



A Smarter Way to Pay: Public Financing for Affordable Transmission Development in New England

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Executive Summary

New England must deploy a wide portfolio of clean energy, grid infrastructure, demand response, and other resources and technologies to meet decarbonization goals, load growth from new industry and electrification, and increasing winter-peaking system demand. At the same time, energy affordability concerns are on the rise and costs of the region's transmission system – the long-distance, high-voltage power lines that connect supply and demand across New England states and neighboring grids – are growing and forecast to grow further.

The challenge to policymakers, regulators, and industry today is delivering an affordable, reliable, secure, modern, and clean electricity grid. Investing in efficient and optimized transmission is key to achieving each of these goals. Transmission investment can lower system costs because it allows cheaper, cleaner generation to interconnect more quickly, while reducing reliance on natural gas – the key driver of regional electricity supply prices.

Public financing has the potential to deliver billion-dollar savings to New England ratepayers as the region invests in the build-out and modernization of its power grid. Clean Air Task Force (CATF) and Acadia Center partnered with Power Advisory and Joshua Macey of Yale Law School to examine the potential for ratepayer savings from public transmission financing and identify promising pathways for implementation.

Public financing tools explored in this report represent a major step forward in one of the three major “P” categories for advancing transmission in New England: planning, permitting, and **paying for** new transmission infrastructure. With savings potential in the billions, policymakers and stakeholders should work swiftly to develop and implement these tools that will provide ratepayers with a more affordable, reliable, and clean energy system.

Key Findings

- **Transmission costs in New England are the highest in the country:** At \$25 per megawatt-hour in 2024, transmission rates account for 30% of wholesale energy costs in New England and are more than double transmission rates in the grid regions of NYISO, PJM, MISO, and ERCOT.¹ Costs are driven in part by inflation and supply chain constraints, but are also compounded by a historic lack of cohesive and efficient ratepayer-focused transmission planning, capital bias toward siloed buildout within utility territories, and high costs of asset condition projects.
- **More investment is needed:** To replace aging infrastructure, \$11.9 billion of local transmission upgrades and replacements – known as asset condition projects – are already proposed, planned, and under construction.² Additionally, ISO New England, the regional grid operator, found that \$16 to \$26 billion in regional transmission investment is needed over the next 25 years to ensure reliability, respond to demand growth, and meet decarbonization goals.³
- **Current financing is too costly:** Transmission today is financed with a mix of private equity and debt, which is both overweighted toward utility shareholder profit and comparatively much more expensive (an all-in, pre-tax cost-of-capital of 10.12%) than public options. The financing status quo effectively requires ratepayers to spend \$3.3 billion to pay off a \$1 billion transmission line over 40 years.⁴
- **New public financing can deliver huge savings:** A range of public financing options backed by project revenue bonds can replace more expensive sources of private capital with lower-cost, tax-exempt public debt and equity, protecting ratepayers. **For new transmission, these models can deliver more than \$8.3 billion in savings for customers, or a 43% reduction from business-as-usual financing. For rebuilds and upgrades of existing transmission lines, public financing models can deliver \$1.1 billion in savings, a 34% reduction in costs from the status quo.**
- **Multiple flexible pathways to implementation:** Building on successful state collaboration, public financing could be pursued via multiple pathways over the near-, medium-, and long-term. These include incorporation into ISO New England’s Longer-Term Transmission Planning (LTTP) process and Voluntary Agreement mechanism by one or more states (without requiring participation by all states or reforms to the ISO New England tariff), and new or modified state financing entities authorized to finance transmission infrastructure with wholly public financing or through public-private partnerships.
- **Flexibility and replicability:** Participating states can take creative steps to return most savings to ratepayers while potentially using small portions of savings for priorities like host community benefits and targeted bill discounts. Promising results for New England also suggest a strong potential to replicate this model and savings opportunity in other multi-state grid regions across the country, in addition to single-state models already demonstrated in New Mexico, Colorado, and California.

¹ Patton, D., LeeVanSchaick, P., Chen, J., & Coscia, J. (2025). *2024 Assessment of the ISO New England Electricity Markets*. <https://www.iso-ne.com/static-assets/documents/100025/iso-ne-2024-emm-report-final.pdf>

² ISO New England. (n.d.). *RSP Project List and the Asset Condition List*. <https://www.iso-ne.com/system-planning/system-plans-studies/rsp/rsp-project-list-and-the-asset-condition-list>

³ ISO New England. (2024). *2050 Transmission Study*. https://www.iso-ne.com/static-assets/documents/100008/2024_02_14_pac_2050_transmission_study_final.pdf

⁴ As discussed further later in this report, status quo transmission financing has included a FERC-approved base Return on Equity (ROE) of 10.57% in New England. However, on March 18, 2026, FERC issued a ruling in a consolidated case, which included a petition brought by Acadia Center (then Environment Northeast) in 2012, that will reduce the approved ROE by 1% to 9.57%. This will require New England utilities to pay customers about \$1.5 billion in refunds for transmission charges going back to 2011. Because of the recency of this decision, and because appeals are now pending, the analyses presented in this report do not yet reflect any forward-looking impact from rate adjustments pursuant to the newly approved ROE – which will likely reduce the potential for savings by a modest amount.

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The project team for this work consisted of:

- **Clean Air Task Force:** Nicole Pavia and Kelsey Landau
- **Acadia Center:** Jamie Dickerson, Anya Poplavska, and Joe LaRusso
- **Power Advisory:** Peter Shattuck (project lead), John Dalton, Ami Khalsa, Michael Killeavy, and Julia Barton
- **Yale Law School:** Joshua Macey

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SECTION 1

Introduction

New England must deploy a wide portfolio of clean energy, grid infrastructure, demand response, and other resources and technologies to meet decarbonization goals, load growth from new industries and electrification, and increasing winter-peaking system demand that is projected to double over the next 25 years.⁵ The region's transmission system – the long-distance, high-voltage power lines that move electricity from where it is generated to homes and businesses – is the connective tissue between supply and demand and across New England states and neighboring grids. Simultaneously, energy affordability concerns are on the rise and transmission costs are already growing and forecast to expand in the coming decades. The challenge to policymakers, regulators, and industry today is squaring this circle and delivering an affordable, reliable, secure, modern, and clean electricity grid.

New and better tools are needed to more affordably finance the build-out of the region's transmission infrastructure. Thankfully, New England states have a potent solution that could deliver up to \$8.4 billion in savings for customers on new transmission development: leveraging lower-cost public financing to reduce and

replace traditional sources of private equity and debt. Effectively, the region can choose from multiple pathways to re-finance the grid at a lower rate, with the potential to save up to 43% compared to business-as-usual financing. This solution could also provide massive savings for transmission repair and replacement projects – known as asset condition projects – with more than \$1.1 billion, or a 34% reduction in costs, on the table.

While electricity systems are complex and cost drivers are numerous,⁶ efficient, optimized, and plentiful transmission capacity can lower system costs. Increased transmission allows cheaper, cleaner generation capacity to interconnect to the grid more quickly, shortening project development timelines for new generators to come online. Incorporating clean energy resources lowers system reliance on natural gas – the key driver of regional electricity supply prices⁷ – particularly in the winter months when gas supplies are constrained.⁸ Increasing transmission links between New England and neighboring grids, including Canadian and New York markets, can alleviate electricity price differentials and provide emergency backup power in the case of outages and severe weather disruptions.^{9,10}

⁵ Acadia Center & Clean Air Task Force. (2024). *The Energy is About to Shift*. <https://acadiacenter.org/resource/the-energy-is-about-to-shift>

⁶ Pavia, N., & Spokas, K. (2026, March 3). A data-driven look at rising U.S. electricity costs and policy solutions. Clean Air Task Force. <https://www.catf.us/2026/03/data-driven-look-rising-us-electricity-costs-policy-solutions>

⁷ David, E., & Moncada Tamayo, P. (2025). *Acadia Center Explains: Natural Gas Price Volatility in New England* [Fact sheet]. Acadia Center. <https://acadiacenter.org/resource/natural-gas-price-volatility-in-new-england>

⁸ ISO New England. (2025). *2024 Annual Markets Report*. <https://www.iso-ne.com/static-assets/documents/100023/2024-annual-markets-report.pdf>; Rand, J., Manderlink, N., Zhang, S., Talley, C., Gormal, W., Wisner, R., Seel, J., Mulvaney Kemp, J., Jeong, S., & Kahrl, F. (2025). *Queued Up: 2025 Edition, Characteristics of Power Plants Seeking Transmission Interconnection As of the End of 2024*. Lawrence Berkeley National Laboratory. <https://emp.lbl.gov/publications/queued-2025-edition-characteristics>

⁹ Delosa III, J., Pfeifenberger, J., & Graham, K. (2025). *Strategic Action Plan*. Northeast States Collaborative on Interregional Transmission. <https://energyinstitute.jhu.edu/wp-content/uploads/2025/04/Strategic-Action-Plan-Final.pdf>; ISO New England, *2024 Annual Markets Report*

¹⁰ FERC Order 1920 provides a list of additional benefits that must be considered in cost-benefit analysis of long-term transmission planning, including avoided or deferred infrastructure replacement, production cost savings, mitigation of unexpected system conditions, and capacity cost benefits from reduced peak energy losses, among others. See Federal Energy Regulatory Commission. (2025). *Explainer on Transmission Planning and Cost Allocation Final Rule*. <https://www.ferc.gov/explainer-transmission-planning-and-cost-allocation-final-rule>

To realize the benefits of a reliable, secure, and efficient electric grid, the region must invest in high-value transmission lines. In its 2050 Transmission Study, ISO New England found that between \$16 and \$26 billion must be invested in transmission to meet asset condition, demand, and decarbonization goals.¹¹ Given these projections and increasing demands on the system, new strategies to minimize cost and associated rate increases on consumers are mission critical. With such significant potential savings on the table, the region cannot afford to continue with the status quo.

New England states are not the first to confront this challenge, nor will they be the last. In 2024, Clean Air Task Force (CATF) and Net-Zero California commissioned economic and legal analyses to investigate alternative financing strategies – including public financing and public-private partnerships – to reduce the impacts of needed transmission investment on rates in California.¹² These financing strategies can potentially lower capital costs, replace portions of investor-owned utility debt and equity with lower-cost public debt, and tie policy objectives to lower-cost financing pathways. This study showed great potential for ratepayer savings as well as a wide range of implementation pathways. Just last year, California passed Senate Bill 254, which created a Transmission Infrastructure Accelerator within the Governor’s Office of Business and Economic Development with mandates to maximize ratepayer savings, streamline transmission development efforts, and develop a public-private partnership financing plan, among others.¹³

In New England, states have partnered before to submit joint federal funding applications and develop ambitious transmission solicitation processes to address shared, long-term transmission needs. CATF and Acadia Center, an organization with more than 25 years of experience advancing bold and effective clean energy solutions in the Northeast region, explored opportunities for first-of-a-kind shared public financing or public-private partnership approaches across the multi-state region to build needed transmission at lower cost. This summary report synthesizes three jointly commissioned analyses to shed light on these potential opportunities. Each of these analyses also incorporates feedback from an in-person January 2026 stakeholder convening.

- **Economic analysis** by Power Advisory quantifying potential ratepayer savings of public transmission financing models compared to a “status quo” investor-owned utility financing and development model. Power Advisory found that new public financing tools for electricity transmission can unlock billions in savings for New England ratepayers.
- **Policy analysis** by Power Advisory identifying potential implementation pathways for public financing models for transmission in New England states.
- **Legal and institutional analysis** by Yale Law School professor Joshua Macey analyzing existing authorities and describing reforms that would allow New England states to leverage public or public-private financing.

¹¹ ISO New England, *2050 Transmission Study*

¹² Clean Air Task Force & Net-Zero California. (2024). *Wired for Savings*. <https://www.catf.us/resource/wired-for-savings>

¹³ Senate Bill No. 254 (2025–2026), Chapter 119, Statutes of 2025, https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202520260SB254

SECTION 2

Background on New England Transmission Financing and Development

New England has some of the highest electricity costs in the country.¹⁴ The region’s aging grid infrastructure has contributed to a strong focus on reliability in transmission investment and planning, which has misaligned transmission investment decisions from more comprehensive planning and coordination toward piecemeal “asset condition projects” ballooning in cost.¹⁵ New England also relies heavily on natural gas, a primary driver of high energy costs,¹⁶ to generate more than half of its electricity and provide fuel for heating.¹⁷ Atop this challenging foundation, New England states anticipate increasing load growth and a doubling of peak demand by 2050.

The region has abundant clean energy potential that can help drive down costs, meet growing electricity demand, and fulfill ambitious energy and climate goals of several of its states.¹⁸ New England is well able to support the renewable resources needed to reach its targets, including up to 36 GW of offshore wind and 51 GW of solar, and is actively exploring the viability and

cost-effectiveness of other zero-emission resources like new nuclear, large-scale hydropower, and long-duration/multi-day storage.¹⁹ Yet the age and constraints on the current transmission system and insufficient planning of long-distance, higher-voltage lines make deploying these resources increasingly challenging. As of 2025, data from the Lawrence Berkeley National Laboratory shows that ISO New England has 399 active generation projects waiting in the interconnection queue, totaling a capacity of 45.6 GW of overwhelmingly renewable generation and battery storage resources.²⁰

Modernizing and expanding New England’s transmission system is essential to drive down system costs, address affordability, meet the needs of new demand sources, and maintain reliability in the near-, medium-, and long-term.²¹ Increased transmission capacity can help unlock interconnection queues and allow low-cost resources to connect to the system more quickly. New England can also expand its interregional transmission capacity with neighboring grids – including up to 5.2 GW with

¹⁴ Acadia Center. (2026). *Electricity Cost Drivers: Why Prices in the Northeast are Climbing* [Fact sheet]. <https://acadiacenter.org/resource/electricity-cost-drivers-why-prices-in-the-northeast-are-climbing>

¹⁵ For more information on asset condition projects, see the Appendix.

¹⁶ David, E., & Moncada Tamayo, P., *Acadia Center Explains: Natural Gas Price Volatility in New England* [Fact sheet]

¹⁷ ISO New England. (n.d.). *Resource Mix*. <https://www.iso-ne.com/about/key-stats/resource-mix>

¹⁸ David, E., & Moncada Tamayo, P., *Acadia Center Explains: Natural Gas Price Volatility in New England* [Fact sheet]

¹⁹ Acadia Center & Clean Air Task Force, *The Energy is About to Shift*

²⁰ Rand, J., Manderlink, N., Zhang, S., Talley, C., Gormal, W., Wisner, R., Seel, J., Mulvaney Kemp, J., Jeong, S., & Kahrl, F., *Queued Up: 2025 Edition*

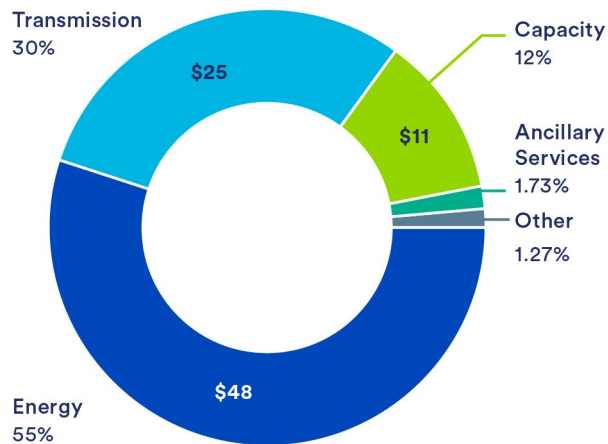
²¹ ISO New England, *2050 Transmission Study*

New York and up to 4.8 GW with Quebec – to reduce congestion, increase access to electricity supply, and reduce reliability on natural gas and its price volatility.²²

ISO New England and the New England states are already making progress on planning and developing a more expansive grid that can unlock myriad benefits for the region.²³ But concerns persist about development costs and their potential to increase already-high energy bills. Price pressure and energy affordability have become dominant issues in regional energy discussions, impacting every consumer, from rural communities to apartment dwellers to large industrial facilities. And current grid costs in the region are significant. At \$25/MWh in 2024, transmission rates account for 30% of wholesale energy costs in New England and are more than double transmission rates in the grid regions of NYISO, PJM, MISO and ERCOT.²⁴ These costs are partially driven by external factors, including inflationary pressure and supply chain constraints, but are also compounded by a historic lack of cohesive and efficient ratepayer-focused transmission planning, capital bias toward siloed transmission buildout within utility territories, and high costs of asset condition projects. Addressing these compounding policy and planning factors is critical to efficient and affordable transmission buildout going forward.

Figure 1: Transmission Share of 2024 Wholesale Energy Cost (\$/MWh)

Source: ISO New England 2024 Annual Markets Report via Power Advisory



²² Acadia Center & Clean Air Task Force, *The Energy is About to Shift*; U.S. Department of Energy. (2023). *National Transmission Needs Study*. <https://www.energy.gov/oe/national-transmission-needs-study>.

The Northeast States Collaborative Strategic Action Plan found that there are 14.5-22.7 GW of low-regrets transmission between New England and its neighbors by 2050; see Delosa III, J., Pfeifenberger, J., & Graham, K., *Strategic Action Plan*.

²³ For more information on recent state and regional coordination efforts, see the Appendix.

²⁴ Patton, D., LeeVanSchaick, P., Chen, J., & Coscia, J., *2024 Assessment of the ISO New England Electricity Markets*

Transmission in the Rate Base

Transmission rates are based on four main components recovered through annual revenue requirements:

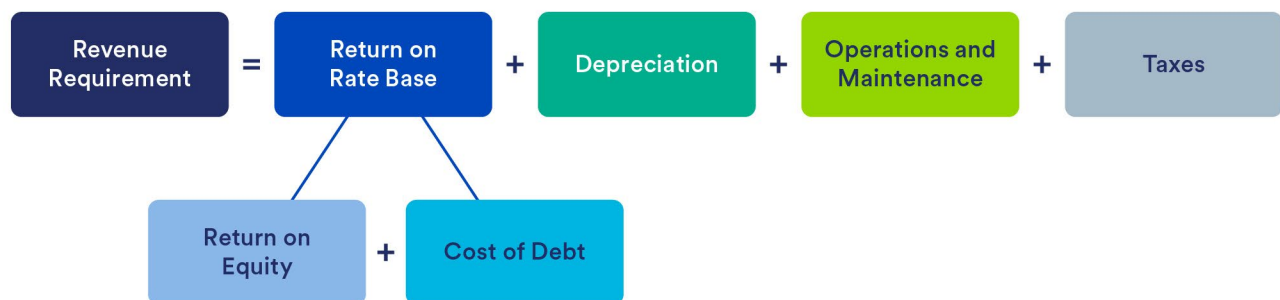
1. A return covering the cost of financing projects, composed of:
 - a. A Return on Equity (ROE) applied to the share of a project's cost funded through equity, and
 - b. The cost of debt issued to cover the share of a project's cost funded by borrowing.
2. Depreciation reflecting the cost of transmission over its useful life,
3. The cost of operating and maintaining (O&M) transmission equipment, and
4. Income taxes incurred by transmission owners and other taxes.²⁵

Under this model, utilities and transmission owners are incentivized to build out their rate base to earn returns on their investments. These returns are a key component of a utility's overall "revenue requirement," which factors into rate calculations and affects ratepayer costs and bills.

Transmission cost of service rates are separate from distribution-level utility revenue requirements and their associated rate cases and proceedings. Distribution and transmission costs both factor into ratepayer bills but are managed differently: the Federal Energy Regulatory Commission (FERC) approves transmission rates, while state-level public utility commissions approve distribution rates.²⁶

Figure 2: Calculating the Revenue Requirement

The "revenue requirement" refers to the total revenue that investor-owned utilities are authorized to collect from ratepayers in a given year. The book value of an investor-owned utility's generation, distribution, and transmission assets (rate base), and just as importantly the cost of capital associated with servicing that rate base (rate of return), directly impacts what is ultimately charged to ratepayers. Transmission is a key and growing component of the rate base. Note: This graphic shows simplified processes regulated by FERC and ISO New England to determine revenue requirements.



²⁵ Power Advisory study, https://cdn.catf.us/wp-content/uploads/2026/05/18122400/Power-Advisory_Public-Transmission-Financing-in-New-England_5.5.2026.pdf

²⁶ For instance, in the New England region, FERC has approved a return on equity for transmission projects of about 11%, which differs from distribution-level return on equity on capital projects approved by regulators in certain states in this same region. Transmission owners also earn bonuses on certain return on equity requirements, e.g., a 0.5% return on equity bonus is given for voluntarily participating in an RTO/ISO (though certain states have been trying to legislate to make this a mandate, which would remove this extra bonus).

SECTION 3

Evaluating Public Financing Models for Ratepayer Savings

Public financing mechanisms to reduce costs to ratepayers include the use of low-cost, tax-exempt public debt and/or equity to unlock lower interest rates, replacing private equity and debt in the capital structure, and reducing taxes. New institutional models to facilitate public financing for both new transmission development and asset condition projects, including certain types of public-private partnerships or a wholly public financing and development model, could serve as vehicles for introducing newer, less expensive forms of public capital to reduce ratepayer costs.

CATF and Acadia Center commissioned Power Advisory to evaluate whether public approaches to transmission financing and development could generate cost savings in New England. The study used ISO New England's 2050 Transmission Study, which developed roadmaps for transmission projects needed to satisfy reliability needs and achieve decarbonization goals while considering both the feasibility of construction and cost, as a basis for the analysis. Although cost savings from this analysis are specific to the scenarios of ISO New England's 2050 Transmission Study, the principles outlined would be expected to provide cost savings under other transmission buildout scenarios.

Power Advisory's analysis examined four public financing models for funding new transmission infrastructure compared to the "business-as-usual" base case of an investor-owned utility developing, financing, and operating transmission lines:

1. **Public Debt at Commercial Operation and Delivery (COD):** Projects are competitively procured from private entities, which secure property and necessary approvals and manage construction. When projects reach COD, the public entity provides debt covering long-term takeout financing.²⁷ The private entity bears risk to equity returns during development, construction, and operation; the public bears risk to debt only after equity returns are eliminated. This model introduces public debt at a later, less risky stage of project development (compared to at the Final Investment Decision, below). Providing takeout financing once the project is built and de-risked allows the public entity to offer low-cost terms (i.e., low interest rates), though the cost advantage versus private takeout financing is less significant than if the public entity provides debt and/or equity earlier in the project development lifecycle, when private entities charge higher risk premiums.
2. **Public Debt at Final Investment Decision (FID):** Projects are competitively procured from private entities, who then secure property and necessary approvals. When projects reach FID, the public entity provides debt covering construction and takeout financing. The private entity bears development risk. Construction and operating risk are first borne by the private entity through reduced equity returns and then borne by the public on debt. This model introduces public debt at a slightly earlier and comparatively riskier stage of project development (versus COD, above), putting the public entity at greater risk of bearing construction cost overruns or delays.

²⁷ Takeout financing pays off construction loans with longer-term, lower-cost debt.

3. **Public Debt- and Equity-Backed (D+E):** Projects are competitively procured from private entities, and following selection the public entity takes a minority equity stake in the winning project. This model reduces the amount of private equity backing a project, the most expensive source of capital in conventional transmission financing. The public entity provides debt and equity covering construction and takeout financing. The public and private entities share development, construction and operating risk to equity returns, and the public bears risk to debt.
4. **Wholly Public:** The public entity develops, finances, constructs, owns, and operates projects and bears all risk. This scenario maximizes utilization of public financing but would not include competitive project solicitation on project concepts or routes, although public entities would be subject to rigorous competitive solicitations for engineering, procurement, and construction (EPC) activities and other major cost centers.

In all scenarios, both debt and equity would be raised through project revenue bonds, which do not impair the public entity’s ability to issue bonds to support other programs or objectives.

Under the ISO New England 2050 Transmission Study, the cost for new transmission is estimated at between \$16 billion (51 GW peak and minimization of new lines) and \$26 billion (57 GW peak)²⁸; the cost for future asset condition project upgrades is an additional \$2.8 billion.²⁹

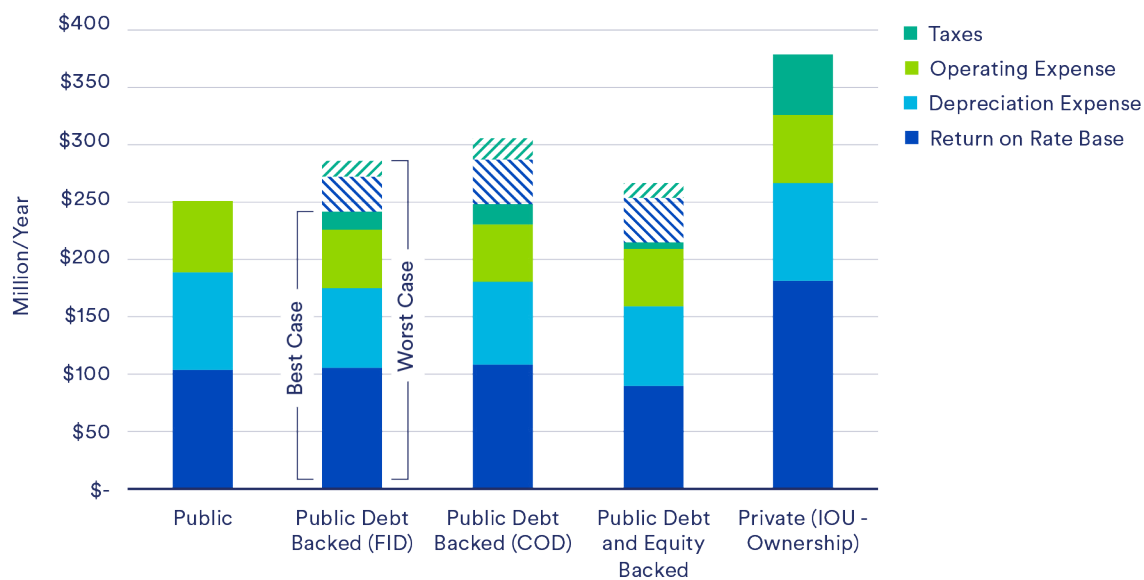
Public financing approaches show significant opportunity to reduce the financing costs and resulting transmission revenue requirements by as much as 43%, or \$8.3 billion, for new lines, and 34%, or \$1.1 billion, for asset condition projects over project lifetimes.³⁰ This is equivalent to ratepayer savings (or a reduction in the revenue requirement) of \$9.5 billion over 40 years. The results are summarized in Figures 3 and 4.

Figure 3: Public Financing Savings for New Transmission in New England

Annual Average Revenue Requirement (\$2025M)

Power Advisory analyzed a range of scenarios for each financing model. Solid bars reflect the best-case modeled combination of high leverage and low return on equity, and the diagonal patterned bars show worst-case modeled combination of low leverage and high return on equity. Specific input assumptions are included in Power Advisory’s analysis.

Source: Power Advisory



²⁸ ISO New England, 2050 Transmission Study

²⁹ Future projects include Planned and Proposed projects on the Asset Condition List as of October 2025. See ISO New England, RSP Project List and the Asset Condition List

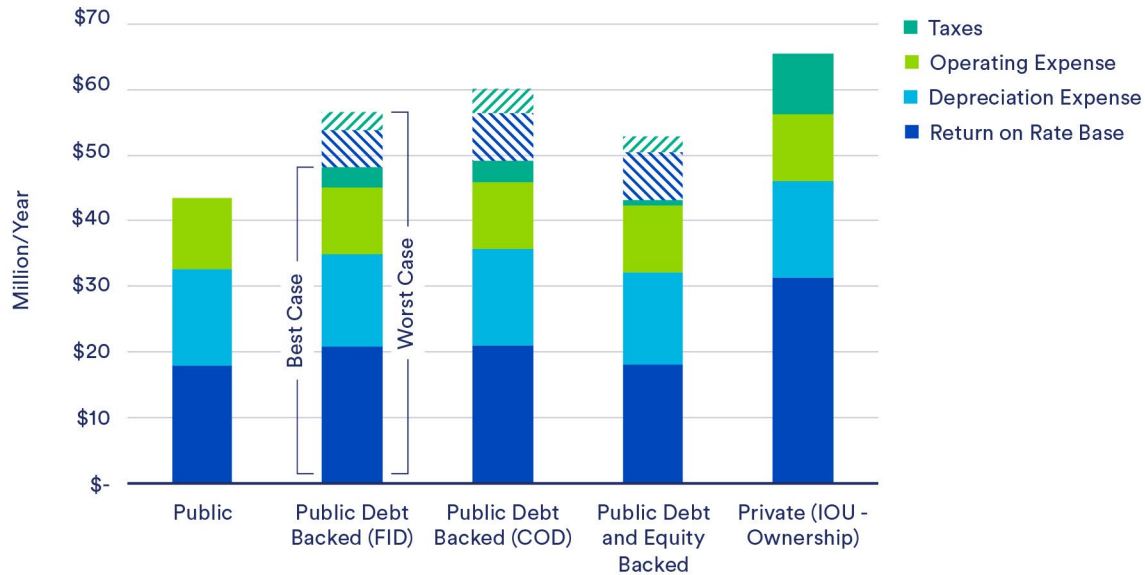
³⁰ In addition to planned and proposed asset condition projects, \$8.8 billion of asset condition projects are in service or under construction. If these projects had been publicly financed, revenue requirements could have been reduced by up to 37%, saving ratepayers \$3.3 billion.

Figure 4: Public Financing Savings for Asset Condition Projects in New England

Annual Average Revenue Requirement (\$2025M)

Power Advisory analyzed a range of scenarios for each financing model. Solid bars reflect the best-case modeled combination of high leverage and low return on equity, and the diagonal patterned bars show worst-case modeled combination of low leverage and high return on equity. Specific input assumptions are included in Power Advisory's analysis.

Source: Power Advisory



These savings are based on several conservative assumptions, which may underestimate the savings that public financing can bring for three reasons. First, interregional transmission costs are not included in the analysis, but if public financing mechanisms were applied to those projects, saving would accrue at the same rate. Second, the list of asset condition projects keeps growing; while this study assumes application

of public financing to planned and proposed asset condition projects on October 2025 asset condition list, an increase in asset condition projects would bring a commensurate scaling in public financing savings. Finally, ISO New England’s 2050 Transmission Study estimate are conservative, reflecting initial, high-level estimates of project costs.³¹

³¹ The 2050 Transmission Study is based on N-1 contingency analysis and does not identify the full extent of upgrades associated with new transmission. The goal of the study’s cost estimates is to “provide a rough estimate of the costs” that is useful for “providing an order-of-magnitude estimate of future transmission system costs.” See ISO New England, *2050 Transmission Study*, p. 46

SECTION 4

Implementation and Legal Pathways for Transmission Public Financing

CATF and Acadia Center also commissioned Power Advisory to analyze implementation pathways for New England states to realize public financing savings, as well as Joshua Macey of Yale Law School to analyze potential legal and institutional reforms, existing authorities in New England that could support transmission investment, and explore the use of financing programs in other states to explain how this model has been used successfully elsewhere.

Joshua Macey's analysis identified two plausible legal mechanisms to promote public transmission financing. The first is to strengthen existing state authorities by explicitly authorizing financing for projects developed through ISO New England and state agreement processes. This approach is likely the administrative and legislative path of least resistance. These entities (e.g., MassDevelopment or the Rhode Island Infrastructure Bank) already exist, so states would not have to create a financing authority from scratch. The downside is that these entities were not designed to support regional transmission projects, so legal and governance reforms may be necessary to make sure that they possess the authority, expertise, capacity, and motivation to support large transmission projects across New England.

The alternative path is to create a new transmission authority or financing agency to act on behalf of one or more New England states. This approach would potentially require a heavier lift up front than the first approach, since states would have to create an entirely new agency structure with statutory authority to issue public debt to support transmission investment. The advantage is that the newly created financing entities could be structured from the outset to be democratically

accountable, have relevant technical expertise, and represent diverse stakeholders, all while being specifically charged with advancing New England's long-term transmission needs – potentially making it a more advantageous approach overall.

Regardless of which approach is taken, any new transmission financing program should adhere to four legal and governance principles:

1. There must be a clear statutory mandate to support transmission that gives the financing entity authority to own, co-own, or issue debt to support FERC-jurisdictional high-voltage transmission that serves the state's load or policy needs, including via connection to facilities outside the home state.
2. A transmission financing entity (or entities) should have the power to participate in public-private partnerships as a financing partner and/or equity co-owner. That means it must be able to issue revenue bonds secured by project revenues and partner with private developers.
3. The entity (or entities) should be authorized to become an ISO New England Participating Transmission Owner or be a contractual co-owner whose revenue requirement is recovered under the ISO New England tariff.
4. The entity (or entities) should have governance and risk controls that ensure that the financing authority represents state interests and pursues public policy goals. This could occur through a board consisting of state officials, industry, consumer, labor, Tribal, and environmental justice representatives, as well as independent experts. It should also have debt caps and risk-sharing rules to avoid over-leveraging a single quasi-public entity's balance sheet and mandate that long-term bonds be tied to stable FERC-jurisdictional revenues or contracts.

Through external engagement and stakeholder interviews, Power Advisory identified an interest among New England policymakers in leveraging collaboration frameworks already built into existing mechanisms.

These include:

- ISO New England’s Longer-Term Transmission Planning (LTTP) process, which sets a foundation for New England states’ cooperation on transmission development.³²
- The Voluntary Agreement approach, which is being used in the Northern Maine Renewable Energy Development Program solicitation for transmission to enable onshore wind development. Five New England states are participating in the Northern Maine solicitation and are sharing the costs of the project.³³

As such, one highly plausible implementation pathway is that, subject to state-level authorizations, public transmission financing mechanisms could be integrated with both the LTTP and voluntary agreement mechanisms that states are already using to advance transmission development in New England.

This mechanism could work as follows:

1. In a future LTTP procurement implemented by ISO New England, or a state-led procurement utilizing a voluntary agreement to pay for transmission, one or more states would offer all bidders the opportunity to utilize public financing.

2. At or before solicitation issuance, the state(s) offering public financing would provide key terms.
 - a. If the state(s) offers debt, the amount of public debt, interest rate, and associated terms would be provided.
 - b. If the state(s) offers debt and equity, additional terms related to the public equity share, return on public equity, and governance rights would be provided.
 - c. A stipulated capital structure establishing the debt-equity ratio would be provided.
3. At their election, bidders could propose an ROE that they would require to accept public financing.
4. If state(s) accepts the bidder ROE, the state(s) and bidder agree to commercial terms and bidder includes public financing in bid.
5. If a bidder proposing to utilize the stipulated public financing wins the solicitation, commercial terms associated with the public financing take effect.

This approach has a number of practical benefits, including:

- Not requiring a modification of the FERC-approved LTTP mechanism in the ISO New England tariff
- Not requiring the participation of all New England states
- The state(s) offering the financing mechanism establishing terms that will produce savings
- Competitive pressure encouraging bidders to propose reasonable returns and make use of the lower-cost public financing

³² The first phase of the LTTP, approved by FERC in 2022, allowed the New England States Committee on Electricity (NESCOE) to request that that ISO New England conduct studies on transmission needs beyond the standard 10-year planning horizon. In 2024, FERC approved phase two of the LTTP, which created a process for ISO New England to solicit proposals from developers to develop transmission lines including, importantly, a cost-allocation mechanism for those transmission projects based on load share, which applies to projects with a benefit-cost ratio greater than 1.0. (NESCOE retains the right to request an alternative cost allocation on a project-by-project basis.) In March 2025, ISO New England issued its first RFP in response to a request from NESCOE, which focused on one need identified in the 2050 Transmission Study: limitations on electricity transfers from Maine to southern New England. The RFP received six proposals from developers. See ISO New England. (n.d.). *Extended-Term Transmission Planning Tariff Changes Key Project*. <https://www.iso-ne.com/committees/key-projects/implemented/extended-term-transmission-planning-key-project>; ISO New England. (2025). *Longer-Term Proposals Summary* https://www.iso-ne.com/static-assets/documents/100030/2025_ltpp_rfp_proposal_summaries_rev1_clean.pdf

³³ Maine Public Utilities Commission. (2025). *Request for Proposals for Renewable Energy Generation and Transmission Projects Pursuant to the Northern Maine Renewable Energy Development Program*. <https://www.maine.gov/mpuc/regulated-utilities/electricity/rfp-awarded-contracts/2025-00361>

In addition, public financing could also advance broader policy objectives by attaching labor, community engagement, community benefits, supply chain (e.g., for HVDC transmission for offshore wind), conservation, or environmental restoration covenants to transmission investments. Community benefits, in particular, should be strongly considered as a guardrail to ensure

that savings from public financing are passed on to ratepayers and community members – a core goal of any public financing approach.³⁴

Power Advisory also considered several variants to the primary implementation mechanism to achieve policy goals (see Figure 5).

Figure 5: Variations in Implementation to Achieve Broader Policy Objectives

Variant	Purpose	Benefits	Structure
Public Power Participation	<ol style="list-style-type: none"> Utilize existing public financing capability of municipal utilities and co-ops to provide low-cost debt and equity. Enable public power to participate in transmission buildout. 	<ol style="list-style-type: none"> Reduce transmission revenue requirement and ratepayer costs. Leverage public power experience with project development. 	In the Public Debt and Equity Backed scenario, municipal utilities and co-ops could provide equity up to funding limits equivalent to their regional load share (~15%).
Community Benefits Funding	Raise funds to benefit communities affected by transmission projects.	Increase public acceptance and reduce permitting risk.	In the Public Debt and Equity Backed scenario, earnings on public equity are used to fund public benefits.
Private Lender Discipline	Provide role for private lenders to utilize transmission project finance experience in project governance.	Reduce risks of cost overruns and delays during project construction.	In the Public Debt at FID and Public Debt and Equity Backed scenarios private lenders could provide a minority share (e.g., 10%) of construction financing.

³⁴ For more on the use of community benefits in transmission projects, see Clean Air Task Force & Environmental Defense Fund. (2025). *Beyond the Wires: Community Benefits from Transmission Projects*. <https://www.catf.us/resource/beyond-the-wires-community-benefits-from-transmission-projects>. In particular, the Sunrise Powerlink and Sycamore-Peñasquitos case study examines a model in which a nonprofit entity co-owns transmission line segments and invests profits into funding charitable programs and community organizations. This model could be modified to encompass a public entity co-owning a line and using the profits to fund community benefits.

SECTION 5

Policymaker Considerations and Next Steps

Conversations around public financing for transmission are actively under way in some New England states³⁵ and more nascent in others. States wishing to pursue public financing approaches on their own can do so by empowering existing public financing entities to offer debt and/or equity in future transmission solicitations conducted through the LTTP or Voluntary Agreement mechanisms, as outlined above. However, given the benefits of transmission across the region and existing mechanisms for collaboration, multistate approaches should be seriously considered and prioritized where feasible.

Policymakers should consider:

- Whether to strengthen existing authorities for financing entities or stand up new organizations³⁶
- Which policy priorities to incorporate into financing mechanisms (e.g., public power participation and community benefits)
- Which existing mechanisms can be leveraged to realize interstate collaboration on transmission public financing (e.g., the LTTP, Voluntary Agreement)
- How to determine financing terms that achieve ratepayer benefits without diminishing private sector interest and resulting benefits of competition



³⁵ E.g., SP 371/LD 838 in Maine, which would establish a Maine Transmission Authority. SP 371, LD 838, An Act to Explore Public Financing and Ownership of Electric Transmission and Distribution Infrastructure, 132nd Maine Legislature, <https://legislature.maine.gov/billtracker/#Paper/SP0371?legislature=132>.

³⁶ For full analysis of these options and precedents in other states, see Joshua Macey's accompanying legal and institutional report, <https://www.catf.us/resource/smarter-way-pay-public-financing-affordable-transmission-development-new-england/>.



SECTION 6

Conclusion

Policymakers and ratepayers are faced with a fundamental dilemma when it comes to strengthening the power grid in New England. A substantial amount of investment is needed to repair, update, modernize, and make resilient the region's transmission network, and yet the costs of conventional approaches to doing so have already begun to strain ratepayer bills. Incremental savings are insufficient for such major expenditures, which require a stepwise change in the approach to transmission investment and financing that can offer deep consumer savings relative to the status quo, without sacrificing anything on project delivery, technology benefits, or accountability. Public financing offers the strongest potential identified yet to catalyze this stepwise change, and to put the region on a fundamentally different trajectory for the next 40-plus years of investing in the transmission system. Ratepayers will be the primary beneficiaries of this evolution, with the chance to save many billions of dollars over the coming decades. Policymakers and stakeholders should come together to pursue these promising solutions expeditiously.



APPENDIX

Building on a Foundation of Oversight and Collaboration

Asset Condition Projects and Broader Impacts on Transmission Planning and Financing

The New England states have already begun important collaborative work to hold costs down and build frameworks for longer-term planning, which can be built upon through transmission public financing mechanisms.

The region's aging grid infrastructure has contributed to a strong focus on reliability in transmission investment and planning. This has misaligned transmission investment decisions from more comprehensive planning and coordination needed to achieve a fully clean, high-energy future. Piecemeal local upgrade and replacement projects – in New England, called “asset condition projects” – have been prioritized. These and local reliability projects have also ballooned in cost, often with little oversight and few opportunities to review proposed projects for cost-efficiency.³⁷ Since 2023, more than \$4 billion of asset condition projects – a significant sum in the context of regional transmission investment – have been proposed for future construction.³⁸ As of October

2025, the estimated cost(s) of asset condition projects total about \$11.9 billion in the ISO New England footprint, a significant sum in the context of regional transmission investment.³⁹ While within this number there is variation between projects that are under construction, planned, or proposed (i.e. \$2.8 billion accounts for planned or proposed projects), these massive numbers indicate the possibility of scalable savings in the future as public financing could moderate these ratepayer costs.

With rising affordability concerns, states and key decision-makers are taking notice of the issues with growing transmission spending and taking steps in the right direction to address the issue. For example, states are rightfully prioritizing accountability on asset condition projects. NESCOE sent feedback to ISO New England on its guidelines for asset condition project evaluation,⁴⁰ and the ISO is now working to establish a first-ever Asset Condition Reviewer Role. Additionally, Maine's Office of the Public Advocate has asked FERC to mandate transmission owners to provide clear information on asset condition project cost prudence, and FERC has ruled in the Public Advocate's favor.⁴¹

³⁷ For instance, asset condition projects simply need to provide 90-day notice about their project and present about it in front of a committee at ISO New England, largely made up of other transmission owners. This provides very little oversight, and very little opportunity to stop or modify projects for cost-efficiency.

³⁸ Poplavska, A., & LaRusso, J. (2025, March 17). *Acadia Center Explains: The Need for an Independent Transmission Monitor (ITM)* [Fact sheet]. Acadia Center. <https://acadiacenter.org/resource/acadia-center-explains-the-need-for-an-independent-transmission-monitor-itm>

³⁹ ISO New England. (2025). *RSP Project List and Asset Condition List – October 2025 Update*. https://www.iso-ne.com/static-assets/documents/100029/final_project_list_presentation_oct_2025.pdf

⁴⁰ New England States Committee on Electricity. (2023, September 15). *Asset Condition Process Improvements – PAC Guidelines*. <https://nescoe.com/resource-center/asset-condition-process-improvements-pac-guidelines>

⁴¹ This is for projects placed in service in 2022. See Lamson, J. (2025, December 18). *Maine Public Advocate Asks FERC for Hearing on Asset Condition Costs*. *RTO Insider*. <https://www.rtoinsider.com/122026-maine-public-advocate-asks-ferc-hearing-asset-condition-costs>

The asset condition project issue reveals that transmission owners and utilities are not currently incentivized to seek cost savings for asset condition and other smaller projects, as they receive a generous return on equity that rewards growth for the sake of growth. The existing system also does not incentivize transmission owners and operators to prioritize or co-prioritize larger and more complex but badly needed longer-distance lines, or to plan with neighboring jurisdictions or transmission owners to cooperate in building these lines. Ongoing oversight efforts should therefore be paired with efforts to promote smart transmission planning and reduce costs through innovative public financing approaches.

State Collaboration

Given ISO New England’s projections that significant investment will be required to build out the region’s future grid, the development of strategies to minimize cost and associated rate increases on consumers is vitally important. Some cost control strategies focus on increasing transmission capacity in existing rights of way to minimize the need for harder-to-build and more expensive “greenfield” construction. Grid-enhancing technologies and advanced conductors will play an important role in implementing that strategy as well.

But enhancements to increase the capacity and reliability of the existing transmission system and the unavoidable need to build new transmission will still require investments costing billions of dollars. And, as project financing (cost of capital) and development costs have the potential to substantially increase overall transmission costs, actions to minimize rate impacts are needed.

Fortunately, the New England states have already taken collaborative steps to develop new transmission:

- ISO New England’s LTTP process
- The creation of the Northeast States Collaborative on Interregional Transmission. In 2024, ten states signed a memorandum of understanding with the commitment to coordinate deeply and accelerate the development of interregional transmission.⁴²
- Leaders from six New England states are working with governors, premiers, and politicians from the five Canadian provinces to pledge support for interregional transmission development and cross-border grid collaboration.⁴³

These existing fora for collaboration, coupled with the fact that the region is at the beginning of its ISO New England-recommended investment trajectory, provide an opportunity for new public financing approaches to help push down these inevitable, higher-order costs while also managing more immediate asset condition project, grid upgrade, and reliability-related costs.

⁴² The Collaborative recently conducted a Request for Information on interregional projects, receiving 18 responses from entities providing project ideas on interregional transmission, bids of support, grid management tools, and more. The Collaborative is pursuing a detailed evaluation from these responses, with more to come in 2026. See Johns Hopkins University Ralph O’Connor Sustainable Energy Institute. (n.d.). *Northeast States Collaborative on Interregional Transmission*. <https://energyinstitute.jhu.edu/northeast-states-collaborative-on-interregional-transmission>

⁴³ This has resulted in the repeated convenings of the Northeast International Committee on Energy (NICE) Committee and New England Governors and Eastern Canadian Premiers (NEG-ECP) Meetings, with a fall 2026 convening scheduled in Vermont.