
NOTE

NEW YORK’S PATHWAY TO
DECARBONIZATION: LEGAL AND
POLICY CHALLENGES OF OFFSHORE
WIND DEVELOPMENT

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INTRODUCTION

New York has emerged as a leader among states in confronting the climate crisis. As part of its response to this pressing issue, New York has passed legislation setting state-wide decarbonization and renewable energy generation goals.¹ Offshore wind generation is a

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key aspect of New York's transition to a clean energy economy, and prioritizing this form of renewable energy generation is necessary to achieve the state's climate goals.

Although New York continues to support offshore wind generation development, significant legal obstacles remain. Amidst a new unsupportive presidential administration, various technological limitations, and lack of support from the private sector, offshore wind development in New York is in danger. The current Trump administration has demonstrated its opposition to offshore wind development through various executive orders and the removal of federal support of New York's renewable energy policies.² Outdated transmission and grid policies hinder the development of critical transmission and grid infrastructure needed to support additional generation capacity. Moreover, offshore wind development in New York faces economic challenges and opposition from residents and groups located in areas with planned renewable developments.

To confront these challenges, New York has various solutions to continue building towards its renewable energy and offshore wind development goals. Leveraging state and local authority to make energy generation decisions and set policy goals for the state and cities provides an avenue to maintaining offshore wind development absent federal leadership. In addition, New York can make improvements to existing transmission and grid infrastructure to increase efficiency and capacity, reducing the need for new construction. The state can also implement economic incentives and prioritize community engagement in response to opposition from the fossil fuel industry through anti-renewables lobbying and public

feedback. Finally, my family—Marsha, Roger, Lauren, Nathan, Devansh, Carolyn, Earl and Chris—I could not have written this note without your love and support, past and present. All views expressed herein are my own.

¹ See Climate Leadership and Community Protection Act, S. 6599, 2019–2020 S. Assemb., Reg. Sess. §§ 1.4, 1.12(d) (N.Y. 2019).

² See, e.g., One Big Beautiful Bill Act, H.R. 1, 119th Cong. § 70512 (2025) (terminating clean electricity production and investment tax credits for wind facilities); Memorandum on the Temporary Withdrawal of All Areas on the Outer Continental Shelf from Offshore Wind Leasing and Review of the Federal Government's Leasing and Permitting Practices for Wind Projects, 90 Fed. Reg. 8363 (Jan. 20, 2025) [hereinafter January 20th Memorandum] (withdrawing areas on the Outer Continental Shelf from wind leasing); Exec. Order No. 14156, 90 Fed. Reg. 8433 (Jan. 20, 2025) [hereinafter E.O. 14156] (calling the Biden Administration's energy policies "harmful and shortsighted").

misinformation campaigns.³ As New York continues the confront climate change through the deployment of offshore wind and other renewable energy sources, the state will need to leverage multisector law and policy solutions to keep moving forward towards decarbonization and achieving its climate goals.

This note seeks to describe the state of offshore wind generation in New York by outlining the current challenges to rapid renewable energy development, as well as potential solutions. The discussion begins with a background on New York's existing climate legislation and its need to decarbonize in response to the climate challenge. The analysis will then turn to various barriers that New York faces in developing offshore wind, including federal opposition, infrastructure inefficiencies, and public opposition. The discussion will then conclude with exploring potential responses to these challenges, focusing on the state and local policy initiatives, improving existing transmission and grid infrastructure, and economic incentives.

I. NEW YORK'S NEED FOR DECARBONIZATION

As climate change continues to worsen, rapid decarbonization is essential. Climate change is causing temperatures to rise, storms to become more frequent and more intense, and oceans levels and temperatures to rise—all of which impact people and ecosystems.⁴ In New York, the average annual temperature has warmed 3°F since 1970 with these changes impacting the types of plants, insects, and

³ See Mariel Lutz & Jenny Rowland-Shea, *The Oil and Gas Industry Is Behind Offshore Wind Misinformation*, CTR. FOR AM. PROGRESS (Dec. 11, 2023), <https://www.americanprogress.org/article/the-oil-and-gas-industry-is-behind-offshore-wind-misinformation/> [<https://perma.cc/HMK9-GHQR>] (describing the fossil fuel industry's funding of misinformation about renewable energy); Chris Martinez, Laura Kilbury & Joel Martinez, *These Fossil Fuel Industry Tactics Are Fueling Democratic Backsliding*, CTR. FOR AM. PROGRESS (Dec. 5, 2023), <https://www.americanprogress.org/article/these-fossil-fuel-industry-tactics-are-fueling-democratic-backsliding/> [<https://perma.cc/Q9ZD-ZA4J>] (describing how the fossil fuel industry has spread misinformation about the climate crisis and lobbied to serve its interests).

⁴ See *Climate Change Effects and Impacts*, N.Y. STATE DEP'T OF ENV'T CONSERVATION, <https://dec.ny.gov/environmental-protection/climate-change/effects-impacts> [<https://perma.cc/Q9VV-X3BA>] (last visited July 31, 2025).

wildlife that can grow in the state.⁵ Human activities that release GHGs into the atmosphere which increase temperatures must be reduced to confront these harmful changes. The electric power sector is particularly critical to reducing emissions as the second largest source of emissions (after transportation), accounting for 25% of the United States' total GHG emissions.⁶

New York has recognized and prioritized this urgent need to decarbonize. In 2019, the State Legislature passed the Climate Leadership and Community Protection Act (CLCPA) which directs New York to reduce GHG emissions by 40% from 1990 levels by 2030 and 100% by 2050.⁷ For the energy sector, the CLCPA's directives include achieving 70% renewable energy generation by 2030 and 100% zero-emission electricity by 2040, with a goal of net-zero emissions statewide by 2050.⁸ In particular, the CLCPA requires New York to install 9 GW of offshore wind energy by 2035.⁹

Currently, New York only has one operational offshore wind facility, the South Fork Wind Farm, which has a generation capacity of 132 megawatts (MW).¹⁰ There are two projects presently under construction—Empire Wind 1 and Sunrise Wind—which have generation capacities of 810 MW and 924 MW respectively.¹¹ Currently, New York is not on track to meet its wind generation goals: even with the addition of Empire Wind 1 and Sunrise Wind, the state must install 7,170 MW more of offshore wind generation within the next nine years to meet the 9 gigawatt (GW) target—an undertaking that would require an immense scale of development.¹² Thus, with

⁵ *See id.*

⁶ *See Sources of Greenhouse Gas Emissions*, U.S. EPA <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions> [<https://perma.cc/J8LC-2DWE>] (last visited Oct. 25, 2025).

⁷ *See* S.B. 6599, 2019–2020 S. Assemb., Reg. Sess. § 1.4 (N.Y. 2019).

⁸ *See id.* §§ 1.4, 1.12(d).

⁹ *See id.* § 75-0101(3)(e).

¹⁰ *See New York Offshore Wind Projects*, N.Y. STATE ENERGY RSCH. & DEV. AUTH., <https://www.nyserda.ny.gov/All-Programs/Offshore-Wind/Focus-Areas/NY-Offshore-Wind-Projects>, [<https://perma.cc/WT5C-3XZB>] (last visited Oct. 26, 2025).

¹¹ *See id.*

¹² Anne Sappenfield, *Guest Blog: Big Announcements About New York Offshore Wind Development Mark Small (but Important) Steps Toward Meeting 2035 Target*, CLIMATE L., SABIN CTR. (July 30, 2024),

New York's fast-approaching 2030 deadline, identifying the barrier and solutions to the development of offshore wind is ever more critical.

II. BARRIERS TO OFFSHORE WIND DEVELOPMENT IN NEW YORK

Despite New York's dedication to developing offshore wind technology, the federal government's policy changes, insufficient transmission and interconnection capacity, and private sector costs pose serious threats to New York's offshore wind generation.

A. *Changes to Federal Policy on Offshore Wind Leasing and Development*

Federal authorities are crucial to realizing New York's renewable energy goals. Offshore wind generation facilities require permitting in federal waters—the Bureau of Ocean Energy Management (BOEM) “oversees leasing and permitting of offshore wind projects on the U.S. outer continental shelf” and holds primary responsibility for approving wind projects.¹³ The federal government can also incentivize certain projects and accelerate their timelines through the various agencies responsible for permitting and development. For instance, the Biden Administration strongly supported the development of renewable energies and advocated for a goal of 30 GW of offshore wind energy capacity by 2030.¹⁴ Under his administration, BOEM approved 11 commercial offshore wind projects which included a “record-breaking” lease offshore New York.¹⁵ On the other

<https://blogs.law.columbia.edu/climatechange/2024/07/30/guest-blog-big-announcements-about-new-york-offshore-wind-development-mark-small-but-important-steps-toward-meeting-2035-target/> [<https://perma.cc/U2LU-SU3M>].

¹³ See LAURA B. COMAY & CORRIE E. CLARK, CONG. RSCH. SERV. R46970, U.S. OFFSHORE WIND DEVELOPMENT: OVERVIEW AND ISSUES FOR THE 118TH CONGRESS (2023), CRS Report R46970, Congressional Research Service, Sept. 13, 2023, <https://crsreports.congress.gov/product/pdf/R/R46970> [<https://perma.cc/32P5-9XXH>].

¹⁴ See *Biden-Harris Administration Advances Offshore Wind Energy Leasing in Guam*, BUREAU OF OCEAN ENERGY MGMT. (Jan. 3, 2025), <https://www.boem.gov/newsroom/press-releases/biden-harris-administration-advances-offshore-wind-energy-leasing-guam> [<https://perma.cc/57YK-CDJQ>] [hereinafter BOEM, *Biden-Harris Administration*].

¹⁵ See *id.*; Catalina Jaramillo, *What to Know About Trump's Executive Order on Wind Energy*, FACTCHECK.ORG (Feb. 5, 2025), <https://>

hand, the Trump administration's position towards offshore wind is a sharp reversal from that of the Biden administration. The administration eliminated and replaced previous policies supporting the development of offshore wind within the first few days with two consequential executive orders.¹⁶ In the wake of these orders, offshore wind energy development in New York has already felt the burden that this federal opposition has engendered through project delays, revocation of funding, and even outright cancellation of projects.

The current administration's policy of opposing any offshore wind development is in direct conflict with New York's stated goal of increasing offshore wind generating capacity. One of the most significant new policies impacting states' abilities to develop new offshore wind energy is the January 20th, 2025 Memorandum temporarily withdrawing all areas in the Offshore Continental Shelf from consideration "for any new or renewed wind energy leasing for the purposes of generation of electricity."¹⁷ The withdrawal stands until the Memorandum is revoked, but preserves the leasing of this area related to other purposes including oil, gas and minerals.¹⁸ Moreover, the Memorandum alleges "legal deficiencies" relating to the federal government's leasing and permitting of offshore wind projects, though does not further specify such "deficiencies."¹⁹ It also halts the issuance of "approvals, rights of way, permits, leases or loans" for offshore wind projects until a review of these practices

www.factcheck.org/2025/02/what-to-know-about-trumps-executive-order-on-wind-energy/ [<https://perma.cc/EQ6Z-SGVQ>].

¹⁶ See, e.g., January 20th Memorandum, *supra* note 2 (withdrawing areas within the Offshore Continental Shelf from offshore wind leasing); E.O. 14156, *supra* note 2 (directing federal agencies to "identify and exercise any lawful emergency authorities available to them, as well as all other lawful authorities they may possess, to facilitate the identification, leasing, siting, production, transportation, refining, and generation of domestic energy resources" excluding wind and solar). A presidential memorandum directs agencies to perform duties consistent with the law or implement the laws that are presidential priorities. They carry the same weight as executive orders, but they do not need to be published in the Federal Register nor include a justification of presidential authority. See *Presidential Memorandum*, BALLOTPEDIA, https://ballotpedia.org/Presidential_memorandum [<https://perma.cc/3AY7-3YQB>] (last visited Oct. 9, 2025).

¹⁷ January 20th Memorandum, *supra* note 2, § 1.

¹⁸ See *id.*

¹⁹ See *id.* § 2.

is undertaken.²⁰ This broad suspension is highly consequential since it will prevent development of 80 GW of offshore wind generation in process of development as of May 2024, 90% of which is in projects currently in permitting or earlier phases.²¹

In addition to preventing new construction of offshore wind generation facilities, the January 20th Memorandum impacts already approved offshore wind projects by directing the Secretary of the Interior to review “the ecological, economic, and environmental necessity of terminating or amending any existing wind energy leases.”²² This provision could create a legal basis for challenges to existing generation facilities in cases where unforeseen circumstances require a design modification that would need approval from the federal government, even if minor.²³ In that case, the project would need to seek reapproval, opening an existing project up for review by the federal government, which now has a legal basis to deny the lease or revoke the permit. Moreover, the inclusion of existing projects in the review scope of offshore leases suggests a willingness to challenge operational facilities. This means that receiving federal approval does not put a project in the clear, which could create economic uncertainties and disincentivize further investment.²⁴

The January 20th Memorandum has already impacted the offshore wind development process in New York. One such project is New York Bight, located 20 miles off the coast of New York in the offshore continental shelf. In 2022, BOEM oversaw an auction of offshore wind project leases for six lease areas in the New York Bight, which drew winning bids from six companies and totaled approximately \$4.37 billion.²⁵ BOEM estimated that full development of the six lease areas could generate seven GW of offshore wind capacity, which would comprise a significant portion of the nine

²⁰ See *id.* § 2(a).

²¹ See Jaramillo, *supra* note 15.

²² See January 20th Memorandum, *supra* note 2, § 1.

²³ See Jaramillo, *supra* note 15.

²⁴ See *id.*

²⁵ See *New York Bight*, BUREAU OF OCEAN ENERGY MGMT., <https://www.boem.gov/renewable-energy/state-activities/new-york-bight> [<https://perma.cc/ERA3-KLSA>] (last visited Oct. 14, 2025).

GW of offshore wind goal contained in the CLCPA.²⁶ The development and permitting process began for these lease areas, and on January 15th, 2025, BOEM published a Notice of Intent (NOI) to prepare an Environmental Impact Statement (EIS) for the construction and operation plan submitted for the Vineyard Mid-Atlantic Project within the New York Bight.²⁷ However, after Trump's issuance of the January 20th Memorandum, the permitting process halted, and the public meetings on BOEM's NOI to prepare an EIS for the Vineyard Mid-Atlantic Project was cancelled.²⁸ Since development of offshore wind facilities in the New York Bight represents a promising avenue for reaching the CLCPA's goal of 9 GW of generating capacity, the January 20th Memorandum impeding these projects is a significant barrier to New York achieving this mandate.

The Trump administration's Executive Order (E.O.) No. 14156 "Declaring a National Energy Emergency" (hereinafter "E.O. 14156" or "the E.O.") also complicates the development of offshore wind projects for New York. While this order is not as explicitly inconsistent with offshore development as the Memorandum, it further elucidates the federal government's general policy perspective opposing offshore renewables. E.O. 14156 directs executive agencies to identify and exercise their available emergency authority to facilitate the development of domestic energy resources.²⁹ However, the order's definition of energy noticeably excludes renewable sources such as solar and wind in its enumerated list of energy resources, described as "crude oil, natural gas, lease condensates, natural gas liquids, refined petroleum products, uranium, coal, biofuels, geothermal heat, the kinetic movement of flowing water, and critical minerals."³⁰ This definition is incorporated into E.O. 14156's emergency authorizations to deploy energy resources, therefore excluding offshore wind from this mobilization and instead prioritizing

²⁶ See *id.*; S.B. 6599, 2019–2020 S. Assemb., Reg. Sess. § 75-0101(3)(e) (N.Y. 2019).

²⁷ See *Vineyard Mid-Atlantic*, BUREAU OF OCEAN ENERGY MGMT., <https://www.boem.gov/renewable-energy/state-activities/vineyard-mid-atlantic> [<https://perma.cc/U95A-ZV4T>]. The NOI and EIS were prepared pursuant to the National Environmental Policy Act (NEPA), which mandates environmental review of federal actions.

²⁸ See *New York Bight*, *supra* note 25.

²⁹ See E.O. 14156, *supra* note 2.

³⁰ See *id.* § 8(a).

“the supply, refining, and transportation” of fossil fuels throughout the United States.³¹ And since wind energy is omitted from the definition of energy throughout the E.O., the contained authorization to use federal lands for “the identification, leasing, siting, production, transportation, refining, and generation of domestic energy resources” does not apply to offshore generation.³² This omission implies an intentional policy decision to carve out offshore wind from development on federal lands, further demonstrating the Administration’s strong opposition to deployment of this technology. Moreover, in response to stated shortages in energy supply, E.O. 14156 expressly directs the Secretary of Energy to issue “emergency fuel waivers to allow the year-round sale of E15 gasoline” but does not include non-fossil solutions.³³

At a high level, E.O. 14156 describes the energy emergency as being “most pronounced in our Nation’s Northeast and West Coast, where dangerous State and local policies jeopardize our Nation’s core national defense and security needs, and devastate the prosperity of not only local residents but the entire United States population.”³⁴ When considering these statements alongside the January 20th Memorandum, the effect is to identify certain state policies as problematic due to their promotion of offshore wind development, which includes the CLCPA in New York. The E.O. also alleges that Biden administration’s policies, which were notably supportive of renewables,³⁵ have driven the United States into a national energy emergency, promoting the contour of this E.O. as another policy opposed to offshore wind.³⁶

Furthermore, the Trump administration promulgated another executive order directly targeting the CLCPA and New York’s efforts to promote renewable energy development. E.O. 11414 “Protecting American Energy from State Overreach” describes the administration’s goal to remove “illegitimate impediments” to the fossil fuel generating sources mentioned in the previous E.O.

³¹ See *id.* § 3(b).

³² See *id.* § 2(a).

³³ See *id.* § 2(b).

³⁴ See *id.* § 1.

³⁵ See, e.g., BOEM, *Biden-Harris Administration*, *supra* note 14 (describing the Administration’s actions in support of offshore wind development).

³⁶ See E.O. 14156, *supra* note 2, § 1.

14156.³⁷ The E.O. then alleges that state and local governments have been impermissibly regulating energy beyond their authority, thereby threatening American energy dominance. Further, the E.O. describes New York's CLCPA as a "'climate change' extortion law" and states that the administration will review any state laws addressing climate change to determine if they are federally preempted or otherwise unenforceable.³⁸ This latest E.O. explicitly demonstrates the federal opposition New York faces regarding offshore wind and the Trump administration's continued efforts to prevent development of this clean energy.

The most recent consequential change in federal renewable wind energy policy has come from changes to the structure of clean energy incentives in the One Big Beautiful Bill Act (OBBBA) of July 2025.³⁹ Under the Inflation Reduction Act of 2022 (IRA), wind generation projects that met certain qualification requirements were eligible to receive a clean electricity Investment Tax Credit (ITC)—providing a per-kilowatt-hour subsidy for electricity generated from zero-emission sources for the first 10 years of operation⁴⁰—or Production Tax Credit (PTC)—equal to a percentage of the investment cost in zero-emission electricity generation and storage facilities.⁴¹ Under the IRA, the phaseout of these credits did not have an explicit expiration date, but rather would be a performance-based phaseout, with reduction of 25% of the credit each year where GHG emissions fall 75% below 2022 levels.⁴² These tax credits encouraged development and construction of qualified wind by reducing the financial barriers to entry and overall cost of the project, thereby incentivizing investment.⁴³ However, the OBBBA terminates these tax credits for

³⁷ See Exec. Order No. 11414, 90 Fed. Reg. 15513, § 1 (Apr. 8, 2025), <https://www.whitehouse.gov/presidential-actions/2025/04/protecting-american-energy-from-state-overreach/> [<https://perma.cc/9EBJ-FPAK>].

³⁸ *Id.*

³⁹ See H.R. 1, 119th Cong. §§ 70506, 70512–14 (2025).

⁴⁰ See Inflation Reduction Act of 2022, 26 U.S.C. § 45Y (2022).

⁴¹ See 26 U.S.C. § 48E (2022).

⁴² See *id.*, at §§ 48E(e)(2) (for ITC), 45Y(d) (for PTC).

⁴³ See Thomson Reuters Tax & Acct., *Renewable Energy Tax Credits: Geothermal, Solar, Biomass, Wind Power, and More*, THOMSON REUTERS (Jan. 10, 2023), <https://tax.thomsonreuters.com/blog/renewable-energy-tax-credits-geothermal-solar-biomass-wind-power-and-more/> [<https://perma.cc/X6XR-B7UG>].

any wind generation facility placed in service after December 31, 2027.⁴⁴ This removes a key source of financial certainty for developers, making it more difficult to secure long-term financing and further delaying the development of these projects.

Furthermore, the Department of the Interior (DOI), acting in response to President Trump's January 20th Memorandum and E.O. 14156 among other actions, implemented new departmental review procedures in July 2025 requiring all decisions on wind (and solar) projects on federal lands and waters to undergo review and approval by the Secretary of the Interior.⁴⁵ According to the DOI's formal guidance memo, these actions apply not only to lease approvals or permits, but also to consultations, environmental reviews⁴⁶—further increasing administrative burdens and delaying critical decisions. For offshore wind developers, who already face complex permitting timelines and interagency coordination, this shift introduces significant regulatory uncertainty and will likely extend project timelines and raise costs, further slowing the pace of deployment.

While the January 20th Memorandum, the two Executive Orders, and the OBBBA do not explicitly prevent New York from developing offshore wind, these laws clearly signal the federal government's policy of opposition to wind generation. In addition to creating an atmosphere of legal uncertainty, the recent legal changes to federal renewable energy policy have eliminated key private sector incentives and hindered New York's ability to secure necessary federal approval to develop necessary wind generation.

B. Insufficient Transmission Infrastructure and Interconnection Delays

Insufficient transmission infrastructure and extended transmission permitting delays further limit offshore wind capacity. The current amount of existing transmission infrastructure in the United States is insufficient to support the renewable energy buildout

⁴⁴ See H.R. 1, 119th Cong. §§ 70512–13 (2025).

⁴⁵ See *Departmental Review Procedures for Decisions, Actions, Consultations, and Other Approvals Related to Wind and Solar Projects*, U.S. DEP'T OF THE INTERIOR (July 15, 2025), <https://www.doi.gov/media/document/departmental-review-procedures-decisions-actions-consultations-and-other> [<https://perma.cc/3L5C-P2NW>]

⁴⁶ See *id.*

necessary to achieve New York and other state's decarbonization goals. One study determined that the transmission system will need to double in capacity by 2050 to maintain reliability at the lowest cost to consumers, with scenarios for higher demand or decarbonization requiring even greater expansion of transmission.⁴⁷ Thus, even in the best-case scenarios of increased offshore generation capacity, transmission infrastructure remains a limiting factor to these facilities becoming operational and connected to energy demand.

To be sure, the current increase in energy demand has pressured utilities to increase generation and transmission, and the Federal Energy Regulatory Commission (FERC) has introduced several dockets to address only some of the challenges facing transmission development.⁴⁸ Additional transmission capacity has been built within the past few years, but it has not been significantly expansive, and most transmission projects constructed since 2020 have been primarily local and intra-regional.⁴⁹ In New York, while some transmission construction projects have improved deliverability, there remain parts of the state "where more renewable energy is produced than can be transmitted to consumers."⁵⁰ New York's central transmission corridor between upstate and downstate is one of the most congested transmission paths, resulting in certain clean energy generation facilities unable to operate at full capacity.⁵¹ Since wind energy production is expected to grow as New York accelerates development to meet the goals of the CLCPA, the ability to construct new

⁴⁷ See Emily Mercer, *National Transmission Analysis Maps Next Chapter of U.S. Grid Evolution*, NAT'L RENEWABLE ENERGY LAB. (Oct. 3, 2024), <https://www.nrel.gov/news/features/2024/national-transmission-planning-study.html> [<https://perma.cc/534F-RXRU>].

⁴⁸ See America's Power, *Challenges to Building Electric Transmission in the U.S.* (Aug. 1, 2024), <https://americaspower.org/challenges-to-building-electric-transmission-in-the-u-s/> [<https://perma.cc/UEA7-DRDU>].

⁴⁹ See *id.*

⁵⁰ See *How Historic Transmission Projects Bridged an Upstate-Downstate Clean Energy Divide*, N.Y. INDEP. SYS. OPERATOR: BLOG (Aug. 27, 2024), <https://www.nyiso.com/-/how-historic-transmission-projects-bridged-an-upstate-downstate-clean-energy-divide> [<https://perma.cc/GC5H-BYNQ>] [hereinafter NYISO, Transmission Projects].

⁵¹ See *id.*

transmission lines remains a limiting factor to the deployment of offshore wind.⁵²

The siting of transmission lines is primarily a state-level responsibility, involving processes to determine the route and obtain necessary permits for construction.⁵³ In New York, transmission projects are overseen by the NY Independent System Operator (NYISO), which is the grid operator for the state.⁵⁴ This process requires “a full review of the need for and environmental impact of the siting, design, construction, and operation of major transmission [projects]” to comply with New York law.⁵⁵ To site transmission in the state, NYISO will first solicit proposals for transmission needs, which are driven by public policy requirements. Next, the New York Public Service commission (NYPSC), working with NYISO, reviews proposed transmission needs, a process which includes a public comment period.⁵⁶ After the need is identified, NYISO requests proposals from qualified developers to evaluate, choosing the most efficient or cost-effective solution.⁵⁷ It is only after these administrative processes are complete that construction may begin. Including the permitting and construction portions of building new transmission, the process can take ten or more years in the U.S., demonstrating that the various regulatory processes create universal connection backlogs.⁵⁸

⁵² See *id.* (“The state’s renewable energy production is expected to grow as we strive to meet the goals of the CLCPA, underscoring the need for enhanced transmission infrastructure to support a changing grid.”)

⁵³ Federal agencies also play a role in this process, particularly for lines crossing federal land or designated National Corridors. See *NYISO’s Role in Evaluating New York’s Policy-Driven Transmission Projects*, N.Y. INDEP. SYS. OPERATOR (Jan. 30, 2024), <https://www.nyiso.com/-/nyisos-role-in-evaluating-new-yorks-policy-driven-transmission-projects> [<https://perma.cc/T42E-LBFN>].

⁵⁴ See *id.*

⁵⁵ See *Article VII: Major Electric and Gas Transmission Facilities*, N.Y. STATE DEP’T OF PUB. SERV., <https://dps.ny.gov/article-vii-major-electric-and-gas-transmission-facilities> [<https://perma.cc/G64Y-XA3T>] (last visited Aug. 4, 2025).

⁵⁶ See NYISO, *Transmission Projects*, *supra* note 53.

⁵⁷ See *id.*

⁵⁸ See Lori Bird & Katrina McLaughlin, *US Clean Energy Goals Hinge on Faster Permitting*, WORLD RESOURCES INST. (Feb. 9, 2023), <https://www.wri.org/insights/clean-energy-permitting-reform-us> [<https://perma.cc/7S6H-U85X>].

The process for siting transmission that spans multiple states or regions, or interregional lines, is even more arduous. With an increase of utility-scale renewable energy,⁵⁹ transmission infrastructure may need to span several states to bring electricity to areas of consumption from more remote areas of generation.⁶⁰ Thus, identifying barriers to interregional transmission is key to unlocking renewable energy growth. One barrier facing construction of this infrastructure is the difficulty associated with multi-state and multi-jurisdictional coordination that is required for transmission lines that traverse large distances, which is characteristic of those required to connect offshore wind facilities to the grid. This problem is due in part to the nature of the grid system in the United States, which was not built as a top-down, systematic network, but rather as a patchwork of separate small-scale grids.⁶¹ Consequently, the system of transmission infrastructure is nowhere near as effective as a planned interconnected grid, capable of deploying energy from multiple generation sources to diverse loads. This unintegrated grid and consequentially reduced capacity to meet energy demand creates inherent inefficiencies. Furthermore, allocating the associated responsibilities and costs between jurisdictions is an arduous task. One commenter analogized the situation to a series of “municipal

⁵⁹ See *Renewable Electricity in New York State*, N.Y. STATE COMPTROLLER 14 (July 2023), <https://www.osc.ny.gov/files/reports/pdf/renewable-electricity-in-nys.pdf> [<https://perma.cc/F2ZG-VUW6>]; see also *Wind Energy*, BUREAU OF LAND MGMT., <https://www.blm.gov/programs/energy-and-minerals/renewable-energy/wind-energy> [<https://perma.cc/3X7Q-CVZQ>] (last visited Aug. 1, 2025) (“utility-scale wind turbines are mounted on towers, some 300 feet or taller. At those heights, the wind is faster and less turbulent. In utility-scale power applications, any number of turbines are connected to the utility grid, generating electricity as the wind turns the blades and turbine”).

⁶⁰ See NAT’L RENEWABLE ENERGY LAB’Y, INTEGRATING VARIABLE RENEWABLE ENERGY INTO THE GRID: KEY ISSUES (May 1, 2015), <https://docs.nrel.gov/docs/fy15osti/63033.pdf> [<https://perma.cc/8CUY-K5SB>]; Zachary Zimmerman, Michael Goggin & Rob Gramlich, *Transmission Projects Ready-to-Go: Progress and Status Since 2021* (Grid Strategies & Americans for a Clean Energy Grid Sept. 2023), https://cleanenergygrid.org/wp-content/uploads/2023/09/ACEG_Transmission-Projects-Ready-To-Go_September-2023.pdf [<https://perma.cc/2KWE-XBY4>].

⁶¹ See Catherine Clifford, *Why It’s So Hard to Build New Electrical Transmission Lines in the U.S.*, CNBC (Feb. 21, 2023), <https://www.cnbc.com/2023/02/21/why-its-so-hard-to-build-new-electrical-transmission-lines-in-the-us.html> [<https://perma.cc/8K3N-5UFJ>].

governments attempting to fund an interstate highway.”⁶² States will want to allocate the costs (including both strict economic costs and distribution of labor) to minimize their respective burdens while maximizing their received benefits from the project. The situation frequently results in state discussions coming to a standstill, with responsibility allocation preventing the process from moving forward, even if the technology is available to be deployed.⁶³ Thus, this patchwork of actors and process creates many points to slow down the rapid transmission buildout New York needs to accommodate offshore wind growth.

In addition to state coordination impediments, economic obstacles have slowed industry investment in construction.⁶⁴ This is due to the increasing cost of building transmission, in part as a result of inflation and uncertainty in ratemaking proceedings, where developers can recoup costs, and financial incentives.⁶⁵ These uncertainties also include the variability of wind conditions and market fluctuations, making the generation aspect uncertain, and the regulatory and policy shifts (like changes to federal financial incentives and imposition of tariffs on component parts) making the capital contribution portion uncertain.⁶⁶ The immense scale of required additional transmission infrastructure is demonstrated by the fact that investor-owned utilities and transmission companies plan to invest approximately \$198 billion nationwide during 2020–2026, which is not enough.⁶⁷ FERC, for example, has attempted to facilitate the allocation of transmission costs through Order 1920, but without siting and permitting reforms, this improved cost allocation will not help build transmission to the required capacity.⁶⁸

Relatedly, the lack of transmission capacity and slow processing times have exacerbated the problem of grid interconnection

⁶² *See id.*

⁶³ *See id.*

⁶⁴ *See America's Power*, *supra* note 48.

⁶⁵ *See id.*

⁶⁶ Montel Energy, *Evolution of Navigating Risk Management in Renewable Energy*, Montel (May 7, 2024), <https://montel.energy/resources/blog/evolution-of-navigating-risk-management-in-renewable-energy> [https://perma.cc/F775-3KTP] (last visited Aug. 1, 2025).

⁶⁷ *See America's Power*, *supra* note 48.

⁶⁸ *See id.*

delays for newly operational renewable generation projects. Now, more than 2,200 GW of generating capacity sits available in interconnection queues, with renewables, battery storage and hybrid facilities comprising 90% of this queued capacity.⁶⁹ The long wait time for interconnection is illustrated by the increase in solar and wind development following federal incentives from the Inflation Reduction Act, as well as the congested permitting process resulting from a large number of smaller scale renewable facilities seeking connection.⁷⁰ This problem will continue to worsen as more projects are constructed if left unaddressed. In fact, the backlog of new power generation projects seeking transmission connection continues to grow; the total capacity waiting for connection is eight times larger now than in 2014, and developers may not have the resources to wait in the queues.⁷¹ When proposed projects are slowed down by uncertain linkage processes, most requests to interconnect to transmission are ultimately cancelled and withdrawn.⁷² FERC has attempted to address this issue by adopting major interconnection reforms in 2023, but these policies have not yet taken effect in most regions, and developers continue to name connection to the grid as a leading cause of delay.⁷³ Since long queues can force developers to cancel projects, the interconnection problem is particularly concerning for offshore wind.⁷⁴

Transmission infrastructure, or more accurately the lack thereof, is a serious barrier to developing offshore wind energy projects in time to meet renewable goals. Even when generation projects are sited, permitted, and built, powering a state with this clean energy is only possible if transmission is available and interconnection occurs.

⁶⁹ *See id.*

⁷⁰ *See id.*

⁷¹ *See* Lawrence Berkeley Nat'l Lab., *Grid Connection Backlog Grows by 30% in 2023, Dominated by Requests for Solar, Wind, and Energy Storage*, ENERGY MARKETS & POLICY (Apr. 10, 2024), <https://emp.lbl.gov/news/grid-connection-backlog-grows-30-2023-dominated-requests-solar-wind-and-energy-storage> [<https://perma.cc/3FQ5-HS4D>].

⁷² *See id.*

⁷³ *See id.*

⁷⁴ *See id.*

C. Economic Challenges

Financing is an important part of developing offshore wind projects. The largest share of these costs result from upfront capital expenditures required to get the project operational such as the turbine parts, machinery, and electrical equipment.⁷⁵ These capital expenditures must be paid for before revenues from the actual energy generation are received, and financing through debt (loans) and equity (⁷⁶ the project) each add to the cost through interest and lost revenue share in the future.⁷⁶ Since substantial expenditures occur early in the process, the oscillation of policy attitudes towards offshore wind makes the future of these projects uncertain and increases the risk for investors, discouraging financial support. As discussed, the OBBBA terminated one of the major provisions of the IRA—tax credits for wind projects—that previously made investment more attractive, an absence which will amplify existing economic challenges. While interconnection delays create economic disincentives for offshore wind, the high upfront costs of offshore wind, especially when the legal rights and obligations of involved actors continue to change with presidential administrations, hinder its development. So instead of viewing offshore wind projects as investments, developers may view them as gambles amidst a shifting legal context and increasing future uncertainty.

D. Public Opposition

Another private sector hurdle to offshore wind development includes public opposition to these projects, both at the industry and community levels. Since offshore wind, and renewable energy more generally, can capture market shares from fossil fuel companies, it is not a surprise that actors within the traditional power industry have taken hostile approaches to offshore wind. In addition to classic forms of opposition like lobbying, there is evidence that the fossil fuel industry has funded misinformation campaigns about renewable energy, beginning in at least 2019.⁷⁷ A nationwide campaign

⁷⁵ See Tyler A. Hansen et al., *Five Grand Challenges of Offshore Wind Financing in the United States*, 107 *Energy Research & Soc. Sci.* 103329 (2024), <https://doi.org/10.1016/j.erss.2023.103329>.

⁷⁶ See *id.*

⁷⁷ See Mariel Lutz & Jenny Rowland-Shea, *The Oil and Gas Industry Is Behind Offshore Wind Misinformation*, *CTR. FOR AM. PROGRESS* (Dec. 11, 2023),

was developed against offshore wind using misinformation and obstruction, causing misinformation to become prevalent in the Northeast where the wind energy economy is accelerating and turbines are being installed.⁷⁸ For example, in Delaware, an op-ed published in a Delaware newspaper using misinformation and describing offshore wind as an “environmental wrecking ball,” was written by the director of an energy and environmental policy center that received thousands of dollars in donations from fossil fuel companies.⁷⁹ As a result, where local communities have concerns about offshore wind construction, these questions are being answered in an inflammatory manner by fossil-fuel serving organizations.⁸⁰ Community resistance to offshore wind generation poses a challenge to its development in New York since the procedure for siting transmission requires a public hearing be held.⁸¹ Consequently, projects with robust community opposition may face challenges in timely receiving the required approval certificate to begin the construction process.

Offshore wind development faces considerable resistance from local communities who oppose changes to their communities due to impacts on property value and other perceived negative effects—a mentality referred to as Not in My Backyard (or NIMBY).⁸² Some individuals object to proposed offshore wind projects because of the impact on the aesthetic value of the seascape and obstruction along the horizon.⁸³ Since 2015, 360 communities nationwide have rejected or restricted wind projects due to the perceived community harms such as lowered property values or interrupted views, and 55 communities have enacted ordinances that prohibit the installation

<https://www.americanprogress.org/article/the-oil-and-gas-industry-is-behind-offshore-wind-misinformation/> [<https://perma.cc/FZZ3-6B8B>].

⁷⁸ *See id.*

⁷⁹ *See id.*

⁸⁰ *See id.*

⁸¹ *See* N.Y. PUB. SERV. LAW § 123 (McKinney 2025).

⁸² *See NIMBYism Defined*, U.S. DEP’T OF HOUS. & URB. DEV., <https://www.hudexchange.info/resources/nimbyassessment/?nimbyassessmentaction=main.dspnimbydefined> [<https://perma.cc/B4X6-GYYW>] (last visited Dec. 19, 2025).

⁸³ Noah Hallward-Rough, *Addressing NIMBYism in Offshore Wind Development*, SUBSTACK (Dec. 5, 2024), <https://cskrosinsky.substack.com/p/addressing-nimbyism-in-offshore-wind> [<https://perma.cc/AE2X-X7C6>].

of large wind facilities.⁸⁴ This problem is exacerbated by the fact that coastal communities who will see the wind turbines from the shore are often the wealthiest residents and have the resources and political power to oppose these projects, and New York is no different. These individuals may include summer residents who impede the development of energy projects and consequently block the benefits that the offshore wind can bring to the community as a whole.⁸⁵

Communities may also oppose development of local offshore wind generation facilities because of a belief that renewable energy generation leads to increased electricity bills. The impact on energy prices of renewable generation is not yet clear since there have been substantial changes and conflicting reports of price. One study analyzing electricity prices in the European Union found that deployment of renewables corresponds to greater electricity bills for households, and this has led voters to oppose renewable policies.⁸⁶ However, another report from the United States argues clean energy generation like wind and solar experience lower rate increases, and that the main drivers of price increases include climate-change driven impacts of wildfires, natural gas price volatility, and transmission and distribution costs rising faster than inflation.⁸⁷ Moreover, the report finds that states with high wind and solar generation percentages (including New Mexico, Iowa, and Oklahoma) have experienced the lowest rate increases.⁸⁸ Nonetheless, communities still oppose development to these projects' potential to increase prices, whether or not this belief is misguided.

⁸⁴ See "NIMBY" May Hurt Biden's Green Transition, INST. FOR ENERGY RSCH. (June 7, 2023), <https://www.instituteforenergyresearch.org/renewable/nimby-may-hurt-bidens-green-transition/> [<https://perma.cc/WVY2-L9X2>].

⁸⁵ See Noah Hallward-Rough, *supra* note 83.

⁸⁶ See Michaël Aklin, *Do High Electricity Bills Undermine Public Support For Renewables? Evidence From The European Union*, 156 ENERGY POL'Y 112400 (Sept. 2021), <https://doi.org/10.1016/j.enpol.2021.112400> [<https://perma.cc/EC2C-B38K>] (analyzing EU countries since they offer relatively homogenous data sources, but argues the findings should be applicable to other regions).

⁸⁷ See Brendan Pierpoint, *Clean Energy Isn't Driving Power Price Spikes*, ENERGY INNOVATION (Oct. 3, 2022), <https://energyinnovation.org/report/clean-energy-isnt-driving-power-price-spikes/> [<https://perma.cc/E22U-93VT>].

⁸⁸ See *id.* at 7–8.

In addition to NIMBY issues stemming from perceived aesthetic harm and increased costs, public concern exists from communities where land acquisition for transmission pathways is required. To connect energy consumers with generating facilities, transmission infrastructure will often require crossing private land, especially for utility-scale renewable generation projects that frequently produce electricity farther away from where it is needed. When a utility company prepares a route for a transmission line that must cross private land, they negotiate with the private landowner for this permission, often in the form of an easement.⁸⁹ However, “[t]here is no standard system for landowner negotiations for [transmission] rights-of-way” as the projects will be subject to varying state and local regulations, and may also depend on the developer.⁹⁰ Obtaining these permissions commonly occurs in a patchwork of easements with many landowners, and the process inherently introduces delays, especially in the case of an uncompromising property owner.⁹¹ After a transmission developer receives initial approval, they must research the property, contact each landowner, survey and appraise the land, and negotiate an easement with an offer for compensation after the owner is given sufficient time to consider the options.⁹² Sometimes, a negotiated settlement cannot be reached, and in certain states⁹³, developers can pursue acquisition by eminent domain, which further slows development with adjudication.⁹⁴ Thus,

⁸⁹ See Ackerman & Ackerman, P.C., *Transmission Lines and Eminent Domain: What Property Owners Need to Know*, JD SUPRA (Nov. 30, 2023), <https://www.jdsupra.com/legalnews/transmission-lines-and-eminent-domain-7806726/> [<https://perma.cc/Z43X-PL9U>].

⁹⁰ See Alison Berry, *Getting Right-of-Way Right: Landowner Compensation for Electric Power Transmission Rights-of-Way 2* (Lincoln Inst. Land Pol’y, Working Paper WP13AB1 2024), https://www.lincolnst.edu/app/uploads/2024/04/2335_1675_Berry_WP13AB1.pdf [<https://perma.cc/7ZTT-JA64>].

⁹¹ See *id.* at 1, 5–7.

⁹² See *id.* at 3.

⁹³ See e.g. New York, “Any corporation authorized to do business in this state and engaged in the production, sale and distribution of heat, light or power to the public may exercise the right of eminent domain pursuant to the provisions of the eminent domain procedure law to acquire property necessary for the construction of transmission lines for such heat, light and power, when necessary for such sale and distribution to the public.” N.Y. ENV’T CONSERV. LAW § 15-1731 (Consol. 2025).

⁹⁴ See Alison Berry, *supra* note 90, at 3.

in addition to the permitting and technical limitations preventing buildout of transmission infrastructure, developers must also contend with local politics and individual landowners before development can begin.

Added to the hostile federal policy landscape and transmission infrastructure challenges, public opposition also poses a barrier to offshore wind generation. The realities of individual landowner negotiation, local communities' NIMBY resistance, and high cost of investment without certain positive returns all weigh against increased development of this generation technology at a time when accelerated construction is essential in New York.

III. POTENTIAL SOLUTIONS TO OFFSHORE WIND DEVELOPMENT CHALLENGES IN NEW YORK

Despite the significant challenges that stand in the way of swift deployment of offshore wind energy in New York, there are potential solutions that the state can leverage to continue progress towards its CLCPA goals. To help combat federal antagonism to offshore wind, New York can take steps at the state and local levels to support development, including collaboration with the private sector and neighboring states. New York can improve the efficiency of its existing transmission and grid infrastructure to decrease interconnection queues when renewable projects become operational. Further, to address private sector challenges including NIMBY opposition, New York can prioritize community engagement and strengthen economic incentives in the face of rising project costs. While these solutions may not completely overcome the challenges facing offshore wind development, they can keep New York heading in the direction of decarbonization.

A. Regional, State, and Local Policy Initiatives Despite Lack of Federal Leadership

New York can maintain its progress towards its CLCPA goals by continuing to enforce the Act's broader goals. New York has powerful existing laws that can ensure progress of offshore wind development in the right direction, as evidenced by previous victories invoking the CLCPA. In Astoria, Queens, the Act was successfully leveraged to block a gas plant proposal deemed incompatible with the Act's climate provisions, which created an opportunity for the applicable land to be sold and repurposed as a substation to

connect an offshore wind facility.⁹⁵ While there are opportunities to pass new legislation and regulations that target specific challenges, it is imperative that New York utilize its existing state laws to defend its climate goals and progress towards a renewable grid, despite the constraints imposed by the federal government.

New York can also engage its relationships and common purpose of developing renewable energy generation with other states in the region, strengthening its position through coordination and resulting synergistic effects. Regional collaboration between New York and other Northeast coastal states for offshore wind development would be mutually beneficial and provide substantial benefits as compared to an “every state for itself” approach.⁹⁶ This collaboration could include consolidating onshore connection points, forming an offshore grid through connecting projects, and jointly developing large-scale requisite infrastructure such as ports and vessels needed for the offshore industry.⁹⁷ Although there would be upfront investment required to achieve a coordinated offshore wind plan, the resulting outcomes would be less expensive for governments, developers, and customers in the long term.

For instance, regional collaboration for transmission has been successfully tested in Europe where several North Sea countries have developed “joint projects” connecting the nation’s grids.⁹⁸ Through a regional organization, the governing body is developing joint projects that “combine offshore wind generation and major transmission infrastructure to facilitate power sharing between national grids.”⁹⁹ In fact, three states in New England (Massachusetts, Rhode Island, and Connecticut) already have a plan to “jointly procure offshore wind power” to “achiev[e] economies of scale” to

⁹⁵ See Jessica A. Knoblauch, *How We Helped an NYC Community Say No to a Dirty Gas Plant and Get Wind Power Instead*, EARTHJUSTICE (Mar. 31, 2023), <https://earthjustice.org/article/how-we-helped-an-nyc-community-say-no-to-a-dirty-gas-plant-and-get-wind-power-instead> [perma.cc/827K-Y374].

⁹⁶ See Sam Schacht, *A Case for Regional Collaboration among States in the New Offshore Wind Economy*, CLEAN ENERGY STATES ALL (Aug. 30, 2023), <https://www.cesa.org/regional-collaboration-offshore-wind/> [https://perma.cc/V6DE-EL76].

⁹⁷ See *id.*

⁹⁸ See *id.*

⁹⁹ See *id.*

lower prices.¹⁰⁰ Similarly, New York has previously announced its commitment to collaborate with New Jersey and BOEM in offshore wind supply chains and workforce development,¹⁰¹ but there still remains an opportunity to move a step further and join the other New England states in joint procurement. These regional collaborations would allow states to pool their financial and infrastructure resources to limit redundancies and decrease construction costs.¹⁰² This would help accelerate offshore development as there could be less permitting, building, and transmission required for the same amount of generation capacity.

In addition, New York could collaborate with industry partners in the private sector through industrial hubs aimed at innovating, manufacturing, and deploying clean energy solutions. This type of partnership is not unprecedented, as certain green technology hubs (for hydrogen and direct air capture) were included in the Bipartisan Infrastructure Law and could provide similar benefits for offshore wind energy development.¹⁰³ For example, developing supply chain roadmaps alongside industry actors to incorporate regional cooperation could lower costs associated with this buildout.¹⁰⁴

Even absent federal leadership, New York is not alone in its transition towards clean energy generation. By leveraging existing laws like the CLCPA and collaborating with similarly-situated states, New York can reduce costs of building offshore wind. This mutualistic relationship could accelerate generation timelines and strengthen regional planning efforts.

B. Improving Transmission and Grid Infrastructure

Instead of relying solely on new construction, New York can meet the connection demand of new wind generation projects by strengthening and revitalizing existing infrastructure. With investment in grid-enhancing technologies (GETs) and improved

¹⁰⁰ See Allegra Dawes, *Where Does U.S. Offshore Wind Go from Here?*, CTR. FOR STRATEGIC & INT'L STUD. (Oct. 27, 2023), <https://www.csis.org/analysis/where-does-us-offshore-wind-go-here> [<https://perma.cc/VH2J-ZFJ9>].

¹⁰¹ See *id.*

¹⁰² See *id.*

¹⁰³ See *id.*; Infrastructure Investment and Jobs Act, H.R. 3684, 117th Cong. §§ 40308, 40314 (2021) (enacted).

¹⁰⁴ See Dawes, *supra* note 100.

transmission regulatory processes, New York can increase its share of wind generation capacity without requiring large scale buildout of additional infrastructure.

As the queue of operational projects awaiting grid connection bottlenecks generating capacity, New York can implement certain GETs to decrease wait times and increase transmission capacity without new lines. GETs include hardware and software components incorporated into existing infrastructure to increase power transmission by improving efficiency and capacity.¹⁰⁵ A study conducted of the Southwest Power Pool grid in Kansas and Oklahoma found that GETs could lead to twice the amount of new renewable generation sources to be integrated to the grid, higher revenues, decreased carbon emissions, and annual production cost savings.¹⁰⁶

In addition to the increase in grid integration of offshore wind projects, implementation of these technology solutions can also save costs, which is a priority for New York amid high rates for the two offshore projects currently under construction. In Kansas and Oklahoma, the investments in grid-enhancing technologies were fully recouped within approximately 0.5 years, with an estimated annual cost savings of \$175 million.¹⁰⁷ While these exact savings and timeframes may not occur in New York, the addition of GETs that are proven to increase wind generation integration in another region is an attractive solution to both high costs of projects and interconnection backlogs.

In addition to physical improvements to transmission, New York could consider harmonizing its transmission permitting with neighboring states and federal requirements. This would allow

¹⁰⁵ See Office of Elec., *Grid-Enhancing Technologies: From R&D to Reality*, U.S. DEP'T OF ENERGY (Oct. 20, 2023), <https://www.energy.gov/oe/articles/grid-enhancing-technologies-rd-reality> [perma.cc/NRL9-F7WX].

¹⁰⁶ See THE BRATTLE GROUP, UNLOCKING THE QUEUE WITH GRID-ENHANCING TECHNOLOGIES 10 (2021), https://lpdd.org/wp-content/uploads/2021/02/Brattle__Unlocking-the-Queue-with-Grid-Enhancing-Technologies_Final-Report_Public-Version.pdf90.pdf [https://perma.cc/7XBH-RQAK]. The GETs considered were both hardware and software solutions: hardware includes Dynamic Line Ratings on 56 transmission lines to calibrate and Advanced Power Flow Control for 8 locations to help the operator control flow, while software solutions include Topology Optimization reconfigurations, which automatically finds reconfigurations to reroute flow around transmission congestion. *See id.* at 19, 21.

¹⁰⁷ *See id.* at 11.

streamlined permitting of interregional transmission lines connected to offshore wind generation by eliminating disjoint or incompatible variations between state permitting processes, as this is often the cause of long timelines for interstate projects.¹⁰⁸ FERC has also attempted to increase capacity of existing transmission infrastructure through regulatory reforms. Under FERC's Order 2222 issued in 2020 (and updated in 2021), energy generated by distributed energy resources (DERs)¹⁰⁹—which often include renewable generation like wind—can be better integrated into the electricity market run by regional grids.¹¹⁰ Since DERs are smaller-scale generators, Order 2222 aims to facilitate participation in the market by aggregating the output of multiple DERs into a bundled size sufficient for direct participation.¹¹¹ Although interstate connection is currently challenging, this order novelly encourages cooperation between different regional and local developers for energy generated by DERs which include renewables.¹¹² For New York, the state can leverage an increased ability to cooperate with neighboring states that Order 2222 makes possible, allowing for synergistic co-development of renewable DERs.

Most notably, FERC adopted Order 2023 in July 2023 which introduces required reforms to interconnection procedures including utilizing cluster (first-ready) rather than a serial (first-come) approach, heightened requirements to enter the queue, and stricter

¹⁰⁸ See Nicole Pavia, Johan Cavert & Federico Holm, *Beyond NEPA: Understanding the Complexities of Slow Infrastructure Buildout*, CLEAN AIR TASK FORCE (Aug. 1, 2024), <https://www.catf.us/2024/08/beyond-nepa-understanding-complexities-slow-infrastructure-buildout/> [perma.cc/A8KQ-TP6N].

¹⁰⁹ See *FERC Order No. 2222: Fact Sheet*, FED. ENERGY REGUL. COMM'N (Sept. 28, 2020), <https://www.ferc.gov/media/ferc-order-no-2222-fact-sheet> (“DERs are small-scale power generation or storage technologies (typically from 1 kW to 10,000 kW) that can provide an alternative to or an enhancement of the traditional electric power system.”).

¹¹⁰ See *FERC Order No. 2222 Explainer: Facilitating Participation in Electricity Markets for Distributed Energy Resources*, FED. ENERGY REGUL. COMM'N (Sept. 25, 2025), <https://www.ferc.gov/ferc-order-no-2222-explainer-facilitating-participation-electricity-markets-distributed-energy> [https://perma.cc/CQ5V-7YFN].

¹¹¹ See *id.*

¹¹² See *id.*

timelines and penalties.¹¹³ Though Order 2023 is a step towards increasing efficiency for interconnection, implementation across the United States has not yet been achieved.¹¹⁴ New York could expedite transmission permitting and implement FERC's Order 2023 in a similar manner to California's, which passed a law allowing transmission projects to qualify for special project status that requires state agencies to resolve environmental review of a proposal, to the extent feasible, within 270 days.¹¹⁵ New York could adopt a similar law placing stricter timelines on environmental review of transmission for offshore wind energy projects.

C. *Economic Incentives and Community Engagement*

Confronting community opposition does not require New York to pass new laws or require intensive overhauls of the current offshore wind system. Instead, the primary solution to addressing community concerns and NIMBY resistance is early community engagement and genuine involvement of affected members in the decision-making process.

In the past, offshore wind development has followed a top-down approach whereby projects are sited, permitted, and approved, with local communities included as an afterthought, and with the expectation of their support.¹¹⁶ However, to assure fairness and equity in offshore wind development, the procurement process must include public consent.¹¹⁷ Investing time and resources into early

¹¹³ See Joseph Rand, *Grid Connection Backlog Grows by 30% in 2023, Dominated by Requests for Solar, Wind, and Energy Storage*, ENERGY MKTS. & PLAN. BERKELEY LAB (Apr. 10, 2024), <https://emp.lbl.gov/news/grid-connection-backlog-grows-30-2023-dominated-requests-solar-wind-and-energy-storage> [https://perma.cc/4ATZ-R93V].

¹¹⁴ See *id.*

¹¹⁵ See S.B. 619, 2023–2024 Leg., Reg. Sess. (Cal. 2023), https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=202320240SB619 [https://perma.cc/EK3H-TR5J].

¹¹⁶ See *id.*; Jessica Reilly-Moman, *Distilling the Key Factors That Drive Social Acceptance of Ocean Renewable Energy* (Aspen Global Change Institute June 2022), <https://www.agci.org/research-reviews/why-people-support-or-oppose-offshore-wind-distilling-the-key-factors-that-drive-social-acceptance-of-ocean-renewable-energy-2> [https://perma.cc/E9W4-P5JN].

¹¹⁷ See Lia Yoo, *Strategies for Stakeholder Engagement for Offshore Wind*, MEDIUM (Jan. 9, 2025), <https://medium.com/@celions/strategies-for-stakeholder-engagement-for-offshore-wind-ba8cf69da342> [https://perma.cc/7NNA-T3V9].

engagement of local stakeholders can transform potential opposition into informed support for a project, which can facilitate project development and create stronger community partnerships.¹¹⁸ Meaningful and early community engagement, where stakeholders participate in decision-making processes, can increase trust between governments, developers, and communities.¹¹⁹

Another possible response to community opposition of offshore wind projects is implementation of community benefit plans, which allow communities facing new infrastructure projects to negotiate with the developers for compensation or other consideration.¹²⁰ These plans are made possible both by the Bipartisan Infrastructure Law and Inflation Reduction Act and allow communities bearing the costs of these projects to receive a direct benefit in exchange for their tolerance of the project.¹²¹

CONCLUSION

There are significant challenges standing between New York's accomplishment of its offshore wind goals contained in the CLCPA, which is only a fraction of the effort needed to achieve deep decarbonization nationwide. These barriers include direct prevention from the federal government, insufficient technology and infrastructure as limiting factors, reduced economic incentives among higher costs, and community opposition. However, New York can leverage legal and policy solutions to lessen the impact of these hurdles. It can utilize state and local laws prioritizing renewables absent federal support, deploy grid-enhancing technology to lessen the strain on built infrastructure, and engage communities to turn public and private opposition into support. Though no potential solution alone can erase the barriers to a fully developed offshore wind generation, in combination, New York has a chance.

¹¹⁸ *See id.*

¹¹⁹ *See id.*

¹²⁰ *See* Noah Hallward-Rough, *supra* note 83.

¹²¹ *See* Noah Hallward-Rough, *supra* note 83.

