March 2025

Competitive Power Benefits for New Yorkers

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Updated March 27, 2025

Abbreviations

Table 1: Abbreviations Used in Report

Abbreviation	Full Phrase
CapEx	Capital Expenditure
CES	Clean Energy Standard
CHGE	Central Hudson Gas & Electric
CLCPA	Climate Leadership and Community Protection Act
ConEd	Consolidated Edison Company of New York
FERC	Federal Energy Regulatory Commission
GHG	Greenhouse Gas
GW	Gigawatt
IO	Input-Output
IPP	Independent Power Producer
IRP	Integrated Resource Planning
MWh	Megawatt-hour
NERC	North American Electric Reliability Corporation
NG	Niagara Mohawk Power Corporation d/b/a National Grid
NREL	National Renewable Energy Laboratory
NYSDPS	New York Department of Public Service
NYSPSC	New York Public Service Commission
NYISO	New York Independent System Operator
NYPA	New York Power Authority
NYSEG	New York State Electric & Gas
NYSERDA	New York State Energy Research and Development Authority
O&R	Orange and Rockland Utilities
PILOT	Payment in Lieu of Taxes
PPTN	Public Policy Transmission Need
REV	Reforming the Energy Vision
RG&E	Rochester Gas & Electric
RPS	Renewable Portfolio Standard
RTO	Regional Transmission Organization
VMP Policy	Vertical Market Power Policy
WACC	Weighted Average Cost of Capital

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Executive Summary

The restructuring of the electric industry has provided measurable benefits to electric ratepayers in the U.S. However, parties in New York are again advancing the notion that the state should allow investor-owned utilities ("utilities") to rate-base new generation investments, in this case, to support the achievement of the state's clean energy mandates.

In this paper, FTI examines the history of electric sector restructuring in New York and the benefits that private generation ownership has provided and continues to provide to the state. We find that utilities would be unable to supply new generation in New York at a lower cost or on a faster timeline than private developers. Instead, our analysis reveals that:

- The transition to a competitive market has provided significant benefits to New York ratepayers and advanced the goals originally envisioned by state policymakers. New York Public Service Commission ("NYSPSC") decisions supporting private ownership of electric generation have already protected New York ratepayers from cost overruns.
- Full or partial return to utility-owned generation would expose New York ratepayers to increased risk and higher development costs. New York utilities have a track record of cost overruns for the portions of the grid they control and have passed or attempted to pass cost increases onto captive ratepayers.
- New York utilities must already make significant investments into the transmission system to support clean energy projects, which is impacting their ability to raise capital, undercutting the notion that they can finance new renewable expansion at more favorable terms and prices than private developers.
- New York has fallen short of its ambitious renewable goals not because of insufficient developer interest in building new generation, but due to challenges created by local opposition, cost inflation, and insufficient investment into the transmission system.
- Utilities in New York face the same development process and timelines as Independent Power Producers ("IPPs"). Full or partial return to utility ownership would provide no relief from concerns about long project development timelines in the context of meeting the Climate Leadership and Community Protection Act's ("CLCPA's") targets and mandates.
- States, including New York, with majority IPP ownership have exhibited more rapid deployment of renewables and emission reductions than utility-dominated states.
- Competitive generation owners have been economic partners in New York for decades, supporting thousands of jobs and billions in state and local taxes.

Competitive suppliers are incentivized to complete projects on time and at the lowest cost. Utilities do not have such incentives and can often pass the expense of delays and cost overruns on to captive ratepayers. Further, New York utilities must make massive investments to build the transmission and distribution ("T&D") infrastructure necessary to support load growth and clean energy policies.

Competitive electricity markets with private, independently-owned generation have lowered electricity costs for New Yorkers and delivered tangible progress towards environmental targets. The New York Independent System Operator ("NYISO") has already taken actions to address the critical roadblocks that have slowed project development. Utilities should continue to focus on developing the critical investments in T&D infrastructure needed to advance New York's ambitious climate vision.

New York utilities have acknowledged their challenges raising capital to meet the required transmission expansion. Adding generation asset investments will further stress utilities' strained financial situations and increase costs for New York ratepayers. Additionally, allowing utility-owned generation could slow progress towards meeting the state's overall energy needs and achieving clean energy goals by chilling market participation.

Introduction

For over 25 years, IPPs in New York's electricity market have delivered significant benefits to consumers through lower power costs, declining emissions, and economic growth. Private developers will continue to be critical partners for achieving the state's ambitious climate and renewable development mandates over the next 25 years, while meeting growing demand for electricity.

Progress towards meeting the state's climate ambitions has been slower than desired, despite consistently high private developer interest in development of new renewables, driven by factors including supply chain constraints, inflationary pressures, and transmission system bottlenecks. At the end of 2024, projects representing nearly 75 gigawatts ("GW") of renewable generation capacity were active in the NYISO Interconnection Queue, more than double the 2025 forecast peak load in New York.[1,2] In comparison, approximately only 1 GW of renewable generation capacity reached commercial operation in 2024 and just 1.5 GW more is expected to connect in 2025.[3]

The recent pace of renewable energy development in New York has led some parties to propose an expanded role for utilities in the development of new generation resources. The issue of utility-owned generation in New York has been considered multiple times in the years following restructuring, and the idea has been dismissed apart from two unique circumstances. These are state-owned assets developed by the New York Power Authority ("NYPA") and batteries owned and operated by utilities to provide T&D services in lieu of new wires infrastructure. The latter is still being studied to determine its impact on wholesale markets, even without the ability to bid these assets directly into them.

Over the last several years, legislators and public utilities in New York have attempted to revive this idea, suggesting that utility ownership of generation assets could increase the pace of renewable build out in New York. Recent utility-sponsored analysis has also been used to suggest that utility-owned generation could benefit New York ratepayers in some cases downplaying the risk that customers will bear higher costs, despite showing that ratepayers would bear higher costs for utility-owned renewables in more than 80% of scenarios studied.[4,5]

The NYSPSC previously found that a return to utility ownership of generation assets would discourage investment from private developers in the competitive market and distract from utilities' primary focus of enhancing and reliably operating the T&D system. The Commission's finding was that utility ownership of generation assets has anti-competitive consequences, and the Commission and market participants have generally agreed that restructuring in New York has led to a "healthy balance" between a strong competitive market and allocations of project risk.[6]

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[1] Lawrence Berkeley National Lab, *Queued Up: Characteristics of Power Plants Seeking Transmission Interconnection* (link)
[2] NYISO, *2024 Gold Book* (link)
[3] EIA, Form 860 Electricity Data (link)
[4] Private ownership delivered lower development costs than utility-owned generation in 30 out of 36 scenarios analyzing a range of project finance, economic, and operational assumptions.
[5] Celebi, M et al. The Brattle Group. *Utility Ownership of New Renewables in New York State* (link)
[6] NYSDPS and NYSERDA, *Draft Clean Energy Standard Biennial Review* (link)

Scope and Coverage of Study

This study evaluates publicly available information from state and federal agencies such as the NYISO, the NYSPSC, and the Federal Energy Regulatory Commission ("FERC") to show the economic and environmental benefits that IPP generation has delivered for New York State. The study also examines the challenges that New York utilities already face in developing T&D infrastructure to support the clean energy transition. Finally, the study weighs the potential risks of utility-owned generation in the state and assesses the validity of arguments for a return to utility-owned generation assets.

The full names of utilities are abbreviated in this report as described in Table 2. When referring to the utilities included here, we will use the term "New York Utilities."

Table 2: New York Utilities Abbreviations

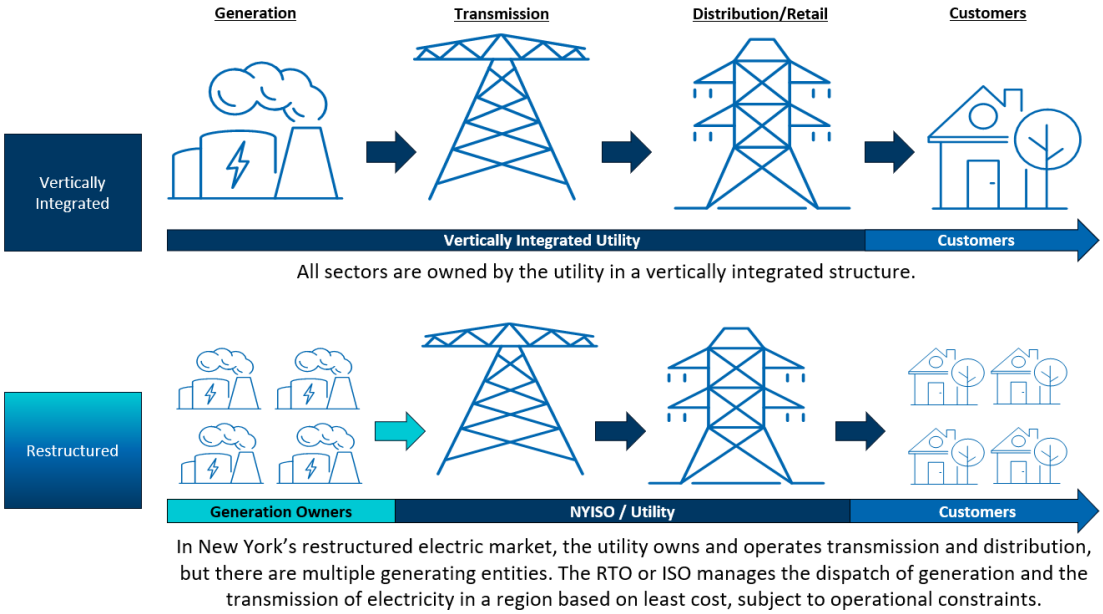
Abbreviation	Company Name
New York Utilities	All utilities defined below
NYSEG	New York State Electric & Gas
RG&E	Rochester Gas & Electric
ConEd	Consolidated Edison Company of New York
CHGE	Central Hudson Gas & Electric
O&R	Orange and Rockland Utilities
NG	Niagara Mohawk Power Corporation d/b/a National Grid

Competitive Generation Ownership Benefits New Yorkers

Electricity Market Structures

Power systems are made up of three primary components: generation, transmission, and distribution. Power plants generate electricity, transmission lines carry the electricity over long distances, and distribution lines deliver electricity directly to consumers. Vertically integrated utilities operate as monopoly owners of all three systems, meaning customers have only one provider. Under the vertically integrated market structure that existed in New York before restructuring, utilities served as state-approved monopolies and sought state approval to invest in new power plants through an integrated resource planning ("IRP") process.[7] Once the state regulator approved generation investments, the utility's cost recovery and guaranteed return on capital were underwritten by customers, who ultimately bore the financial risk of generating assets failing to recover their costs or failing to be completed.

Figure 1: Vertically Integrated Structure vs. Restructured Electricity Markets



In New York's competitive markets, public utilities largely divested their generation and have been prohibited from owning and building new generation. Generators are now developed and owned by private companies that recover their costs through competitive wholesale electricity markets, rather than through regulated cost-of-service rates that applied to utility-owned generation prior to restructuring.[8] Within wholesale markets, independent regional transmission organizations ("RTOs") replaced utilities as grid operators, managing wholesale transactions.[9] Under competitive

[7] For utility-owned portions of electric service, state regulators oversee customer rates, ensuring they cover a utility's operational and investment costs, along with a reasonable return. The cost of generation and purchased power is passed on to customers, but utilities do not typically earn a rate of return on these pass-through costs for competitive wholesale generation portions of electric service.

[8] Transmission in New York may also be privately-owned.

[9] Independent System Operators ("ISOs") and RTOs allow for competition at the wholesale (generation) level but do not necessarily require utility divestiture of generation. While all restructured states are in ISOs/RTOs, not all states in ISOs/RTOs are restructured.

markets, utilities and other load-serving entities purchase electricity at market-driven prices and sell the electricity to ultimate end-users.

IPPs compete in wholesale markets, leading to lower prices and reducing the power supply costs passed on to ratepayers by utilities. Unlike vertically integrated utilities, which rely on rate-based utility investment decisions, IPPs compete and bear the risk of cost overruns and uneconomic investments. Generation owners in these markets are not reimbursed by ratepayers for their investments, which shifts cost risks away from customers to private generation owners.

Following restructuring in New York, utilities retained T&D infrastructure but began purchasing electric energy and other products[10] from wholesale markets. On a typical New York State residential bill, the costs of procuring generation from the competitive wholesale market are included as "Supply" charges, while the costs that utilities recover such as T&D investments and operations expenses are included in "Delivery" charges (see Figure 2). Over the last 10 years, supply charges have accounted for approximately one-third of an average customer's total bill in New York, a proportion that has remained stable year to year.

Figure 2: Sample New York Residential Bill - Orange and Rockland

Your electric breakdown (Rate: ELECTRIC RESIDENTIAL WITH WATER HEATING)

Meter detail - billing period from Jan 21, 2022 to Feb 18, 2022 (28 days)

Meter #	New Reading	Reading Type	Date	Prior Reading	Reading Type	Date	Reading Difference	Multiplier	Total Usage
701145425	38180	Actual	Feb 18	37465	Actual	Jan 21	715	1	715 KWH

Your Supply Charges

Merchant Function Chg 715 KWH @ 0.49000¢	3.50
Government surcharges - Delivery	.07
Total merchant function charge	**$3.57**
Forecast Mkt Sup Chg 715 KWH @ 8.26800¢	59.12
Mkt Supply Chg Adj 715 KWH @ -1.70300¢	-12.18
Government surcharges - Commodity	.03
Total Price For Elec Supply 6.569¢ Avg	
Total electric supply charges	**$46.97**

Competitive Wholesale Markets

Your Delivery Charges

Basic Service Charge	$19.50
First250 KWH @ 8.711¢ each	21.78
Next 250 KWH @ 8.711¢ each	21.78
Next 215 KWH @ 8.711¢ each	18.73
Energy Cst Adj 715 KWH @ 0.31100 ¢	2.22
EVMR Surcharge 715 KWH @ 0.00900¢	.06
RDM Adjustment 715 KWH @ -0.80907 ¢	-5.78
Transition Adj Chg 715 KWH @ -0.02600¢	-.19
SBC Chg 715 KWH @ 0.56300¢	4.03
Government surcharges - Delivery	1.74
Total electric delivery charges	$83.87
Your electricity total	**$134.41**

Source: Orange and Rockland, Sample bill – New York *(link)*

[10] Other products include ancillary services, installed capacity, and transmission congestion contracts.

Restructuring in New York State

In 1994 New York faced the second highest electricity costs in the U.S.[11] This led the state to begin restructuring its electric sector, formally beginning the process when the NYSPSC opened a general proceeding to investigate electric competition.[12]

> *"The large difference between New York's prices and the national average electric price should begin to shrink, rather than growing as it has under regulation. As a result of these lower prices, New York's competitive position will improve and economic development will be furthered, with the creation of additional jobs and increased opportunities for businesses and residents."*
>
> - New York Public Service Commission, Opinion 96-12, Cases 94-E-0952 et al.

Unlike monopoly utilities, competitive suppliers are incentivized to complete projects on time and at the lowest cost. New York State sought to harness the power of competitive markets to bring down electricity prices. Large load customers noted they were "concerned about the high electric rates in New York State"[13] and that New York commercial retailers were "negatively affected by the high commercial rates currently charged in New York for electricity."[14] The Retail Council of New York noted that the price of electricity "is especially important when considering expansion or relocation,"[15] indicating that high electricity prices could threaten further economic activity in the state. This concern is mitigated today, as NYISO expects over 1.8 GW of new large, energy-intensive economic development projects to come online before the end of 2026.[16] Future economic growth will largely depend on the availability of affordable and reliable power supplies.

In 1996, the NYSPSC ruled that the ownership of generation assets should be separated from transmission and distribution to prevent vertical market power and encourage the development of a wholesale competitive electricity market.[17] These orders set in motion New York electricity industry restructuring. In the years following, utilities sold their generation assets to IPPs and NYISO was created to administer competitive wholesale markets in 1999.[18]

Competitive Generation Lowered Power Supply Costs for New York Customers

Nearly 30 years ago, the NYSPSC adopted a set of principles to guide New York's transition to competition for electric service, beginning with the principle that "[c]ompetition in the electric power industry will further the economic and environmental well-being of New York State," and ending with the principle that "[p]ro-competitive policies should further economic development."

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[11] EIA, *Electric Sales and Revenue 1994* (link)
[12] NYSPSC. Cases 94-E-0952, et. al. *Order 94-27* (link).
[13] Big V Supermarkets, *Re: Case 94-E-0952, Electric Industry Restructuring* (link)
[14] Retail Council of New York State, *RE: Case 94-E-0952, COMPETITIVE OPPORTUNITIES* (link)
[15] Id.
[16] NYISO, *2024 Power Trends* (link)
[17] NYSPSC. Cases 94-E-0952, et. al. *In the Matter of Competitive Opportunities Regarding Electric Service - Opinion and Order Regarding Competitive Opportunities for Electric Service* (link).
[18] NYISO, *Our History* (link)

The results of this study demonstrate that these principles were well-founded 30 years ago and remain so today.

Under the cost-of-service rate recovery regulation that existed in New York before restructuring in 1996, pricing was based on the average cost of producing electricity and utilities were given an opportunity for guaranteed recovery of all expenses incurred in the construction and operation of assets, plus a reasonable rate of return. Because of this guaranteed positive return, utilities had little incentive to operate their generation assets efficiently and at the lowest cost, leading to high generation costs that made up a growing share of customers' electricity bills in part because any cost overruns were borne by customers, rather than the utility.

With the adoption of competition in wholesale generation, the construction and operation of generation assets were no longer accompanied by a guarantee to recover costs from electric customers. This change shifted investment risk from utilities' captive ratepayers to IPPs, who must recover their costs with revenues from the competitive market. Additionally, with the establishment of the NYISO, market pricing for generation was no longer based on utilities' average cost over long periods but rather the marginal cost, i.e., the system-level cost of generating an additional unit of electricity in any given hour. These market changes combined to re-align incentives for owners of generation assets to the benefit of ratepayers in New York. Whereas utilities were able to profit on the operation of inefficient and costly generation plants, private developers now must absorb financial losses arising from substandard planning or performance.

A review of power production costs before and after the restructuring transition in New York provides substantial evidence that the market changes discussed above have had the intended effect of lowering costs for ratepayers. In the five years preceding restructuring, utilities' cost of producing electricity increased over 8% to approximately $75 per megawatt-hour ("MWh"). Prices began rising in the late 1990s and remained elevated in the 2000s primarily due to higher oil and natural gas prices and low generation supply relative to growing power demand.[19] Further, stranded utility costs were passed onto customers during this period. Even accounting for these factors, NYISO estimated that the competitive market delivered wholesale price savings of 10% after controlling for the impact of fuel price volatility over the decade following restructuring.[20]

Comparing the five years preceding restructuring to the most recent five years studied in this report, 2019 – 2023, the competitive generation market reduced the power supply costs in New York by over 35%. The benefits of wholesale electric competition are not isolated to New York. A recent study found that between 1996 and 2022, average retail electric rates in states with restructured electricity markets declined by 13.3% while rates in vertically integrated states increased by 2.9%.[21,22]

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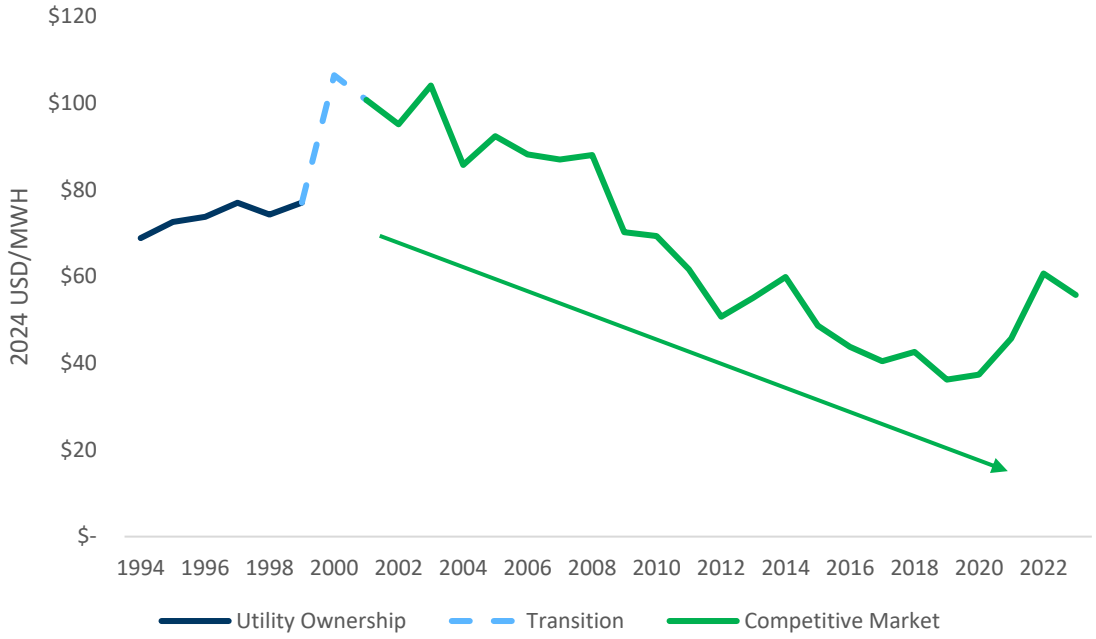
[19] NY State Comptroller, *Electric Deregulation in New York State* (link)
[20] NYISO, *2009 Power Trends* (link)
[21] FTI Consulting, *An Evaluation of Regulated and Restructured Electricity Markets* (link)
[22] Percentage changes calculated based on historical retail rates converted to 2024 USD.

Figure 3: New York Generation Costs by Regulatory Period



Source: FTI analysis of FERC Form 1 submissions

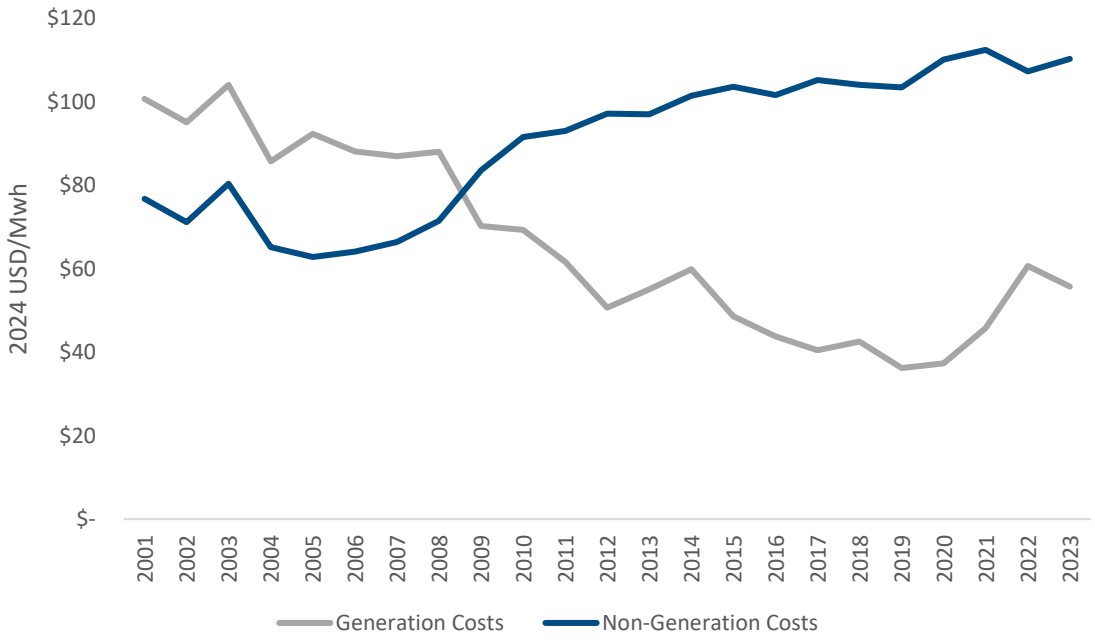
Utilities are Charging Customers More, even as Power Supply Costs Fall

Despite the significant generation cost savings delivered by private developers in the competitive market, New York ratepayers have not benefited from lower overall electricity bills from their utilities. This is because customers pay for services beyond just the electricity supplied via competitive wholesale markets.

Figure 4 below shows the progression of utilities' costs passed on to ratepayers in New York over time. Costs are broken out between the cost of power supply, which is primarily procured in the competitive wholesale market, and the remainder of costs charged by the utilities in the state, which include transmission, distribution, and other administrative services. Even as private developers have driven down the cost of electricity in New York, utilities have continued to charge more for their services despite making inadequate investments into the transmission infrastructure needed to support the state's shift towards renewable energy.[23] Competitive supply charges have fallen in real terms since 2007, while the utilities' delivery charges have increased over the same period.

[23] See section "Transmission Investment Requirements"

Figure 4: Generation and Non-Generation Costs in New York Over Time



The real-world impact for customers is higher utility bills. For example, on January 31, 2025, Consolidated Edison Company of New York, Inc. ("ConEd") requested authority from the NYSPSC to increase delivery charges by an average of 19.1% starting in 2026, which will increase total monthly bills by 11.4%.[24] The utility claimed that the rate increase would support infrastructure resilience, clean energy investments, customer affordability programs, and IT tools.[25] The proposal sparked a backlash from ratepayers, advocacy groups, and Governor Kathy Hochul. In a public announcement in February, the Governor stated her formal opposition to the utility proposal, stating, "the cost of living is too damn high and New Yorkers need more money in their pockets."[26] A compilation of recent and currently-proposed rate case bill impacts is provided in Table 3.

[24] NYSDPS, *DPS staff broadcast memo on Con Edison rate case* (link)
[25] ConEd, *Con Edison Proposes Investments to Maintain World-Class Reliability, Meet Growing Demand for Clean Energy, and Enhance Customer Support* (link)
[26] Governor Hochul, *2/11/25 Remarks on ConEd utility rate hike proposal* (link)

Table 3: Recent and Pending Utility Bill Increases (Proposed Average Residential Bill Impacts) [27]

Utility	Filing Date	Rate year	Monthly Bill Increase ($)	Delivery Charges Increase (%)
NG	5/28/2024	2026	$18.92	23.4%
NYSEG	5/26/2022	2023	$18.31	22.2%
ConEd	1/31/2025	2026	$26.60	19.1%
RG&E	5/26/2022	2023	$12.95	15.0%
O&R	1/26/2024	2025	$8.81	9.3%
CHGE	8/1/2024	2025-2026	$9.19	8.6%

Source: NYSDPS rate case summaries (link)

As seen in Figure 4, the primary driver of recent rate increases has been non-generation costs. These costs stem primarily from T&D services provided by regulated utilities in the state, in addition to other charges levied by the NYSPSC. Therefore, the proposed rate increases shown above are due, at least in part, to cost overruns by NY Utilities that have been passed on to New York ratepayers.

[27] For settled rate cases, initial proposed bill impacts are used.

Decarbonization Goals are Transforming the Electric Sector

Over the entire history of New York's renewable energy targets, the state has encouraged the development of renewable generation through competitive solicitations with private developers. From 2003 to 2015, the New York State Renewable Portfolio Standard ("RPS") required procurement of a mandated share of the total load from renewable resources. New York's 2004 RPS specifically tasked the New York State Energy Research and Development Authority ("NYSERDA") with procuring long-term contracts for "RPS Attributes"[28,29] from eligible resources[30] that sell their power into NYISO. The NYSPSC set an initial RPS goal of 25% of total electricity consumption from renewables by 2013. In 2010, the NYSPSC extended the program, targeting 30% of total electricity consumption from renewables by 2015.

NYSERDA purchased Renewable Attributes from generators through competitive solicitations, selecting bids according to price, project viability, and incremental economic benefits.[31] These solicitations provided an economic incentive to renewables developers and helped them reduce project risk by providing a revenue stream via long-term contracts for renewable assets. The NYSPSC set annual targets for the total quantity of Renewable Attributes to be procured, calculated from the renewable targets set by the state as a share of total consumption. Load-serving entities then purchased the contracted generation in proportion to their total load, essentially reimbursing NYSERDA for their total RPS program spending.

At the culmination of the RPS program in 2015, New York took further action to advance its path to renewable energy generation. The Governor's office and the NYSPSC released *Reforming the Energy Vision* ("REV"), a set of regulatory proceedings and policy initiatives intended to modernize the state's electric grid.[32] REV set a target that New York State reduce greenhouse gas ("GHG") emissions by 40% relative to 1990 levels by 2030 and that 50% of the state's electricity come from renewable energy sources.[33] The 2015 Energy Plan was released the same year and was intended to provide a roadmap for REV targets.[34] Also in 2015, Governor Andrew Cuomo directed the Department of Public Service ("NYSDPS") to turn the renewable energy targets outlined in REV and the 2015 Energy Plan into actionable targets,[35] which culminated in the Clean Energy Standard ("CES"), which set a target that 70% of all electricity consumed in New York State be sourced from renewable energy by 2030.[36]

In 2019, the New York State Legislature passed the CLCPA, the legislative basis of the mandate to achieve the CES targets and advanced even more ambitious climate goals. The CLCPA requires the

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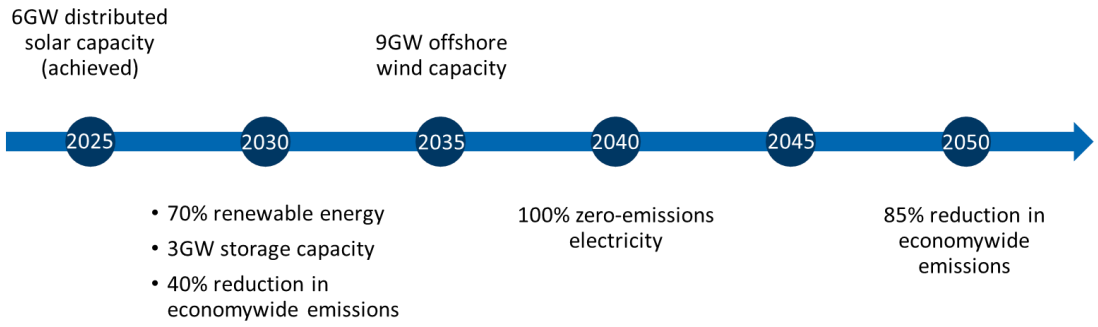
[28] Renewable Attributes are defined as the reduction in pollutants and emissions created with the generation of electricity by eligible renewable resources.
[29] NYSERDA, *New York Renewable Portfolio Standard Program Evaluation Report – 2009 Review* (link)
[30] See RPS Main Tier Eligible Electric Generation Sources (link)
[31] NYSERDA, *New York Tier 1 RESRFP24-1 Proposers' Webinar* (link)
[32] State of New York, *Reforming the Energy Vision* (link)
[33] Id.
[34] State of New York, *2015 Energy Plan* (link)
[35] State of New York, *The Energy to Lead: Biennial Report to the 2015 State Energy Plan* (link)
[36] NYSERDA, *History of NYSERDA* (link)

state to secure large shares of its electricity supply from renewables, reduce GHG emissions across all sectors of the economy, and develop specific amounts of certain renewable generation technologies (see Figure 5).

Figure 5: CLCPA Target Timeline



Sources: NYSERDA, History of NYSERDA (*link*), *State of New York,* CLCPA Fact Sheet (*link*)

Electric Decarbonization is Facing Challenges in New York

All states face challenges meeting their renewable energy targets due to rising costs, transmission constraints, interconnection delays, reliability concerns, regulatory uncertainty, and local opposition. Recognizing these challenges, New York government entities continue to enact reforms supporting the development of new renewable resources to meet state mandates. For instance, NYSERDA has made contracts more resilient to supply chain shocks and other price increases and NYISO has reformed its Interconnection Queue in line with FERC Order 2023 to streamline the study process and meet strict timelines for queue progress.

Transmission Constraints

One major constraint to renewable development in New York is the transmission bottleneck between the renewable-rich upstate regions and densely settled load centers downstate. Inadequate transmission restricts the flow of electricity between regions and hinders renewable deployment by increasing development costs.[37] The NYSPSC is tackling these transmission needs by approving major transmission investments through its CLCPA Phase 1 and 2 program, while NYSERDA underwrites major new transmission projects through its Tier 4 solicitations. According to the New York State Comptroller, the state plans to invest at least $26 billion in transmission and expand distribution capacity by 1,970 MW to make the CLCPA's vision a reality.[38] However, the success of these state investments hinges on continued utility focus on transmission investments.

Reliability

As New York transitions to a renewable-based grid, reliability challenges may arise due to the intermittent nature of wind and solar power. Unlike fossil fuel plants, which provide dispatchable generation around the clock, renewables depend on weather conditions, making real-time supply

[37] Brookfield, *Gridlock: Why Investment in Transmission Is Critical to Reach Net Zero* (link)
[38] NYS Comptroller Thomas DiNapoli, *Renewable Electricity in New York State: Review and Prospects*. (link)

and demand balancing more complex. The New York City area is forecasted to experience a generation shortfall starting in 2033, driven by an increase in peak demand and the planned retirement of existing dispatchable generation.[39] Further, the North American Electric Reliability Corporation ("NERC") forecasts that NYISO will drop below its reference margin level starting in 2033.[40] New York faces hurdles in maintaining reliability due to ambitious renewables targets, the projected retirement of much of its flexible fossil generation fleet, growing load, and extreme weather. The NYSPSC's pending decision on what constitutes a zero emissions source is also delaying progress toward the state's 100 by 40 mandate. [41,42]

Cost and Supply Chain

Inflation and supply chain disruptions have posed significant challenges to New York's procurement of renewable resources, increasing project costs and delaying development timelines. Rising material and labor costs, driven by inflation, have made it more expensive to construct and maintain renewable energy infrastructure. Additionally, higher interest rates have increased borrowing costs for developers, slowing investment in new projects. These cost pressures affect all types of developers and would also drive up utilities' costs if they were permitted to build large-scale renewables.

NYSERDA has continuously refined its renewables solicitation processes to ensure the state can meet its renewables targets under the CLCPA at least cost. In 2021, NYSERDA introduced Index Renewable Energy Credit ("REC") pricing for Tier 1 solicitations. Index RECs promise more stable revenues to developers in exchange for lower overall prices. The new contract structure has been successful in driving developer participation and lowering costs for New Yorkers, as well as resulting in larger amounts of renewables procured.[43] NYSERDA has also introduced reforms to counter inflationary pressures, allowing submitted developer bids to be adjusted according to inflation indexes.[44]

Home Rule Impacts and Local Opposition

New energy projects in New York also must deal with local opposition and Home Rule concerns, as some communities may try to prevent new construction in their districts. For example, the Hecate Energy Solar project in Copake, New York, was designed with a nameplate capacity of 60 MW and a footprint of 500 acres. However, after local complaints that it would ruin the landscape, the project capacity and footprint were reduced to 42 MW on 215 acres.[45] Another example is the Union Energy Center lithium-battery farm in Mahopac, New York, which would occupy nearly 100 acres and account for 116 MW of energy storage.[46] After public outcry, a six-month moratorium was put

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[39] NYISO, *2024 Reliability Needs Assessment ("RNA")* (link)
[40] NERC, *2024 Long Term Reliability Assessment* (link)
[41] Id.
[42] While the state's 100 by 40 mandate is not optional, it can be altered by the NYSPSC.
[43] Compass Energy Consulting, *Recap of NYSERDA's 2021 Tier 1 Solicitation* (link)
[44] NYSERDA, *RESRFP24-1 Request for Proposals* (link)
[45] Hecate Energy, *Community Involvement – Virtual Open House – February 19,2025* (link)
[46] Putnam Press, *Mahopac Crowd Decries Battery-Storage Facility at Public Hearing* (link)

on the project, with some residents urging the town board to cancel the project altogether.[47] One last example is the Lighthouse Wind project, which sought to harness the wind from Lake Ontario with 200 MW of turbines.[48] However, residents vehemently opposed the large wind plant in their community and after eight years of opposition, the project was cancelled.[49]

Interconnection Process

Before developers can build a generator in New York, NYISO must study and approve an interconnection request to ensure system reliability will not be compromised and to apportion any necessary costs to upgrade the grid among affected parties. In recent years, the Interconnection Queue has been congested due to a high volume of interconnection requests, rapidly growing demand, and constraints on the aging transmission system.[50] NYISO has actively reformed its Interconnection Queue procedures in compliance with FERC's Order 2023, which directed system operators to streamline their interconnection processes.

This process identifies the distribution and transmission system upgrades along with associated costs necessary to safely connect new resources to the existing grid. Project developers bear these interconnection costs, which often determine whether a project is financially viable. As discussed in this paper, NYISO has recently implemented impactful reforms that will streamline the interconnection process for developers. These reforms will increase the amount of new generation capacity added to the grid and the speed with which projects can connect.

The adoption of a two-phase cluster study approach has been NYISO's most critical reform. Under this new process, interconnection requests will be evaluated in large groups, or clusters, rather than individually. This approach is expected to significantly reduce timelines relative to the former processes, with a projected timeline of approximately 1.5 years between project application and final study results. NYISO has also taken steps to improve the Interconnection Queue process efficiencies through expanded staffing and a greatly enhanced web portal for developers and utilities.[51]

Prior to the reforms implemented in 2024, NYISO had difficulty keeping pace with the rapidly increasing interest in developing new renewable generation in New York. Interconnection study delays and uncertain cost estimates provided to developers contributed to projects' slow progression through the Interconnection Queue or failure to reach commercial operation. By 2023, interconnection costs had doubled across all projects studied since 2017 compared to the decade prior, and projects active in the queue were facing higher costs than projects that reached commercial operation. Developers were forced to contend with uncertain cost estimates that increased at each stage of the study process, with costs at least doubling between the last two

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[47] Putnam Press, *Mahopac Crowd Decries Battery-Storage Facility at Public Hearing* (link)

[48] Steve Orr, Democrat and Chronicle, *BIG wind farm proposed near Lake Ontario shore* (link)

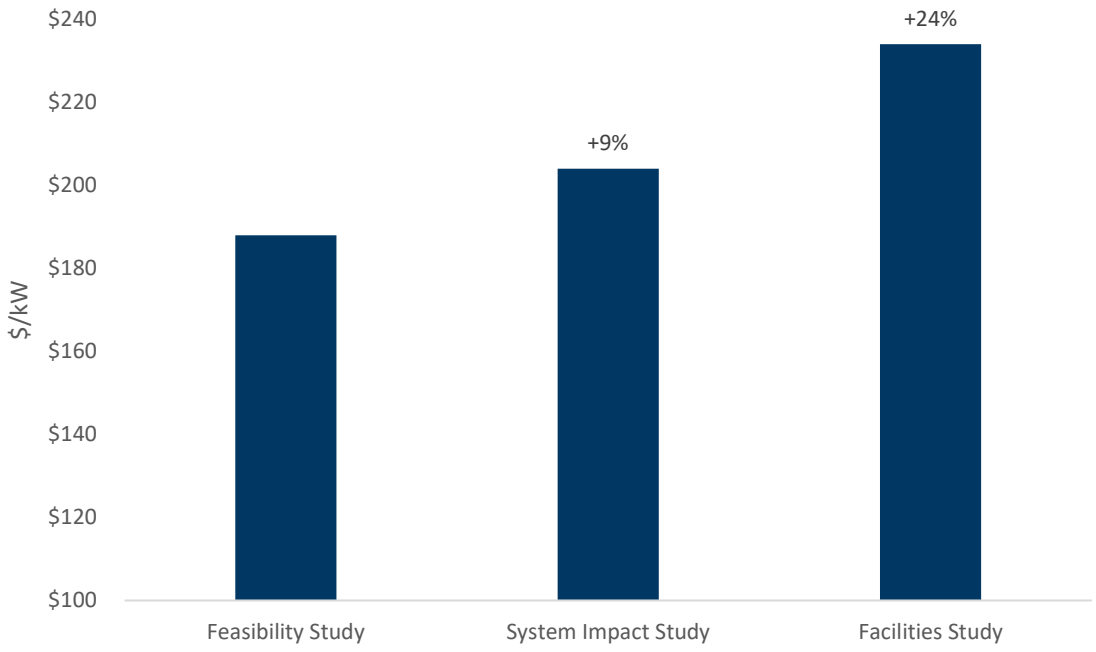
[49] Thomas Zambito, Lohud, *'Where's the rural justice?' Turbine plans for Lake Ontario shoreline hit headwinds in WNY* (link)

[50] These challenges are discussed in more detail in the sections *Interconnection Process* and *Importance of Transmission Upgrades to the Interconnection* Queue.

[51] NYISO, *Enhancing the Interconnection Process: the NYISO's Commitment to Improving the Integration of New Generation Projects onto the Grid* (link)

study phases for more than 25% of projects reviewed.[52] As shown in Figure 6 below, before the recent interconnection reforms, NYISO interconnection cost estimates increased by nearly 25% on average over the earlier Interconnection Queue process.

Figure 6: New York Average Change in Interconnection Cost Estimates

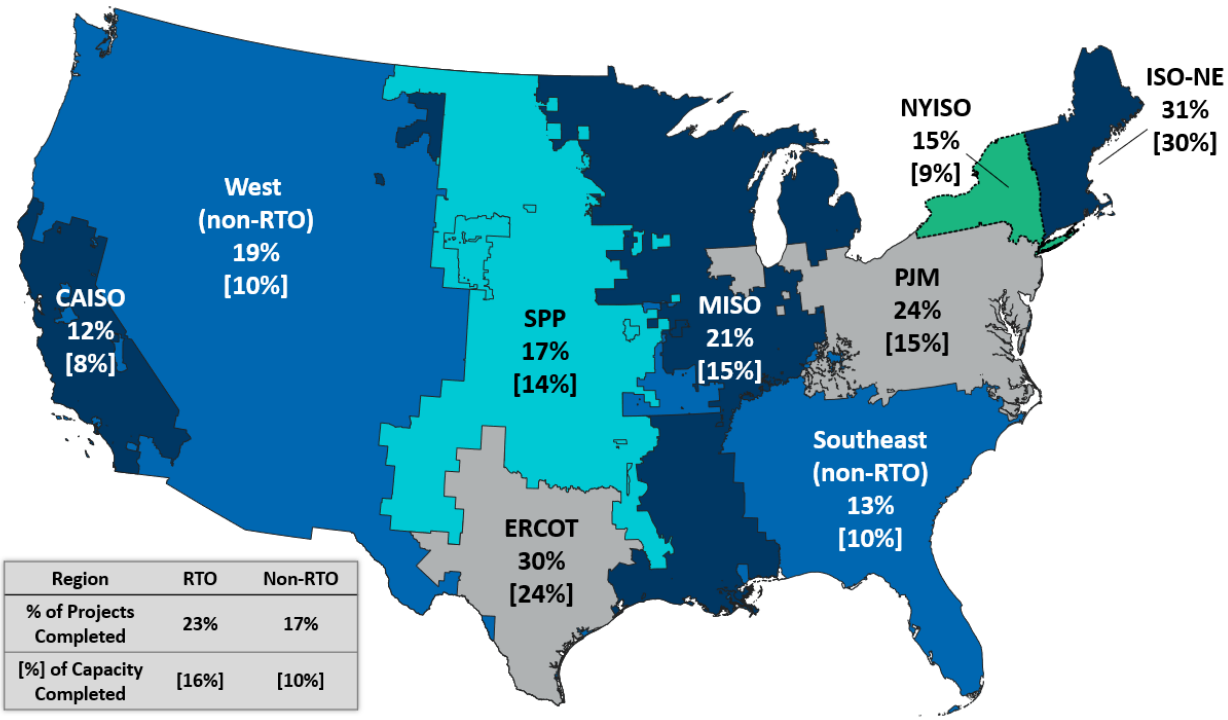


Source: Lawrence Berkeley National Lab, Interconnection Cost Analysis in the NYISO Territory (link)

The result of these challenges is that many private developers in New York have been forced to withdraw projects when they received unexpectedly high final cost estimates that made the projects unviable. While these outcomes can delay new renewable construction, they also protect customers from cost increases that could otherwise be passed through under a utility-ownership model. However, NYISO's new Interconnection Queue process provides a 1.5-year timeline from application to final study results, which speeds the interconnection process. In prior years, estimates of the final interconnection cost could take years to complete. These interconnection queue issues are not unique to New York. Across the U.S., only a small portion of projects that entered interconnection queues reached commercial operation, with project completion rates ranging from 12% to 31% from 2000 to 2018 (see Figure 7).[53,54] Overall, project success rates in non-RTO regions where the majority of generation is built by utilities have been nearly 40% lower compared to regions operating within an RTO, where most generation is built by independent power producers.

[52] Lawrence Berkeley National Lab, *Interconnection Cost Analysis in the NYISO Territory* (link)
[53] Lawrence Berkeley National Lab, *Queued Up: Characteristics of Power Plants Seeking Transmission Interconnection* (link)
[54] Success rates weighted by project capacity.

Figure 7: Interconnection Queue Completion Rates by Region (2000-2018)



Region	RTO	Non-RTO
% of Projects Completed	23%	17%
[%] of Capacity Completed	[16%]	[10%]

Source: Lawrence Berkeley National Lab, Queued Up: Characteristics of Power Plants Seeking Transmission Interconnection (link)

Utilities Face the Same Challenges as Private Developers

Arguments for utility ownership of generation often claim that utilities can realize efficiencies and time-savings during the development process. This argument ignores the fact that utilities and private developers have the same project development process.

The project development timeline for new power generation facilities follows a similar sequence for utilities and private developers, encompassing regulatory approvals, project planning, financing, key equipment and materials procurement, and construction. Both types of entities must navigate permitting processes, environmental reviews, and interconnection studies to comply with regulatory requirements. Project planning and financing involve securing capital, negotiating power purchase agreements[55] or other revenue structures, and managing financial risks. Supply chain considerations, including equipment and materials procurement, impact project schedules and require coordination with manufacturers, construction teams, and regulatory authorities. Construction phases for both utility and private developers involve site preparation, infrastructure installation, testing, and commissioning[56] before the facility becomes operational.

The assertion that utilities can develop power plants faster than private developers is not supported. Since both must adhere to the same regulatory, financial, and logistical requirements, utilities have no inherent advantage in expediting project completion.

[55] Including NYSERDA REC solicitations.
[56] Commissioning is the final stage of testing and approvals before a generation asset can enter operation.

Utility-owned Generation Would put Ratepayers at Risk

Utility-owned Generation Proposals and Assessments

Since the restructuring of the New York energy industry, the NYSPSC has investigated re-introducing utility ownership of generation several times, deciding against utility ownership of large-scale generation in each instance. While designing the CES in 2015, a NYSERDA report found that "[c]urrent financial analysis shows privately owned projects with bundled [power purchase agreements] deliver the lowest-cost solution,"[57] a finding confirmed by FTI's analysis in this report. The NYSPSC looked into the matter again in 2017 and 2018 when considering offshore wind procurement and again decided against utility ownership.[58] Most recently, while considering how to implement the requirements of the CLCPA, the NYSPSC asked stakeholders to evaluate its "Vertical Market Power Policy" ("VMP Policy"), which "established a presumption that utility ownership of generation has anti-competitive consequences."[59] Feedback from many stakeholders[60] indicated that the VMP Policy strikes a good balance between competition and the allocation of project risk.[61]

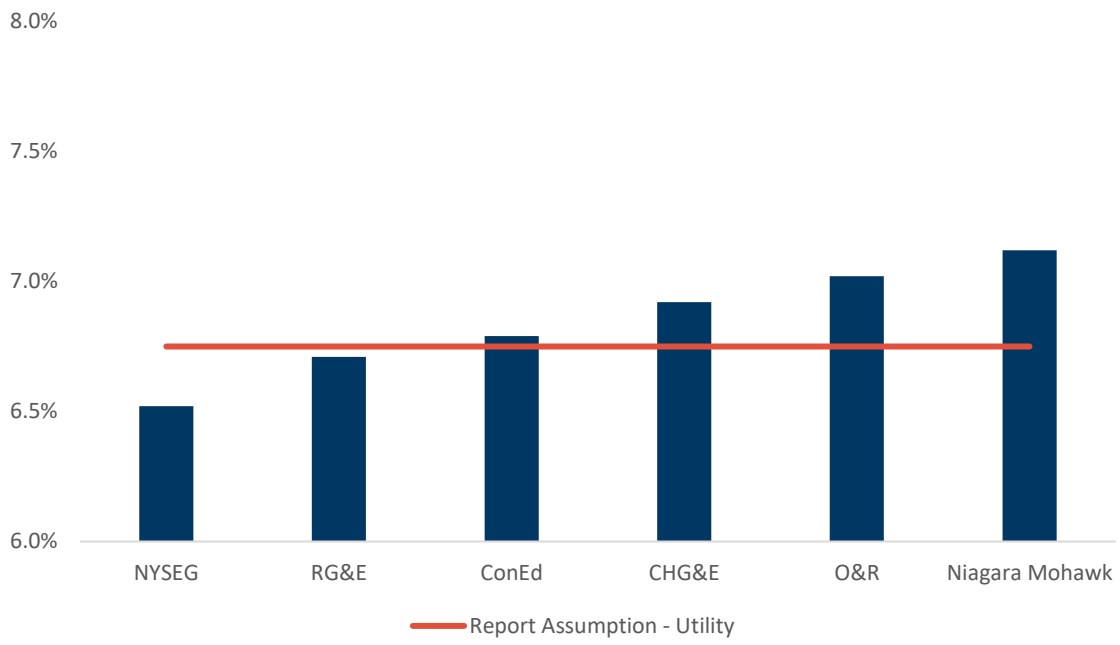
Now, in 2025, utilities are again advancing the notion that New York should allow utility ownership of generation, this time to support achievement of the state's renewables procurement goals. A recent utility-sponsored analysis explored the issue and found that private ownership of renewables is less costly for customers in 30 out of 36 cases, and that "the final customer cost [of new renewable generation] is 1–11% higher under utility ownership in most cases."[62]

However, further investigation of the report's assumptions reveals that the case for utility generation may be even weaker. For example, the report uses ConEd's estimate of 6.75% from its most recently approved rate case as the basis for its projections of a representative New York utility's after tax weighted average cost of capital ("WACC").[63,64,65] Surveying recent utility filings reveals that New York utilities generally face higher borrowing costs. This means that generation owned by these utilities would be more expensive than the results presented in the report. Figure 8 illustrates that four of the six utilities analyzed have indicated higher after tax WACCs than the report's assumption. An analysis of base and high WACC scenarios in the report suggests that utility ownership costs may be understated by up to 3% compared to utility costs calculated using actual

[57] NYSERDA, *Large-Scale Renewable Energy Development in New York: Options and Assessment* (link)
[58] NYSERDA, *Offshore Wind Policy Options Paper* (link)
[59] NYSPSC, *Order on Implementation of the Climate Leadership and Community Protection Act* (link)
[60] City of New York (link), IPPNY (link), AES Clean Energy (link), Advanced Energy Management Alliance (link), Sane Energy Project and The New York Energy Democracy Alliance (link)
[61] NYSDPS and NYSERDA, *Draft Clean Energy Standard Biennial Review* (link)
[62] Celebi, M et al. *Utility Ownership of New Renewables in New York State* (link)
[63] Id.
[64] The authors of the utility-sponsored study incorrectly label after tax WACC as "Pre-Tax WACC."
[65] WACC can be calculated with or without accounting for tax impacts. For renewable generation projects, after tax WACC is the more commonly used metric.

WACCs for New York Utilities. Using a more representative WACC for NY Utilities would have resulted in even more cases where private ownership was found to be less costly.[66,67]

Figure 8: Utility After Tax WACCs, Real USD (Recently Filed vs. Report Assumption)[68]



Source: FTI analysis of utility filings and financial statements

Transmission Investment Requirements

New York State is expected to spend $26 billion by 2030 on transmission projects needed to meet CLCPA targets.[69,70] This amount represents a significant increase in transmission system spending, reflecting nationwide trends. Between 2003 and 2023, annual U.S. transmission capital spending almost tripled to $27.7 billion.[71] Additionally, annual capital spending on distribution infrastructure increased by $31.4 billion, or 160%, over the same period.[72] This investment in transmission and distribution has been effective for renewables, as NYISO found that most local transmission constraints in renewable generation pockets have been resolved, "primarily due to the Smart Path

[66] Potential understatement of WACC calculated based on the difference between the report assumption of 6.75% and the most recently reported WACC for Niagara Mohawk of 7.12%.
[67] For both solar and wind projects evaluated in the report, the difference in cost between the Base and High WACC cases for private developers is approximately 7% - 8% for each 1% increase in WACC.
[68] See most recent Commission-approved rate-case filings:
ConEd 25-E-0072 (link), Niagara Mohawk 24-E-0322 (link), NYSEG & RG&E 22-E-0317 (link), O&R 24-E-0060 (link), CHGE 23-E-0418 (link)
[69] NYS Comptroller Thomas DiNapoli, *Renewable Electricity in New York State* (link)
[70] This estimate totals NYSERDA Tier 4 purchases, approved 4/14/2022, and Commission-approved CLCPA Phase 2 projects, approved 2/16/2023. Excludes CLCPA Phase 1 projects. Does not include investments in CLCPA phase 1 projects or historical investments in transmission capacity.
[71] Aniti, Lori – EIA, *Grid infrastructure investments drive increase in utility spending over last two decades* (link)
[72] Id.

and planned Phase 1 and Phase 2 local transmission upgrades."[73] By 2030, energy deliverability is expected to be above 90% in almost all zones as transmission congestion has been reduced.[74]

Capital expenditure ("CapEx") requirements for utilities are already substantial. As utilities undertake these new investments, they risk operational and financial strain. Diverting resources to generation development may overextend utilities, delay critical transmission projects, and increase costs for ratepayers. For example, a recent Moody's credit rating of ConEd notes, "[ConEd's] credit is constrained by high capital spending to meet service requirements and the state of New York's energy transition plans, which could place additional pressure on customer rates and debt financing requirements."[75] This upward pressure on rates will only be further exacerbated by ConEd's plans to spend approximately $25 billion over 2024-2028, on projects to replace aging infrastructure, improve reliability, and achieve CLCPA targets.[76] With an average of $5 billion invested annually, this amount represents approximately a 20-40% increase in spending compared to recent history.[77]

Thus, capital demands for New York utilities are increasing, even without potential investments in new generation, and utilities have acknowledged the resulting financial strain in regulatory filings. In a recent update, New York State Electric & Gas ("NYSEG") and Rochester Gas and Electric ("RG&E") noted, "The Companies are making substantial capital investments to support New York's achievement of its climate goals." They then stated that these investments were causing "strained credit metrics." [78]

As noted in Figure 8, recent regulatory filings indicate that the WACC for certain New York utilities is greater than recent public estimates for private developers. If utilities pursue additional capital-intensive projects to develop generation assets, borrowing costs may increase further, worsening their financial strain. In 2024, Fitch revised NYSEG's Outlook to "Negative", citing weak financial metrics partially stemming from the utility's sizeable CLCPA Phase 1 investments.[79] The credit rating agency noted that if the company continues to see its financial metrics decline, the company will likely face a credit downgrade, which would increase its borrowing costs.[80] A rise in borrowing costs for utilities like NYSEG will be transferred to ratepayers, who are already experiencing the pressure of proposed rate hikes.[81]

Importance of Transmission Upgrades to the Interconnection Queue

Continued focus on transmission investments is even more critical when considering the impact of the Interconnection Queue's efficiency on the pace of renewable generation additions. In New

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[73] NYISO, *2023-2042 System & Resource Outlook (The Outlook)* (link)
[74] Id.
[75] Moody's Investors Service, *Credit Opinion: Consolidated Edison Company of New York, Inc., February 1, 2024,* Referenced as Exhibit__(JCN-33) on Page 55 in *Direct Testimony of Return on Equity Panel* (link)
[76] Fitch, *Fitch Rates Consolidated Edison Company of New York's Senior Unsecured Debentures 'A-'* (link)
[77] Id.
[78] Avangrid, *Proceeding on Motion of the Commission to Implement Transmission Planning Pursuant to the Accelerated Renewable Energy Growth and Community Benefit Act.* (link)
[79] Fitch Ratings, *Fitch Revises NYSEG's Outlook to Negative; Rates Green Notes 'A-'; Affirms IDR* (link)
[80] Id.
[81] Governor Hochul, *2/11/25 Remarks on ConEd utility rate hike proposal* (link)

York, NYISO does not own transmission, but utilities and private companies do. Much of the national discussion surrounding interconnection queues focuses on possible procedural improvements that could speed projects through the queue or provide better support for the ISOs conducting interconnection studies. Prior studies have found that introducing competition into transmission development stimulates innovation, reduces costs, and provides value to customers.[82] However, a potentially more urgent issue is that generation must underwrite some of the transmission upgrade costs necessary to reconfigure the grid for a 21st-century resource mix.

In the 2023 *National Transmission Needs Study*, the U.S. Department of Energy noted, "Assigning the costs of these broader network upgrades to the first generator in line can cause those projects to drop out, even though those upgrades could facilitate additional interconnecting generators further down the queue."[83] Conversely, proactive transmission infrastructure expansion will enable necessary growth in renewable generation. Current policy, such as FERC Order 1920, attempts to remedy the historical lack of forward-looking transmission planning and address the issue of private developers being forced to pay for some portion of overdue upgrades to the grid.

Utility Project Management

Unlike IPPs, which operate under competitive market forces, utilities recover costs through cost-of-service rates, reducing incentives for strict cost control. Due to their cost-recovery model, utilities earn more by expanding their rate base rather than finding operational efficiencies. As a result, utilities often have less incentive to contain cost overruns, engineering and project management failures, and excessive risk mitigation factors; all of which increase costs for ratepayers. In this section, we discuss how these factors could contribute to higher electricity costs and greater risks for New York ratepayers if the State were to allow utilities to build and own generation.

Cost Overruns

While the NYSPSC prohibits utilities in New York from being involved in generation, they are still responsible for T&D, which require a large amount of project work for construction and operation. These projects frequently go over budget (with cost overruns borne by ratepayers) and similar cost overruns could be seen if utilities were building generation. Claims that utilities would be more efficient than private developers in building generation should be weighed against this prior performance.

For example, in January 2025, Avangrid, the corporate parent of NYSEG and RG&E, filed an update on its Phase 1 and 2 CLCPA transmission upgrade projects. The filing showed that costs for its Phase 1 projects increased 23% from its initial estimates, and that costs for its Phase 2 projects increased by 10% after they were initially approved two years earlier. In a letter filed with these cost increases, the company noted that project delays stemmed from supply chain delays, uncertainty around newly implemented transmission siting regulations, strained organizational capacity for

[82] The Brattle Group, *Cost Savings Offered by Competition in Electric Transmission* (link)
[83] U.S. Department of Energy, *National Transmission Needs Study*. October 2023. (link)

project development activities, and "strained credit metrics" resulting from the investments required by the CLCPA.[84]

This is just one example of cost overruns by utilities in New York. Table 4 provides several further examples where utility projects experienced significant cost overruns in New York and across the country. Under the regulated cost-of-service model, New York customers ultimately pay these additional costs for projects located in the state.

Table 4: Utility Cost Overruns

Project	State	Utility	In-service Year	Initial Budget	Final Budget Overrun	Budget Increase[85]
NYSEG Phase 1	NY	NYSEG	Ongoing	$1.4B	$1.7B	23%
NYSEG/RG&E Phase 2	NY	NYSEG/RG&E	Ongoing	$2.3B	$2.5B	10%
East River Repowering Project	NY	ConEd	2005	$406M	$788M	94%
Rochester Transmission Project	NY	RG&E	2008	$75M	$125M	66%
Altamont Solar Interconnection[86]	NY	National Grid	2024	$1.1M	$2.4M	118%
Vogtle	GA	Georgia Power	2023	$14.0B	$35.0B	150%
Coastal Virginia Offshore Wind	VA	Dominion	Ongoing	$9.8B	$10.7B	9%
Kemper County CCS[87]	MS	MS Power	2017	$3.0B	$7.5B	150%
Peach Bottom to Baltimore	MD	BGE	Ongoing	$739M	$1.5B	105%

Source: FTI Research

Project Management/Engineering Failures

Utility cost-recovery can leave ratepayers on the hook for engineering and project management failures. In a 2022 petition to the NYSPSC, ConEd sought to classify the Brooklyn Clean Energy Hub project as a CLCPA transmission upgrade because it could provide 6,000 MW of interconnection capacity for offshore wind facilities. However, in evaluating the upgrade, the NYSPSC determined that ConEd had not adequately assessed the feasibility of delivering its claimed offshore wind interconnection capacity.[88] Had NYSPSC proceedings not identified these project design flaws, ratepayers across the state would have borne the cost, potentially without receiving any of the purported benefits.

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[84] Avangrid, *Proceeding on Motion of the Commission to Implement Transmission Planning Pursuant to the Accelerated Renewable Energy Growth and Community Benefit Act.* (link)

[85] Percentages may not match due to rounding.

[86] National Grid had incurred $1.3 million in utility cost overruns for upgrades that the utility deemed necessary to interconnect the community solar project. (link)

[87] The relevant CCS portion of Kemper County CCS was officially cancelled in 2017, though onsite natural gas combined cycle assets have been generating power since 2014.

[88] NYSPSC, *Order Approving Cost Recovery for Clean Energy Hub – Case 20-E-1097* (link)

One of the largest utility projects in recent history resulted in massive cost overruns and delays, at a significant burden to ratepayers. In 2009, Georgia Power and Westinghouse Electric received approval to construct two additional nuclear reactors at the Vogtle Plant. This project ultimately contributed to Westinghouse's bankruptcy and is the costliest power plant ever.[89] The Vogtle nuclear power plant expansion came online eight years behind schedule, with an overall price tag of $35 billion (up from an initial cost estimate of $14 billion).[90] Despite numerous project management failures, residential rates for Georgia ratepayers have increased by 10% to pay for the cost overruns.[91]

The worst case scenario for customers under the utility cost-recovery model is not that costs will be higher than expected but that they will pay for failed or cancelled projects. For example, the Kemper County Carbon Capture and Storage plant is an example of a power plant project by a utility that did not achieve its intended objectives. Initially designed as a coal plant incorporating carbon capture technology, the project encountered numerous challenges that eventually led to a complete redesign.[92] Construction commenced in 2010, with an expected completion date of 2014. Despite receiving federal tax credits tied to the 2014 deadline, the project failed to adhere to its original schedule.[93]

Ultimately, the carbon capture component was never completed and the facility was commissioned in 2017 as a natural gas power plant. As a result, the investments allocated to the carbon capture infrastructure were not utilized as intended, and additional resources were required to deconstruct the unused portions of the plant.[94] Initially projected to cost $3 billion, the project's final costs exceeded the projection by approximately $4.5 billion, and the final outcome did not align with the project's original scope.[95] Estimates suggest that if the plant had been designed as a natural gas facility from the outset the total cost could have been under $1.5 billion.[96] The utility proposed an 18% rate increase for approximately 186,000 ratepayers in Mississippi to recover expenses.[97] However, this request was ultimately denied following public opposition. While the rate increase was denied, the example illustrates how utilities seek to push the costs of failed projects on ratepayers.

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[89] Energy Transition, "Anatomy of a mess: the cautionary tale of the US's last mega nuclear reactor" (link)
[90] Kann, Drew, *Georgia Power rates: Public to pay bulk of Plant Vogtle costs* (link)
[91] Id.
[92] Christian Middleton, Mississippi Free Press, "Boondoggle in Kemper County: Powerful Ignored Red Flags of 'Clean Coal' Flop" (link)
[93] Id.
[94] Kristi Swartz, EnergyWire, "The Kemper project just collapsed. What it signifies for CCS" (link)
[95] Institute for Energy Economics and Financial Analysis, "IEEFA U.S.: Southern Company demolishes part of the $7.5 billion Kemper power plant in Mississippi" (link)
[96] Id.
[97] Christian Middleton, Mississippi Free Press, "Boondoggle in Kemper County: Powerful Ignored Red Flags of 'Clean Coal' Flop" (link)

Excessive risk management

Propel NY is a transmission project owned in part by New York Transco, which in turn is owned by the New York Utilities.[98] It aims to enhance system reliability and resilience on Long Island while providing the transmission capacity for new offshore wind projects, as mandated by the CLCPA. This project includes subterranean and underwater cables spanning Long Island, offering connections to Bronx and Westchester Counties. In October 2023, New York Transco submitted a petition to FERC requesting several rate incentives, citing the risks associated with developing the project.

In a dissent against the approval of this petition, FERC Commissioner Mark Christie expressed that the risk mitigation measures were excessive. He noted, “the incentives granted in this order go beyond the Commission’s practices and what should be accepted by this Commission" and that "the extent of the incentives will be egregiously unfair to New York consumers.” He also highlighted comments from the NYSPSC, noting that New York Transco was awarded the project through a Public Policy Transmission Need (“PPTN”) processs based on a NYISO determination that the project faced “relatively low procurement, permitting, and construction risks," which undermined New York Transco’s claims of high project risk.[99]

The Propel NY risk mitigation measures were approved despite the objections of the NYSPSC. As a result, New York Transco and its utility backers will realize a higher return on the project in the case of project success, and NY ratepayers will be on the hook in the case of cost overruns or project failure.

[98] New York Utilities is defined in Table 2 as ConEd, O&R, CHG&E, RG&E, NYSEG, and NG.
[99] *New York Transco, LLC*, 185 FERC ¶ 61,222 (2023) (link)

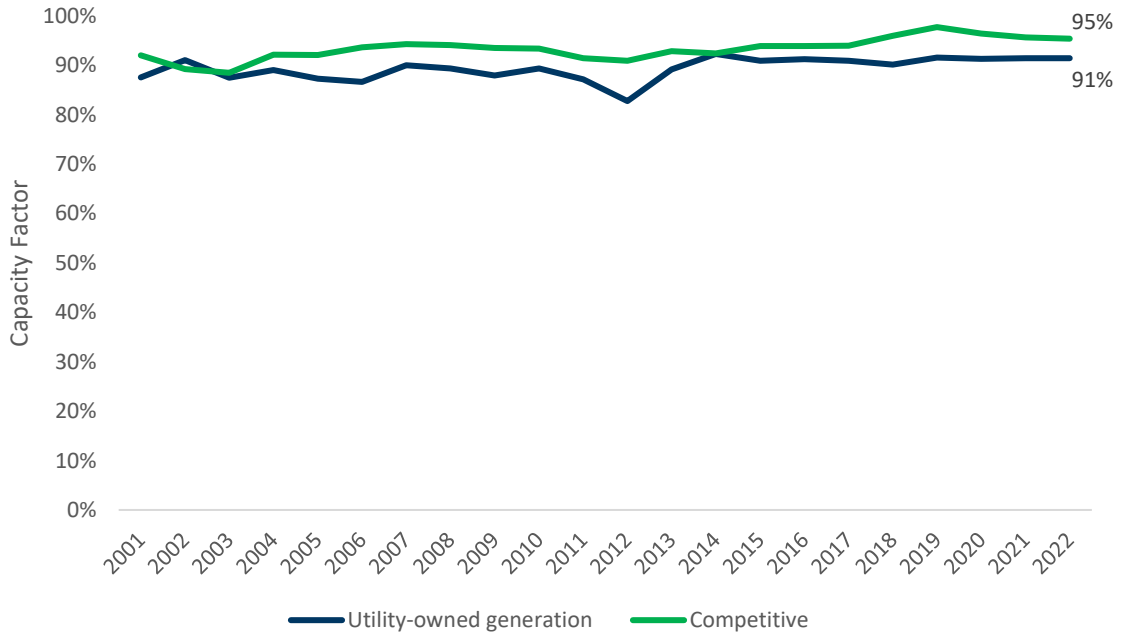
Competitive Generation Ownership Improves Environmental Outcomes

New York has the third-lowest per capita energy sector emissions of all states after Maryland and California.[100] Since 2001 per capita emissions from the energy sector have dropped 21.5%.[101] Private generation has been a key partner in these milestones since 1996. The following section details the contribution of competitive wholesale markets and private power developers to meeting ever more ambitious environmental targets.

Competitive wholesale electricity markets promote asset efficiency by incentivizing the adoption of newer, more cost-effective generation technologies. In contrast to vertically-integrated utilities outside of New York, which may be incentivized to continue operating older, less efficient generators, competitive markets encourage firms to invest in newer, higher-performing assets and operate existing assets as efficiently as possible. Studies have estimated that the transition to competitive generation markets led to 3–5% reductions in labor and nonfuel expenses relative to investor-owned plants, and 6–12% relative to government and cooperatively owned plants.[102]

Studies also show that plant efficiency improved by approximately 5% following ownership changes (switching to competitive ownership), reflecting the pressures that drive operational improvements in the open market.[103] This pattern is also reflected in national historical trends in nuclear plant efficiency, as shown in Figure 9.

Figure 9: Nuclear Capacity Factor by Market Structure



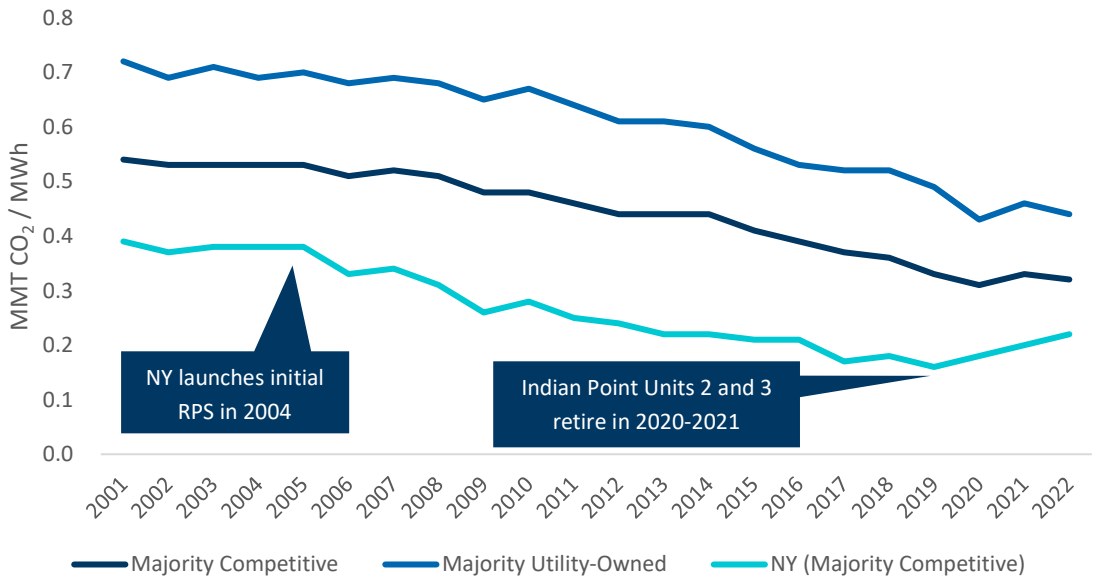
[100] U.S. EIA, *Environment, Energy-Related CO2 Emission Data Tables, Table 4, Per capita energy-related carbon dioxide emissions by state (1970-22)* (link)
[101] Id.
[102] Kira R. Fabrizio, Nancy L. Rose, and Catherine Wolfram, MIT Economics, "Do Markets Reduce Costs? Assessing the Impact of Regulatory Restructuring on US Electric Generation Efficiency" (link)
[103] Lucas Davis and Catherine Wolfram, National Bureau of Economic Research, "Deregulation, Consolidation, and Efficiency: Evidence from U.S. Nuclear Power" (link)

Source: EIA, "Historical State Data" (link)

Competitive markets have also more readily integrated cleaner technologies, capitalizing on their cost advantages and reducing the overall environmental footprint of electricity generation. Under competitive markets, the resulting efficiency gains and emissions reductions can provide long-term benefits to consumers and the environment.

Figure 10 illustrates the evolution of emission rates since 2001 in New York, majority competitive generation states (including New York), and states where a majority of electric generation is utility-owned.[104] Since 2000, emissions rates in states that generate a majority of their power generated from competitive markets have declined faster than states in which the majority comes from utility-owned plants. This holds true in New York, where emission rates have declined even faster than the average of states with competitive markets. As a result, the average MWh of electricity produced in New York emits less than half the CO2 emissions of the average MWh generated in states with a majority of utility-owned generation. In 2019, before the closure of the Indian Point nuclear plant, this ratio was even more stark, with New York producing only a third of the emissions per MWh as an average utility generation state.

Figure 10: NY Historical Emissions Rates vs. States with Majority Competitive and Majority Utility Generation Ownership



Source: EPA eGRID (link)

Utility-owned Generation and Renewables Targets

Significant regulatory or market rule changes can create uncertainty for IPPs, potentially discouraging investment and reducing new project development. IPPs rely on stable market

[104] States with utility-owned generation accounting for greater than 50% of total state generation were characterized as majority utility-owned.

conditions to assess financial viability, and sudden changes can disrupt long-standing investment strategies. If competitive markets were to have both competitive and utility-owned generation, a decline in IPP participation may outpace the ability of utilities to develop replacement capacity, leading to supply constraints and reduced competition.

Arguments in favor of allowing utility-owned generation focus on the additional renewable capacity that utilities might build. However, it is more likely that the threat of utility vertical market power will reduce the amount of new projects from private developers, offsetting any gains realized from allowing utility ownership of generation. Historical trends suggest that regulatory instability negatively impacts investment, as seen in power markets where uncertainty has driven capital away to lower-risk jurisdictions.[105]

Beyond market participation, regulatory changes and project delays can increase project development costs, which are often passed on to ratepayers. Early-stage setbacks—such as permitting issues or shifting regulatory requirements—can lead to cost overruns from inflation, extended financing obligations, and contractual penalties. These cost increases may trigger additional regulatory review, further delaying projects and creating uncertainty about completion.

[105] Kira R. Fabrizio, The Effect of Regulatory Uncertainty on Investment: Evidence from Renewable Energy Generation, *The Journal of Law, Economics, and Organization*, Volume 29, Issue 4, August 2013, Pages 765–798 (link)

Private Developers Benefit the State Economy

Competitive generation developers have been actively investing in the State of New York for over 25 years. During this time, they have made significant investments across a wide range of generation types, including more than 2.6 GW of wind, 1.7 GW of solar, and nearly 7.4 GW of natural gas generation, among other investments. These investments have benefited the state by providing job opportunities, tax revenues, and other economic benefits, all realized without exposing consumers to the risk and costs of failed, uneconomic projects. These results show that IPPs have been long-term partners in New York supporting the state's economy and its environmental goals.

In this section, we take a conservative view of the economic benefits provided by competitive generators in both the construction and operations phases. The benefits of these projects could be even larger if the equipment and materials used to construct these projects were sourced in-state. Additionally, as indicated by stakeholders in prior NYSPSC proceedings, lower electricity costs allow New York businesses to be more competitive,[106] expand their operations, and leave New York households with more money to spend on other goods and services. These broader economic benefits go above and beyond the impacts addressed later in this section.

Construction Impacts

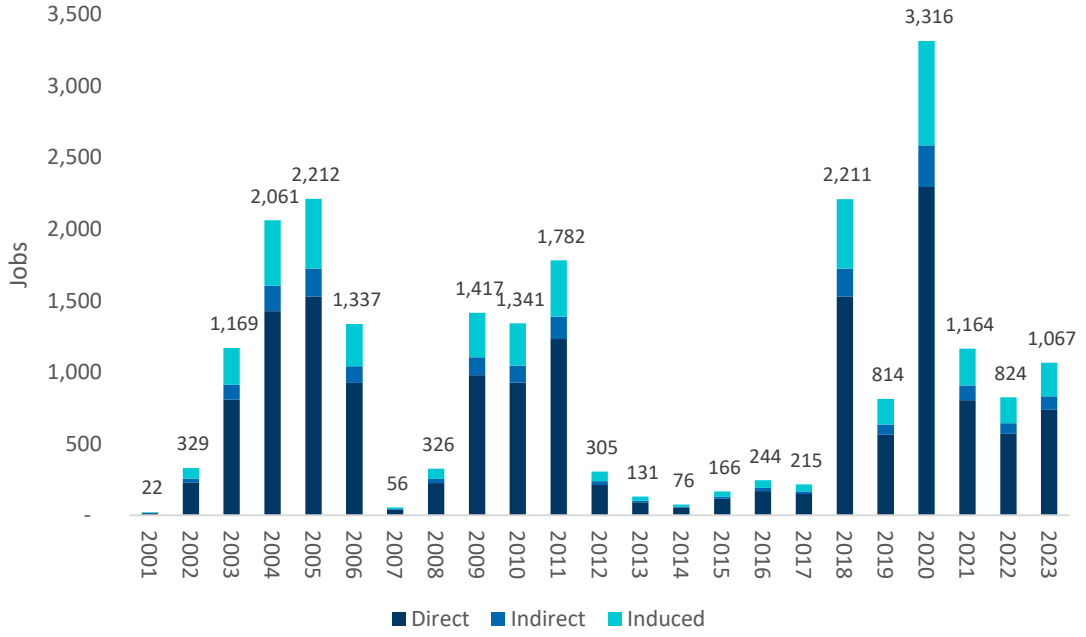
Competitive generation is a driver of economic development and activity within the state. Roughly 14 GW of currently operable generation capacity has been brought online in New York State since 2001, with about 87% of this capacity developed and constructed by IPPs.[107] At a minimum, the construction of these plants has supported significant employment in the construction sector, its supply chain, and the wider state economy. FTI estimated the jobs and other economic activity supported by competitive generation plant construction labor activity using the IMPLAN model and annual estimates of construction labor expenditures.[108] The estimates do not include any in-state manufacturing of plant equipment or materials, because it is not possible to determine where these items were sourced. As such, the estimates presented here should be considered a conservative view of the total economic activity supported by these large capital investments in the state. As shown in Figure 11, the number of jobs and economic activity supported by competitive generation capacity construction has varied over the years as new projects have come online.

[106] Retail Council of New York State, *RE: Case 94-E-0952, COMPETITIVE OPPORTUNITIES* (link)

[107] Excludes 412 MW of commercial/industrial generation capacity.

[108] For more information on the IMPLAN model and how these expenditures were calculated, please consult the Appendix.

Figure 11: Estimated NYS Jobs Supported by Construction Labor Activity, by Date of Commercial Operation



Estimated jobs supported peaks in 2020 due to the addition of nearly 1.6 GW in generation capacity, including more than 1.3 GW of natural gas-fired capacity at the Cricket Valley Energy project and over 230 MW of solar and battery storage capacity. In 2023, the construction of 776 MW of wind, solar, and battery storage projects supported an estimated 1,067 jobs. On average, the construction of competitive generation projects has supported nearly 1,000 jobs across the state each year since 2001. The majority of the jobs supported have been direct construction jobs, though there are a significant number of indirect jobs supported in the construction sector supply chain and induced jobs supported by the consumer spending activity of those supported directly and indirectly.[109] Many of these direct construction jobs are performed by union laborers. In New York State, an estimated 15% of clean energy installation workers are union members.[110] That level of membership is nearly 34% higher than the U.S. average.[111] In addition, construction activity has supported, on average, nearly $132 million (2023$) in annual state GDP and almost $12 million (2023$) in annual state and local tax revenues.

Operations Impacts

Once operational, these plants play a significant role supporting jobs and economic activity in local communities across a wide range of fields including plant and system operators, engineers, scientists, financial analysts, maintenance staff, hospitality workers, and others. FTI utilized the IMPLAN model to analyze the economic contribution of the share of the electric power generation sector, on a capacity basis, operated by independent power producers in 2023. As shown in Table 5,

[109] Direct jobs refer to those employed in the physical construction of the projects, while indirect jobs are those whose jobs are supported in the upstream supply chain of the construction sector. Finally, induced jobs are those jobs supported by the consumer spending of those whose jobs are supported directly or indirectly.
[110] NYSERDA, *2024 New York Clean Energy Industry Report* (link)
[111] Bureau of Labor Statistics (link)

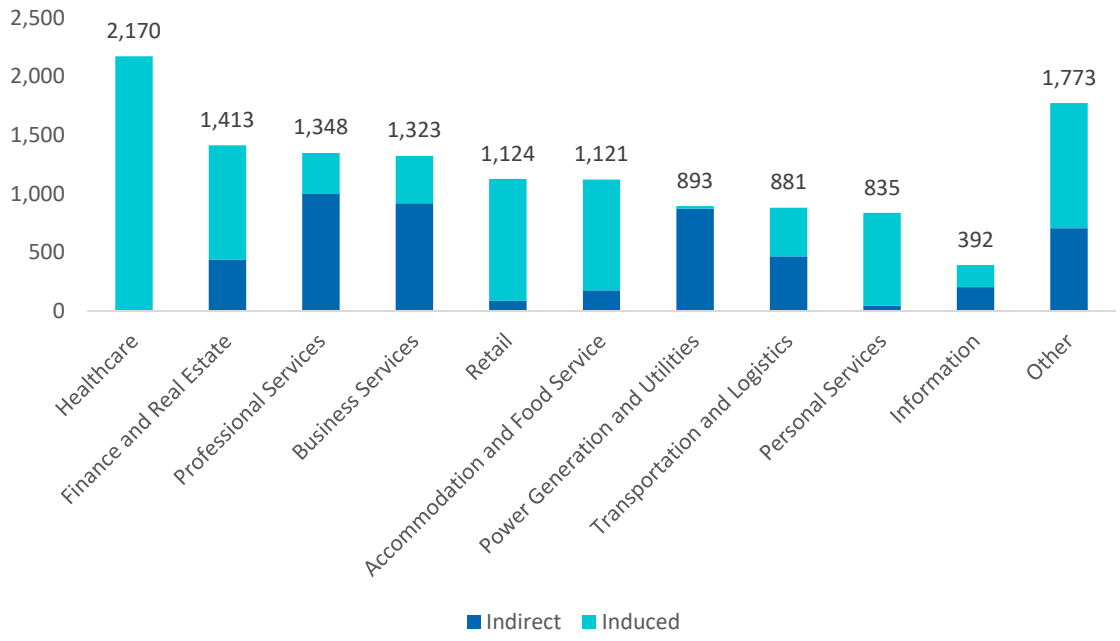
these plants supported an estimated 18,748 jobs across the state and generated over $1.5 billion in state and local tax revenues. These benefits are ongoing and can be expected to increase each year as the total generation capacity grows.

Table 5: NYS Competitive Generation Operational Economic Benefits (2023)

	Units	Direct	Indirect	Induced	Total
Jobs	#	5,475	4,910	8,363	**18,748**
Output	2023$ millions	$7,192	$2,366	$1,730	**$11,288**
GDP	2023$ millions	$4,043	$1,193	$1,193	**$6,429**
Labor Income	2023$ millions	$1,680	$801	$646	**$3,127**
Federal Taxes	2023$ millions	$439	$179	$159	**$777**
State and Local Taxes	2023$ millions	$1,185	$194	$147	**$1,526**

In addition to the nearly 5,500 jobs supported directly at power plants, competitive generation also supports indirect and induced economic activity. Indirect, upstream impacts include activity supported in the power plants' supply chain, while induced, downstream activity is driven by the consumer spending of those whose jobs are supported directly or indirectly. Indirect and induced job impacts span a wide variety of sectors, as shown in Figure 12. Competitive generation operations support over 2,000 jobs across the state in the healthcare sector and over 1,000 jobs in the finance and real estate, professional services, business services, retail, and hospitality sectors.

Figure 12: Upstream and Downstream Sectors in NYS Impacted by Plant Operations



The jobs supported by competitive generation provide an average annual salary of nearly $118,000 across direct, indirect, and induced impacts, excluding proprietor income, benefits, and other forms of non-wage compensation. This amount is roughly 28% higher than the average state wage of

$92,000 in 2023.[112] This benefit is driven primarily by the direct jobs at competitive generation facilities, where the average salary estimated by IMPLAN is more than $173,000 annually.

In some cases, project developers enter into PILOT ("payment in lieu of taxes") agreements with the communities where they site their projects. For example, in Western New York's Wyoming County, a PILOT agreement with a wind farm has allowed the Town of Eagle to eliminate its general fund and highway fund real property tax levy and provide curbside garbage pick-up to residents at no charge.[113] These payments go beyond the state and local benefits calculated using IMPLAN, which rely solely on average state tax rates and are driven largely by sales taxes and personal income taxes. PILOT agreements can help communities fund schools, repair roads, and pursue other local priorities to have a meaningful impact where projects are sited.

[112] New York State Department of Labor, *Quarterly Census of Employment and Wages* (link)
[113] New York State Comptroller, *Town of Eagle Wind Power Revenues* (link)

Conclusion

Competitive wholesale electricity markets have provided measurable benefits to electric ratepayers in the U.S. However, utilities in New York are again advancing the notion that the State should allow utilities to rate-base new generation investments. In this instance, utilities point to supporting the achievement of the state's renewables procurement goals as justification for retreading an idea that regulators have dismissed on multiple distinct occasions over the last 20 years.

In this paper, FTI examined the history of restructuring in New York and the benefits that private generation ownership has provided in lowering customer rates, advancing environmental goals, and supporting the New York economy. Further, we investigated claims made by utilities in the context of new generation development against the actual outcomes in the state for the portions of the grid they currently own. We have also reviewed and addressed New York utilities' own statements about their ongoing challenges in raising capital to meet required transmission expansion. These statements undercut the notion that utilities can finance new renewable generation at more favorable rates than private developers.

In short, we find that utilities would not be able to supply new generation in New York at a lower cost or on a faster timeline than independent power producers. Key to this finding is the fact that utility cost-recovery would expose captive New York ratepayers to cost overruns like the examples below in Table 6.

Table 6: Utility Cost Overruns

Project	State	Utility	In-service Year	Initial Budget	Final Budget Overrun	Budget Increase [114]
NYSEG Phase 1	NY	NYSEG	Ongoing	$1.4B	$1.7B	23%
NYSEG/RG&E Phase 2	NY	NYSEG/RG&E	Ongoing	$2.3B	$2.5B	10%
East River Repowering Project	NY	ConEd	2005	$406M	$788M	94%
Rochester Transmission Project	NY	RG&E	2008	$75M	$125M	66%
Altamont Solar Interconnection	NY	National Grid	2024	$1.1M	$2.4M	118%
Vogtle	GA	Georgia Power	2023	$14.0B	$35.0B	150%
Coastal Virginia Offshore Wind	VA	Dominion	Ongoing	$9.8B	$10.7B	9%
Kemper County CCS	MS	MS Power	2017	$3.0B	$7.5B	150%
Peach Bottom to Baltimore	MD	BGE	Ongoing	$739M	$1.5B	105%

Source: FTI Research

Instead, our analysis reveals that the transition from utility-owned generation assets to a competitive market has provided significant benefits to New York ratepayers and advanced the goals originally envisioned by state policymakers. Private ownership of electric generation protects New York ratepayers from cost overruns arising from inflationary pressures and high

[114] Percentages may not match due to rounding.

interconnection costs. Our analysis also shows that a full or partial return to utility-owned generation would expose New York ratepayers to increased risk, higher costs, and would provide no relief from long project development timelines driven by historically short-sighted transmission planning.

Competitive suppliers are incentivized to complete projects on time and at the lowest cost. They are paid for generation only if their plants are running, which requires them to be less expensive than their competitors.[115] Utilities do not have such incentives and may not be penalized for delays and cost overruns that are passed on at the expense of captive ratepayers. Utilities recover all their costs, whether their plants are running or not. States in which generation is primarily produced in competitive markets, including New York, have exhibited more rapid total emission reductions than states dominated by utility-owned and operated generation assets. Competitive generation owners have also been economic partners in New York for decades, supporting thousands of jobs and billions in state and local taxes.

Further, New York utilities are undertaking massive investments to build the T&D infrastructure necessary to support load growth and clean energy targets, and are already showing signs of financial and resource strain. Adding generation asset investments will only further exacerbate utilities' stressed financial situations, increasing project financing costs which, in turn, will increase costs for captive ratepayers. Indeed, allowing utility-owned generation could slow progress towards meeting the state's overall energy needs and achieving clean energy goals by chilling market participation and introducing the delays and cost overruns that accompany utility capital investments.

Competitive suppliers have entered nearly 75 GW of new renewable generation capacity in the NYISO Interconnection Queue, more than double the state's 2025 forecast peak load. NYISO has recently adopted new, streamlined procedures to complete the required interconnection studies. There is clearly sufficient private developer interest in new renewable development to meet the State's CLCPA requirements. Utilities should continue to focus on developing the critical investments in T&D infrastructure needed to advance New York's ambitious climate goals as a partner, rather than a replacement, to private developers.

[115] Power plants can also earn revenue by providing market products other than energy such as capacity and ancillary services.

Appendix

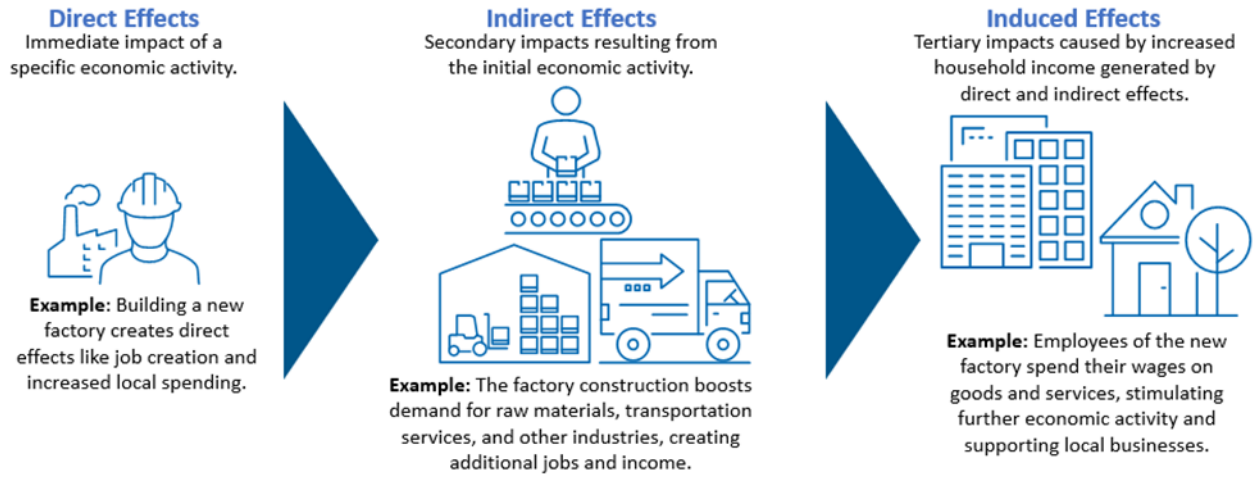
Economic Impact Calculations

The IMPLAN model is an input-output ("IO") model of regional economies. IMPLAN describes the movement of dollars through the economy, including linkages between different economic sectors and industries in their supply chains, between employers and employees in the labor market, and between the public sector and the private sector through taxes and government expenditures.

IMPLAN includes a detailed representation of the sectors of an economy. The IMPLAN model includes 528 economic sectors for regions in the U.S., including agriculture, natural resources, construction, utilities, many manufacturing activities, transportation, information, professional services, business services, and personal services. The structure of IMPLAN allows it to illustrate how an initial additional unit of employment or spending affects the rest of the economy. IMPLAN describes these ancillary or ripple effects through its indirect effect and its induced effect, which are described here:

- **Direct Effect –** refers to the economic activity resulting from capital and operational outlays on items such as materials, labor, utilities, and services. Direct impacts are the first order impacts of the industry.
- **Indirect Effect –** refers to the economic activity resulting from the direct industries spending a portion of their revenues on goods and services provided to them by their supply chain.
- **Induced Effect –** refers to the economic activity resulting from the spending of labor income earned by employees within the directly and indirectly affected industries.

Figure 13—IMPLAN Process



To estimate total construction labor spending on competitive generation projects since 2001, FTI first calculated the total capacity operated by independent power producers by year of first operation using EIA-860 data.[116] These capacity figures were paired with estimates of capital costs

[116] EIA, Form 860 Electricity Data (link)

for wind, solar, battery storage, combined cycle natural gas, and combustion turbine natural gas projects to estimate total capital expenditures. FTI sourced historical capital cost estimates for wind and solar from the Lawrence Berkeley National Laboratory's 2024 Land-Based Wind Market Report and Utility-Scale Solar, 2024 Edition report, respectively.[117,118] Capital costs for battery storage and natural gas projects were sourced from the National Renewable Energy Laboratory's ("NREL") Annual Technology Baseline for years 2017-2023.[119] Note, two hours were assumed to be the duration for the average storage project. Where necessary, capital cost figures for earlier years were estimated by deflating available yearly values using the consumer price index.[120] Approximately 97.5% of all capacity constructed in New York State since 2001 has been in the form of wind, solar, battery storage, natural gas combined cycle, or natural gas combustion turbine generators. While there have been some small landfill gas, oil, hydropower, and other projects constructed over this time period, these projects were not included in the analysis due to the difficulty in sourcing reliable capital cost estimates.

Next, FTI utilized the share of construction labor expenditures relative to total capital expenditures for each project type to estimate total labor costs. These shares were derived from government estimates such as NREL's Cost of Wind Energy Review: 2024 Edition, the Department of Energy's Solar Photovoltaic System Cost Benchmarks, NREL's U.S. Solar Photovoltaic System and Energy Storage Cost Benchmarks, and the EIA's Capital Cost and Performance Characteristics for Utility-Scale Electric Power Generating Technologies.[121,122,123,124] Estimated labor costs served as an input to the IMPLAN model and were used to calculate the direct, indirect, and induced economic activity supported by construction labor activity.

Finally, to estimate ongoing operational economic impacts using the IMPLAN model, FTI calculated the share of total generating capacity operated by independent power producers by generation type across the model's seven generation sectors: hydro, fossil, nuclear, solar, wind, biomass, and other. For example, 99.8% of online wind capacity in New York State is operated by independent power producers.[125] As such, the model was configured to credit 99.8% of the economic benefits associated with the wind sector to competitive generators.

[117] Lawrence Berkeley National Lab, Land-Based Wind Market Report (link)
[118] Lawrence Berkeley National Lab, Utility-Scale Solar (link)
[119] NREL, Annual Technology Baseline Archives: NREL ATB and Standard Scenarios (link)
[120] Federal Reserve Bank of St. Louis, Consumer Price Index for All Urban Consumers: All Items in U.S. City Average (link)
[121] NREL, Cost of Wind Energy Review: 2024 Edition (link)
[122] U.S. Department of Energy, Solar Photovoltaic System Cost Benchmarks (link)
[123] NREL, U.S. Solar Photovoltaic System and Energy Storage Cost Benchmarks (link)
[124] EIA, Capital Cost and Performance Characteristics for Utility-Scale Electric Power Generating Technologies (link)
[125] There are five turbines representing 6.1 MW of wind capacity owned by commercial or industrial entities in New York.