Secure the Supply Chain for a Robust Clean Energy Transition* ix, 25 (2022); Camilla Hodgson, *Wind Sector Faces Supply Chain Crunch This Decade, Industry Body Warns*, FINANCIAL TIMES (Mar. 27, 2023), <https://www.ft.com/content/f324be0d-191e-4943-97fd-51a8d46e286c>.
4. U.S. Dep’t of Energy, *Solar Photovoltaics Supply Chain Deep Dive Assessment* iii (2022).
5. *Id.*
6. *Id.* at iii-iv.
7. *Id.* at iv.
8. J. Dale Schoemaker, *Tesla’s Solar Factory in Buffalo Fizzles*, THE INVESTIGATIVE POST (Jan. 11, 2023), <https://www.investigativepost.org/2023/01/11/teslas-solar-factory-in-buffalo-fizzles/>.

9. 26 U.S.C. 45(b)(9).
10. National Renewable Energy Laboratory, *A Supply Chain Road Map for Offshore Wind Energy in the United States* 16 (2023), <https://www.nrel.gov/docs/fy23osti/84710.pdf>.
11. *Id.*
12. *Id.* at ix-x.
13. *Id.* at ix; Neil Ford, *Offshore Wind in Europe Needs Urgent Factory Aid to Hit Targets*, REUTERS (June 29, 2023), <https://www.reuters.com/business/energy/offshore-wind-europe-needs-urgent-factory-aid-hit-targets-2023-06-29/>.
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15. Ørsted, *Ørsted Ceases Development of Ocean Wind 1 and Ocean Wind 2 and Takes Final Investment Decision on Revolution Wind* (Oct. 31, 2023), <https://us.orsted.com/news-archive/2023/10/orsted-ceases-development-of-ocean-wind-1-and-ocean-wind-2>; Ella Nilsen, *Energy Company Pulls the Plug on Two Major Offshore Wind Projects on East Coast*, CNN (Nov. 1, 2023), <https://www.cnn.com/2023/11/01/us/orsted-wind-energy-canceled-climate/index.html>.
16. U.S. Dep't of Energy, Office of Efficiency & Renewable Energy, *Wind Manufacturing and Supply Chain* (accessed October 5, 2023), <https://www.energy.gov/eere/wind/wind-manufacturing-and-supply-chain>.
17. U.S. Dep't of Energy, *Wind Energy Supply Chain Deep Dive Assessment* 25-26 (2022).
18. *Id.* at 25; U.S. Dep't of Energy, Office of Efficiency & Renewable Energy, *Wind Manufacturing and Supply Chain* (accessed October 5, 2023), <https://www.energy.gov/eere/wind/wind-manufacturing-and-supply-chain>.
19. Town of Bethlehem, New York, *Port of Albany Project* (accessed October 5, 2023), <https://www.townofbethlehem.org/929/Port-of-Albany-Project>; Larry Rulison, *Offshore Wind Developers Ask New York for Higher Payments*, THE TIMES UNION (Aug. 4, 2023), <https://www.timesunion.com/business/article/offshore-wind-developers-ask-new-york-higher-18274217.php>.
20. Town of Bethlehem, New York, *Port of Albany Project* (accessed October 5, 2023), <https://www.townofbethlehem.org/929/Port-of-Albany-Project>.
21. Larry Rulison, *Despite Funding Questions, Bethlehem Wind Energy Project Progressing*, THE TIMES UNION (July 16, 2023), <https://www.timesunion.com/business/article/despite-money-issues-wind-energy-project-18201555.php>.
22. Benjamin Storrow, *Not Made In America: Factory Shortage Stalls Offshore Wind*, E&E News (Sept. 29, 2023), <https://www.eenews.net/articles/not-made-in-america-factory-shortage-stalls-offshore-wind/>.
23. The New York State Energy Research and Development Authority's (NYSERDA) Build-Ready Program, also created as part of the Accelerated Renewable Community Benefit Act, is another effort to encourage the expansion of renewable energy in New York and meet the CLCPA's targets. Through the program, NYSERDA brings under-utilized sites such as brownfields through the planning and permitting process and delivers them to developers "build ready." New York State Energy Research and Development Authority, *Build-Ready Program* (accessed October 9, 2023), <https://www.nyserda.ny.gov/All-Programs/Build-Ready-Program>. The focus of the Build Ready program is renewable energy generation projects and not the manufacturing and assembly facilities.
24. N.Y. Exec. Law § 94-c(2)(h).
25. *Id.* (incorporating by reference Public Service Law § 66-p(b)).
26. N.Y. Exec. Law § 94-c(2)(i); N.Y. Exec. Law § 94-c(4)(a).
27. N.Y. ECL § 8-0111(5)(b).
28. N.Y. Exec. Law § 94-c(5)(b).
29. N.Y. Exec. Law § 94-c(5)(f).
30. *Id.*
31. N.Y. Exec. Law § 94-c(5)(c).
32. N.Y. Exec. Law § 94-c(5)(e).
33. N.Y. Exec. Law § 94-c(2)(b).
34. 19 CRR-NY XVIII 900.
35. *Town of Copake v. N.Y. State Off. of Renewable Energy Siting*, 216 A.D.3d 91 (App. Div. 3d Dep't 2023).
36. *Id.*; *Town of Copake v. N.Y. State Off. of Renewable Energy Siting*, 2023 NY Slip Op. 74039(U) (App. Div. 3d Dep't Sept. 22, 2023).
37. New York State Office of Renewable Energy Siting, *Permit Applications* (accessed October 5, 2023), <https://ores.ny.gov/permit-applications>.
38. Addressing the impact of permitting on offshore wind port development, one industry report notes that "Permitting timeline risk can dissuade private investment, especially in early-stage development work. Reducing this uncertainty will help draw more capital into the offshore wind port sector and accelerate the overall pace of development." Business Network for Offshore Wind Ports Working Group, *Building A National Network of Offshore Wind Ports* 24 (2023).
39. California Public Resources Code 25545.1(b)(1).
40. California Public Resources Code 25545(b).
41. 2021 HB1812 2022, codified RCW 80.50.020.