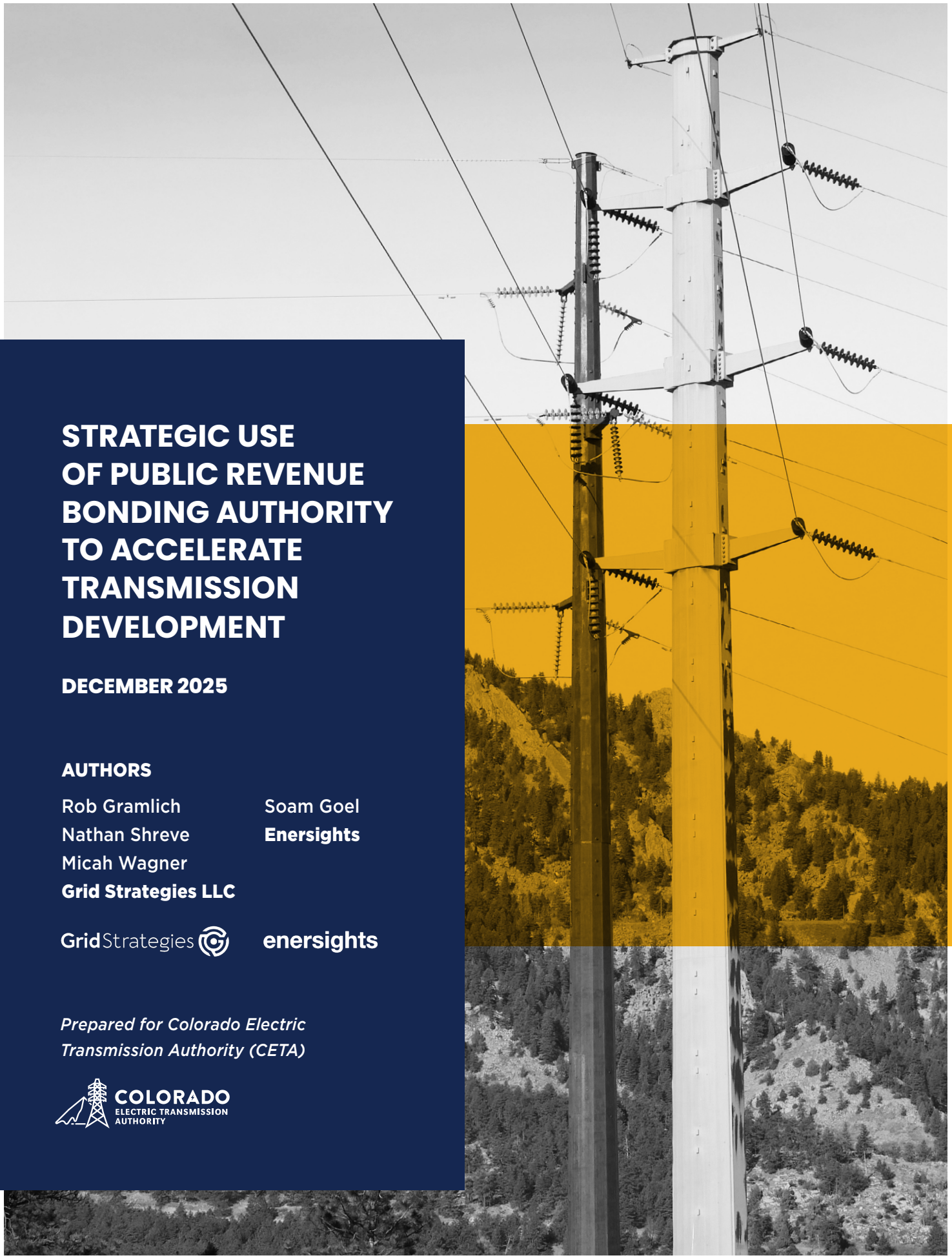

STRATEGIC USE OF PUBLIC REVENUE BONDING AUTHORITY TO ACCELERATE TRANSMISSION DEVELOPMENT

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COLORADO ELECTRIC TRANSMISSION AUTHORITY

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EXECUTIVE SUMMARY

Colorado faces a critical inflection point in its electric transmission system. Rapid demand growth, driven by electrification, industrial expansion, crypto currency, and data centers, is placing unprecedented demands on the grid. At the same time, Colorado has legislated ambitious decarbonization and economic development goals that depend on timely, large-scale, high-capacity transmission buildout. Many of the transmission projects needed to meet these goals fall outside any single utility's planning framework, face higher early-stage risks and potentially long development timelines, and may sometimes involve new entrants that may need support accessing capital markets efficiently. These structural gaps can stall projects that would otherwise deliver significant public benefits.

The Colorado Electric Transmission Authority (CETA) was created in 2021 to help fill these gaps. As a political subdivision of the state, CETA has statutory authority to issue revenue bonds, designate corridors, and coordinate multi-party development. Its mandate is to facilitate projects that advance statewide reliability, decarbonization, and economic development, and to potentially step in as a "developer of last resort" where neither utilities nor private developers are willing or able to proceed. When used strategically, this revenue bonding authority

can lower borrowing costs at the margin, align capital deployment with project milestones, and bring institutional legitimacy that accelerates permitting, coordination, and stakeholder alignment—thereby increasing the chances of transmission projects getting built.

Transmission financing fundamentals explain why this role matters. Projects with regulated tariffs or long-term contracts can attract low-cost debt on their own because of high repayment certainty. Conversely, there are projects that post development will secure revenues given the market problem they address, but advancing development with sole reliance on equity can become challenging. During development, as risk falls over time, the cost of capital also falls with it—but only if early risks and any capital gaps during the development process can be bridged cost effectively. Public financing is well positioned to serve precisely that function. When deployed selectively, it can shorten development timelines, avoid negative carry, support bankability, and ultimately reduce the levelized cost of delivered power to consumers.

Because revenue certainty varies by business model, different types of transmission require different financing approaches. Incumbent utility investments generally carry low risk and secure debt directly on utility balance sheets. Competitive regulated projects selected through independent system operator (ISO) and regional transmission organization (RTO) procurements require bidders to expend capital up front before revenue is assured. Merchant Build-Own-Transfer (BOT) lines must finance permitting and construction entirely before transferring to a regulated owner. Merchant offtake projects face ongoing counterparty and capacity utilization risk that requires threshold contracted volumes before lenders engage. Each context presents distinct financing barriers, and distinct opportunities for CETA to support projects and unlock value.

CETA's revenue bonding authority can create meaningful value by partnering with transmission developers to strategically address stages of the development cycle where conventional capital is scarce or expensive. Its value lies in complementing, rather than displacing, existing financing approaches. The first primary use case for CETA's revenue bonding authority is to provide selective early-stage development strategic support for merchant transmission projects. CETA can provide milestone-based capital in selected situations for permitting, stakeholder engagement, and right-of-way acquisition when private investors may not finance these activities. The second primary use case for CETA's revenue bonding authority is to fill capital gaps faced by developers of Merchant BOT projects by providing transitional or bridge financing that is more flexible and patient to accommodate the uncertainties of such gaps. CETA can offer short-term financing that reduces reliance on 3rd party bridge funding or sole reliance on equity to smooth the path to utility acquisition. A third potential use case is for CETA to provide targeted support for regulated incumbent or competitive projects, in defined circumstances, by advancing discrete public-benefit upgrades or strengthen competitive bids by supplying capital aligned with project timing and development milestones.

With its revenue bonding authority, CETA can partner with developers to tailor financing structures that respond to development risks rather than forcing projects into standard templates. Milestone-based or delayed-draw bonds can reduce sole reliance on equity by releasing capital only when major approvals are secured. Revenue-aligned repayment, such as capitalized interest or interest-only periods, can ensure that debt service does not begin before tariff or contract revenues flow. And pooled issuances can aggregate smaller municipal

or cooperative needs to achieve scale, diversify risk, and tap a broader investor base. These targeted tools allow CETA to act as a catalytic co-financing partner while keeping financial responsibility tied to project performance, not the state balance sheet.

Just as important, CETA brings institutional legitimacy and convening power that private developers alone cannot. When a public authority participates after its own due diligence, communities, local governments, and regulators can receive a credible signal that a project is aligned with Colorado's long-term interests, not simply a commercial venture for out-of-state investors. That signal can potentially accelerate permitting and improve execution certainty, particularly on projects that cross multiple jurisdictions or involve both incumbents and independents. Experience in other states, especially with New Mexico's Renewable Energy Transmission Authority, shows that this platform function often determines whether major lines actually get built.

To build a durable financing platform, CETA should standardize its approach early: publish repeatable documentation, include customary municipal bond features that investors recognize, and incorporate a modest public bond component in its initial transactions so each project contributes to a growing project execution track record. Strong coordination with utilities, co-ops, and regional planners will ensure that these projects advance and enter regulated cost recovery in a timely manner. A focused project selection approach will demonstrate that CETA complements rather than competes with traditional developers.

By supplying selective early-stage capital through its revenue bonding authority, CETA can strengthen the overall trajectory of a project's financing rather than altering the fundamental price of the earliest dollars. Early-stage development inherently carries greater uncertainty than later-stage development, and therefore is more costly to finance. In many cases, private investors may be unable or unwilling to participate at this point in the development cycle. A public authority can help bridge this gap with selective risk-tolerant, milestone-aligned financing tools that are suited to development uncertainty. Once key early-stage milestones are achieved, the project's risk profile improves, enabling the transition to standard private capital or utility-sponsored financing. In this way, public financing serves as a catalyst that enables private investment, rather than displacing or competing with it.

Public financing offers incremental cost advantages, but its real value lies in enabling transmission projects that deliver long-term reliability, cost, and policy benefits for Colorado. CETA can generate marginal, incremental cost savings through state tax exemptions on revenue bonds—particularly for early-stage development activities. Far more importantly, CETA can help advance transmission lines that private markets cannot on their own, which will ultimately deliver long-term net benefits to ratepayers through reduced congestion and improved reliability. Used strategically alongside traditional financing tools, CETA's bonds can help ensure that Colorado builds the high-capacity transmission backbone required for reliability, affordability, meeting state mandated goals, and continued economic growth.

INTRODUCTION

The United States is entering a period of unprecedented need for electric transmission development. Rapid load growth and a transitioning supply (i.e., power generation) mix are placing new pressures on the nation's electric grid. Expanding the high-voltage transmission backbone needed to serve these demands will require improving planning and permitting processes, along with finding ways to leverage financing tools that can help advance transmission projects that may otherwise stall or proceed too slowly.

Public financing represents one such tool to help accelerate the development of needed transmission. While most transmission continues to be financed through conventional private capital backed by regulated cost recovery, certain high-value projects may face financing barriers that private markets alone are unable to efficiently resolve. These might include multi-state lines with cost-allocation uncertainty, or policy-driven infrastructure outside a utility's core reliability mandate. In select cases such as these, public financing can complement private capital by reducing borrowing costs, mitigating execution risk, and enabling investment where market incentives/mechanisms do not fully reflect system and overall economic benefits.

CETA was established in 2021 through SB21-072 as an independent, special purpose authority of the State of Colorado[1] to plan, facilitate, and accelerate needed transmission development

1 Public Utilities Commission Modernize Electric Transmission Infrastructure, Colo. Sess. Laws 2021, ch. 292 (S.B. 21-072), at 9, https://leg.colorado.gov/bills/sb21-072 (hereinafter, "Colorado Electric Transmission Authority Act").

that improves reliability, supports state policy goals, and advances economic development. CETA is empowered to designate intrastate transmission corridors, coordinate interstate corridors, and select qualified transmission operators to finance, build, and operate eligible transmission and interconnected storage facilities. It can also act as a "developer of last resort" when no other party is willing or able to advance a project,[2] ensuring its role is additive to, rather than duplicative of, private and utility-led development.

A core element of this mandate is CETA's statutory authority to issue revenue bonds. Through access to public debt markets, CETA can provide lower-cost or more flexible financing structures that enhance project bankability, particularly during risk-intensive early stages. When applied strategically, revenue bonding authority can unlock transmission that delivers broad public benefits but struggles under conventional financing frameworks.

This paper outlines how CETA can strategically and selectively deploy its revenue bonding authority to help advance needed transmission projects. Section 1 reviews the growing need for transmission; Section 2 introduces financing fundamentals; and Section 3 examines how different revenue models influence financing cost and risk. Section 4 then considers where and how public financing—and CETA's bonding authority in particular—can address targeted gaps. Finally, Section 5 provides a framework for deploying this authority in a scalable way that deepens market credibility over time. CETA's bonding authority is a tool that, if designed and deployed carefully, can complement existing capital sources and address targeted gaps to accelerate the development of high-value transmission infrastructure essential for Colorado's future reliability, affordability, and economic growth.

2 *Id*, at 16.

SECTION 1

MORE TRANSMISSION IS NEEDED AS THE BACKBONE FOR A MODERN GRID

The United States is entering a new era of electricity demand. After decades of flat or declining load, utilities and transmission planners are now revising their forecasts sharply upward. Electrification across transportation, buildings, and industry—alongside a boom in data center development, artificial intelligence, and domestic manufacturing—is driving this rapid and sustained growth in electricity demand. Recent analysis suggests that peak demand is on track to rise by more than 20% by the end of the decade, with a sixfold increase from the 2022 five-year load growth forecast to the 2025 forecast only three years later.[3]

High-voltage (345 kV or greater) transmission is an essential component of meeting this surging electricity demand to maintain a reliable, affordable, and resilient electric system. Transmission infrastructure enables electricity to flow efficiently from where it is generated to where it is needed, often across vast distances and jurisdictional boundaries. Modern transmission lines connect diverse resources, reduce congestion costs, and strengthen the grid's ability to respond to extreme weather, unplanned outages, or sudden shifts in demand. CETA's 2024 *Transmission Capacity Expansion Study* identified a significant long-term need for transmission in Colorado, with a Reference Case Portfolio that calls for $4.5 billion in additional grid investment. This includes nearly 550 miles of new greenfield lines and over 3,000 miles of reconductoring and rebuild projects that are needed to meet the reliability, deliverability, and economic needs of the system.[4] From a nationwide affordability perspective, investment in well-planned, high-capacity transmission could save residential consumers $6.3–10.4 billion per year across the United States after accounting for the cost of the transmission.[5]

But despite its central importance, the pace of transmission expansion across the country remains relatively slow. In 2024, only 888 miles of high-voltage transmission were completed

3 Grid Strategies LLC, *Power Demand Forecasts Revised Up for Third Year Running, Led by Data Centers* (Nov. 2025), https://gridstrategiesllc.com/wp-content/uploads/Grid-Strategies-National-Load-Growth-Report-2025.pdf.

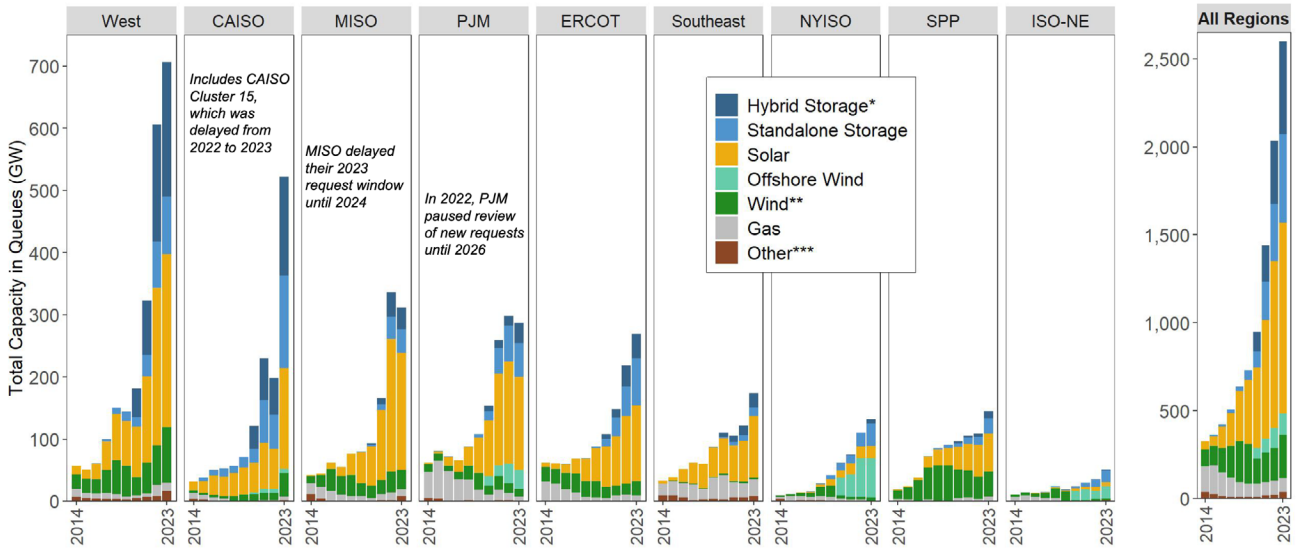
4 CETA, *Transmission System Capacity Expansion Study for Colorado* (Dec. 2024), at 36, https://static1.squarespace.com/static/6390da3a799a023d4be2c27e/t/675b79237efd431c080048e7/1734048042545/CETA+Transmission+Study+Final+Report+-+241012.pdf.

5 Grid Strategies LLC, *Large-Scale Transmission Deployment Saves Consumers Money* (Jun. 2025), at 1, https://gridstrategiesllc.com/wp-content/uploads/GS_Transmission-Deployment-Saves-Consumers-Money_vf.pdf.

nationwide.[6] By contrast, the 2024 National Transmission Planning Study by the U.S. Department of Energy (DOE) found that the lowest-cost U.S. electricity system portfolios that meet future demand growth and reliability needs require expanding the total transmission system of the contiguous United States by 2.1 to 2.6 times its 2020 size by 2050. DOE found that under high demand growth (i.e., 2.7% growth per year), that range increases to 2.5 to 3.3 times the 2020 system. Even under the most conservative scenario of needed transmission expansion—2.1 times by 2050—DOE's findings imply the need to build roughly 5,000 miles per year of high-voltage transmission to support grid reliability, reduce congestion, and enable continued economic growth.[7]

The growing length of interconnection queues is a clear indicator for the need for new transmission. According to the Lawrence Berkeley National Laboratory, at the end of 2024, nearly 2.6 TW of total generation and storage capacity were actively seeking connection to the grid. This is nearly twice the current total U.S. generating capacity of 1.28 TW.[8] The total capacity active in queues across the country is growing every year, and interconnection wait times are on the rise: The typical duration from connection request to commercial operation increased from less than 2 years for projects built in 2000–2007 to over 4 years for those built in 2018–2023, with a median of 5 years for projects built in 2023.[9]

FIGURE 1 | Active queue capacity by region, 2014-2023



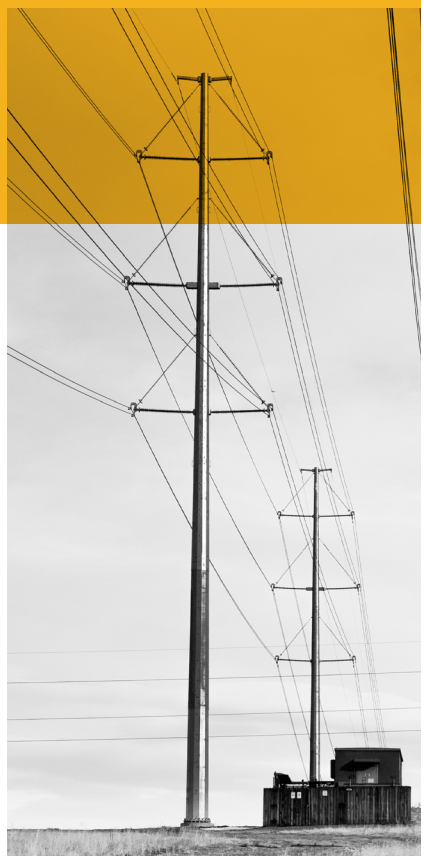
Source: Lawrence Berkeley National Laboratory

6 Grid Strategies LLC, *Fewer New Miles: Strategies industries held back by slow pace of transmission – Rev. 1* (Jul. 2025), at 4, https://gridstrategiesllc.com/wp-content/uploads/ACEG_Grid-Strategies_Fewer-New-Miles-2025_Rev-1.pdf.

7 *Id.* at 16.

8 Lawrence Berkeley National Laboratory, *Grid connection backlog grows by 30% in 2023, dominated by requests for solar, wind, and energy storage* (Apr. 2024), https://emp.lbl.gov/news/grid-connection-backlog-grows-30-2023-dominated-requests-solar-wind-and-energy-storage#:~:text=The%20total%20capacity%20in%20the,than%20the%20queue%20in%202014.

9 Lawrence Berkeley National Laboratory, *Queued Up: 2024 Edition, Characteristics of Power Plants Seeking Transmission Interconnection As of the End of 2023* (Apr. 2024), https://emp.lbl.gov/publications/queued-2024-edition-characteristics.



Transmission is also critical to system reliability. In a 2024 study, the North American Electric Reliability Corporation (NERC) concluded that the U.S. grid will require at least 35 GW of new interregional transfer capacity by 2033 to ensure adequate reliability during periods of extreme weather.[10] As the frequency and severity of extreme weather events increases, a stronger transmission system will be necessary to prevent widespread outages and ensure resilience.

System reliability is especially relevant, considering that much of today's grid was constructed in the mid-20th century. Across the country, over 70% of transmission and distribution assets are past the midpoint of their 50-year expected lifespan.[11] As aging infrastructure approaches the end of its useful life, utilities and regulators face a choice: replace existing lines with like-for-like low-capacity infrastructure, or invest in higher-capacity upgrades that deliver better value over the long term. Without coordinated planning, the default will often be the former, even when the latter would deliver greater economic and reliability benefits.

Planning and development of high-capacity transmission is rising

Grid operators have announced massive increases in transmission investment across the country:

- The Southwest Power Pool (SPP) Board of Directors approved the 2025 Integrated Transmission Plan (ITP), representing $8.6 billion in investment;[12]
- The Electric Reliability Council of Texas (ERCOT) Board of Directors approved the 765 kV Strategic Transmission Expansion Plan (STEP) Eastern Backbone Regional Planning Group (RPG) project, representing nearly $9.4 billion in investment;[13]
- The Midcontinent Independent System Operator (MISO) Board of Directors approved the 2025 MISO Transmission Expansion Plan (MTEP25), which represents nearly $12.3 billion in investment;[14]
- The California Independent System Operator (CAISO) Board of Governors approved $4.8 billion in projects as part of its 2024–2025 Transmission Planning Process (TPP).[15]

10 NERC, *Interregional Transfer Capability Study* (Dec. 2024), https://www.nerc.com/pa/RAPA/Documents/ITCS_Final_Report.pdf.

11 U.S. Department of Energy, *What does it take to modernize the U.S. electric grid?* (Oct. 2023), accessed Sept. 26, 2025, https://www.energy.gov/gdo/articles/what-does-it-take-modernize-us-electric-grid.

12 SPP, *SPP board advances regional transmission plan to keep pace with accelerating growth and ensure grid reliability* (Nov. 2025), https://www.spp.org/news-list/spp-board-advances-regional-transmission-plan-to-keep-pace-with-accelerating-growth-and-ensure-grid-reliability/.

13 ERCOT, *Item 14.1: Recommendation Regarding AEP Texas, CPS Energy, Oncor and CNP Texas 765-kV STEP Eastern Backbone Regional Planning Group (RPG) Project* (Dec. 2025), https://www.ercot.com/files/docs/2025/12/01/14.1-25RPG025-AEP-Texas-CPS-Energy-Oncor-and-CNP-Texas-765-kV-STEP-Eastern-Backbone-Project.pdf.

14 MISO, *MTEP25 Transmission Portfolio Report* (Dec. 2025), https://cdn.misoenergy.org/MTEP25%20Report731648.pdf.

15 CAISO, *Board Approved 2024-2025 Transmission Plan* (May 2025), https://stakeholdercenter.caiso.com/RecurringStakeholderProcesses/2024-2025-Transmission-planning-process.

In 2024, transmission congestion surpassed $12 billion nationwide—these costs are ultimately borne by consumers.[16] Without significant new high-capacity transmission infrastructure, these costs are expected to increase as demand continues to surge, and new generation is added to meet this growth.

Bottlenecks in transmission development often carry financing implications

While many of the obstacles to building transmission arise in the realms of planning, permitting, or stakeholder alignment, each of these challenges ultimately has significant implications for how transmission is financed. Transmission projects have significant financing needs years before they begin earning regulated revenues or contractual payments. Any delays, uncertainties, or gaps in project development affect the perceived risk profile of the project and therefore the cost and availability of capital. The table below summarizes several recurring development bottlenecks and highlights how they influence financing dynamics. Understanding these dynamics provides essential context for Section 2, which outlines the fundamentals of transmission financing and how investors assess risk.

TABLE 1 | Key bottlenecks that routinely stall transmission development

Bottleneck	Description
Cost allocation disputes	Utilities are generally authorized and incentivized to serve retail load within their own service territories at the lowest cost. Investing in projects that benefit other regions may fall outside the scope of their regulatory mandate, or may introduce complexity in cost recovery that makes participation seem unattractive. States and utilities may disagree over who benefits—and by how much—and therefore who should pay. As a result, many high-value interregional transmission projects fail to attract utility investment, even when such projects could reduce system-wide costs or enhance reliability. For example, states may oppose paying for infrastructure that enables the export of generation from another state, while utilities may resist absorbing costs without clear benefits to their own ratepayers.
Rate impact sensitivity	Utilities and regulators are highly attentive to near-term retail rate impacts, which can create reluctance to undertake major capital-intensive transmission expansions. In vertically integrated states especially, political and regulatory incentives often reward cost containment and can discourage projects whose benefits accrue gradually or outside a utility's core service territory. This dynamic often leads to a preference for incremental, low-capital solutions, even when higher-capacity lines would provide long-term net affordability and reliability benefits over time. Credit rating agencies also closely monitor utility balance sheet strength and capital planning, and may respond negatively if a utility's planned investment levels appear likely to raise rates too quickly.
Limited tools for independent developers	Merchant projects built by independent developers generally do not have the benefit of regulated cost recovery or guaranteed revenue from captive customers in a service territory, making their financing riskier for investors. The risk profile of a multi-billion-dollar transmission project with multi-year permitting timelines and uncertainties limit feasible financing options for developers, so lower-cost financing is often unavailable. These developers usually must finance the high risk early-stage development capital with higher cost equity, often relying on anchor customers or federal support (such as DOE's Transmission Facilitation Program) to attract investment. See further discussion in Sections 2 and 3.

16 Grid Strategies LLC, *Transmission Congestion in 2024* (Oct. 2025), https://gridstrategiesllc.com/project/transmission-congestion-in-the-u-s/.

SECTION 2

OVERVIEW OF TRANSMISSION FINANCING

Building high-capacity transmission infrastructure requires substantial upfront investment, often hundreds of millions of dollars for a single project. This capital is typically raised through a mix of debt and equity, each playing a distinct role in the project's financial structure.

- **Debt** is borrowed capital provided by lenders. These investors expect fixed, periodic interest payments and full repayment of the principal by maturity. Because these repayment terms are contractually guaranteed, lenders bear less risk than equity investors. In the event of financial distress, lenders have first claim on project revenues and assets before equity investors receive any returns. As a result, debt financing generally carries a lower cost of capital.
- **Equity** represents ownership in the project. Equity investors provide funds in exchange for a share of future profits, but repayment is neither fixed nor guaranteed. Their returns depend entirely on project performance. If the project fails to generate sufficient revenue, equity investors may receive little or no return. Because they take on greater risk, they require higher expected returns to justify their investment.

The overall cost of financing a project is captured by its weighted average cost of capital (WACC), which reflects the proportion and cost of both debt and equity. Projects that can support a larger share of debt, which is generally lower-cost than equity, will achieve a lower overall WACC than those that rely more heavily on equity. Given a set debt-to-equity ratio, a project can also realize a lower WACC through reducing the cost of the debt itself. For example, cutting the interest rate on the 50% debt portion of a $1 billion project by even 1% will reduce levelized cost materially, even without changing the debt-to-equity ratio. Anyone who has secured a home mortgage probably understands the impact of a small change in the rate of a loan.

Repayment certainty drives financing terms

The cost and availability of capital depend above all on repayment certainty, which is the

confidence investors have that they will be repaid in full and on time.[17] When transmission project revenues are legally secured and predictable, such as through a regulated tariff or long-term contract, lenders and equity investors view repayment risk as low. They are therefore willing to provide capital at lower required returns and on longer terms.

When revenue is uncertain, investors demand higher compensation for the higher risk they take by investing.[18] Lenders may shorten repayment periods, charge higher interest rates, or refuse to provide financing altogether, forcing developers to rely more heavily on expensive equity.

How is transmission project risk evaluated?

Table 2 | Key considerations for banks, institutional lenders, or rating agencies in determining the creditworthiness of a transmission project

Revenue model	How will the project generate revenues to repay investors? Is the revenue collected through an approved tariff, through long-term bilateral contracts (i.e., transmission capacity reservations), or through merchant developer exposure to market prices? Tariff-based recovery is generally considered the lowest risk, while uncontracted market-driven revenues are viewed as the most risky. This is explored further in Section 3.
Credit support mechanisms	Are repayment obligations backed by guarantees, reserves, or other credit enhancements? Parent-company guarantees or minimum-payment contracts from creditworthy counterparties can substantially strengthen a project's credit profile.
Development and construction risk	How far along is the project in the development timeline? Are key permits, rights-of-way, environmental approvals, and interconnection agreements secured? Projects early in development are inherently riskier because many factors outside the developer's control remain unresolved.
Debt service coverage and flexibility	Do projected revenues meet or exceed required debt payments? Creditors assess debt service coverage ratios (DSCR)—the ratio of cash flow available to service debt relative to required payments. Strong DSCRs indicate a cushion against fluctuations in cash flow, while thin coverage signals higher risk.
Counterparty quality	Who are the paying customers? Investment-grade utilities generally provide more creditworthy backing than non-investment grade counterparties, which affects the pricing and types of loans that are available.
Project structure and security	How are cashflows and repayment protected legally? Lenders look closely at the legal and contractual structure of the project, such as security interests in assets or the hierarchy of claims in case of default.
Team experience/ strength	Does the management team have a proven track record in executing large, complex, multistakeholder infrastructure projects successfully? Lenders also perform due diligence assessments on the engineering and construction vendors and their contractual relationship with the developer.

17 United States Department of Commerce, *Understanding Power Transmission Financing* (Dec. 2021), at 23, https://cldp.doc.gov/sites/default/files/2021-10/Understanding_Transmission_Financing.pdf (hereinafter, "Power Transmission Financing).

18 United States Department of Commerce, *Understanding Power Project Financing* (Dec. 2024), Second Edition, at 79, https://cldp.doc.gov/sites/default/files/2024-12/Understanding%20Power%20Project%20Financing%20Handbook%20%282nd%20edition%29%2011.28.2024%20.pdf.

Public financing can complement private capital

Private capital underpins the vast majority of transmission investment in the United States, and for projects with low risk, regulated cost recovery, it continues to provide a stable and well-established financing pathway. However, the financing fundamentals discussed above reveal a challenge: When repayment certainty is limited and/or development risk is high, private investors may raise return requirements, provide debt financing at a higher cost, or decline to finance projects at all. These risk-driven capital constraints can delay or downsize projects that are beneficial to the region and would ultimately improve reliability, reduce congestion, or enable access to lower-cost generation.

Public financing is well positioned to address these specific gaps to accelerate the development of projects that benefit the public regionally and beyond the immediately quantifiable dollar benefits. Its core function is not just to make inherently risky capital inexpensive, but to make capital available when transmission development bottlenecks, such as those outlined in Table 1, hinder the efficient flow of private investment. Public financing is not a substitute for private capital. Rather, it is most effective when used as a targeted, strategic enabler in the capital stack to enhance bankability or accelerate progress for select projects. In practice, this can include providing patient, milestone-based earlier-stage capital that absorbs select risks that private investors may price prohibitively, such as permitting, right-of-way acquisition, or interregional cost-allocation uncertainty, thereby enabling projects to advance that might otherwise stall.

Federal programs illustrate the catalytic role of public financing well. DOE's Loan Programs Office (now called Office of Energy Dominance Financing) has issued over $100 billion in commitments over the last 5 years, backing projects too capital-intensive or complex for private markets alone.[19] Meanwhile, DOE's Transmission Facilitation Program offers capacity contracts that guarantee revenue during the riskiest early years. Projects such as the Southline and Cimarron Link lines have already used this tool to secure financing that might otherwise have been out of reach.[20]

Debt issuance through public bonding authority

One of the primary tools available to public entities is the ability to issue bonds to raise long-term capital for infrastructure investment. Bonds are debt instruments sold to investors to raise large amounts of capital, with repayment scheduled over many years. The proceeds from bond issuance can be used to acquire, construct, or take equity ownership in infrastructure assets that generate long-term public value. This structure is particularly well-suited to infrastructure projects for two main reasons. First, such projects require large capital commitments that cannot be met through annual appropriations or short-term loans. Bonds give governments access to deep capital markets and allow them to fund projects at scale. Second, infrastructure assets provide benefits over many decades, making it appropriate to spread repayment across

19 U.S. Department of Energy, *LPO Year in Review 2024* (Jan. 2025), accessed September 30, 2025, https://www.energy.gov/lpo/articles/lpo-year-review-2024.

20 U.S. Department of Energy, *Transmission Facilitation Program Selections* (Oct. 2024), accessed September 30, 2025, https://www.energy.gov/gdo/transmission-facilitation-program-selections.

the same time horizon during which future users also benefit.[21] Public bonds generally fall into two categories:

- **General Obligation (GO)** bonds are repaid from the general funds of the issuing government and are backed by its full faith and credit, including taxing power. Because this backing is highly secure, GO bonds typically carry very low interest rates,[22] but often require voter approval.[23] While GO bonds are widely used to finance public works such as schools or roads, they are rarely used for transmission projects since utilities already have reliable, low-cost mechanisms for raising capital through rate recovery.
- **Revenue bonds**, by contrast, are repaid solely from the revenues generated by the specific project they finance, such as tariff collections, lease payments, or user fees. They do not rely on general tax revenues, do not require voter approval, and do not pledge the issuing government's taxing authority.[24] Because repayment depends on project performance, revenue bonds generally carry more credit risk than GO bonds.[25] Investors therefore evaluate their security based on the predictability and stability of the underlying revenue stream. In the transmission context, credit quality and pricing of revenue bonds hinges on whether the project's revenue source is a regulated cost-of-service rate—viewed as lower-risk—or a merchant tariff or contract structure, which carries greater uncertainty. Section 3 explores these differences in greater detail.

21 California Legislative Analyst's Office, *Frequently Asked Questions About Bond Financing* (Feb. 2007), accessed September 30, 2025, https://lao.ca.gov/2007/bond_financing/bond_financing_020507.aspx (hereinafter, "Bond Financing FAQ").

22 Berkeley Center for Law, Energy, & the Environment, *Improving Transmission Financing in California* (Oct. 2024), at 25, https://www.law.berkeley.edu/wp-content/uploads/2024/10/Improving-Transmission-Financing-in-California-CLEE.pdf (hereinafter, "Transmission Financing in California").

23 Bond Financing FAQ.

24 *Id.*

25 Transmission Financing in California, at 25.

Public bonding can lower the cost of capital

Public debt issuers can often borrow at lower yields than private developers, and in some cases lower than investor-owned utilities, depending on tax treatment, credit support, and market conditions. For example, large, investor-owned utilities might issue corporate bonds[26] at interest rates between 4.5–5.5% for 10–30 year maturities, while municipal authorities issuing tax-exempt bonds can sometimes achieve[27] yields closer to 2–3%. Even a modest reduction in borrowing costs can translate into significant savings when applied to large transmission projects.

As discussed earlier, lower borrowing costs depend foremost on repayment certainty. When repayment relies solely on project revenues, investors must account for the possibility of delays, underutilization, or shortfalls, which increases required yields. By contrast, mechanisms such as DOE loan guarantees, debt-service reserves, or Transmission Facilitation Program capacity contracts reduce this risk by providing a backstop for repayment, which allows investors to accept lower yields. From a financing perspective, this is equivalent to mitigating the credit risk from the project by shifting part of it to the public balance sheet. The stronger and more explicit that public backing, the more it reduces the cost of capital.

Tax advantages provide an additional source of cost savings. Interest on municipal-style bonds is typically exempt from federal and often state income taxes, which reduces the yield investors require. Public issuers also avoid corporate income tax, eliminating a layer of cost embedded in private utility financing. Both benefits can lower a project's WACC. However, the magnitude of the benefit depends on which exemptions apply across the federal, state, and local levels. Furthermore, these tax exemptions only deliver their full effect when paired with credible repayment security. Without credible protection against revenue risk, investors will still demand a premium even if the interest income is tax-exempt.

26 Raymond James, *Weekly Interest Rate Monitor, Fixed Income Solutions* (Sept. 2025), https://www.raymondjames.com/-/media/rj/dotcom/files/wealth-management/market-commentary-and-insights/bond-market-commentary/weekly_rate_monitor.pdf.

27 Municipal Securities Rulemaking Board, *2024 Municipal Market Year in Review* (Jan. 2025), at 7, https://www.msrb.org/sites/default/files/2025-01/MSRB-2024-Municipal-Market-Year-in-Review.pdf.

SECTION 3

COMPARING FOUR TYPES OF REVENUE MODELS FOR TRANSMISSION PROJECTS

A transmission project's revenue model fundamentally determines how it can be financed. The revenue model defines the mechanism through which a project recovers its costs and compensates investors, establishing who pays for transmission, how predictable those payments are, and how much financial risk investors must bear.

TABLE 3 | Transmission business models from a financing standpoint

	Regulated		Merchant	
Criteria	**#1 Regulated Incumbent**	**#2 Regulated Competitive**	**#3 Merchant BOT**	**#4 Merchant Offtake**
Revenue/ Return Model	FERC or state rate -based return awarded to incumbent utilities	FERC rate-based return with competitive procurement run by regional planner or state agency.	Non-incumbent developer builds, owns, and transfers (BOT) the transmission project to incumbent at Commercial Operation Date (COD) for regulated cost recovery	Non-incumbent developer secures offtake / revenue agreements through open access sale of transmission capacity
Participants	Incumbents	Incumbents and non-incumbent developers	Non-incumbent developers	Non-incumbent developers
Project Types (typical)	• Franchise territory upgrades • Reliability projects • Reconductoring • Right of first refusal (ROFR) Projects	• Projects that cut across different utility territories • Import / export across regions	• Projects that are market needs driven • Originated by a non-incumbent developer	• Projects not aligned with a single utility mandate • HVDC or long-haul export lines • Large-load serving corridors

	Regulated		Merchant	
Criteria	**#1 Regulated Incumbent**	**#2 Regulated Competitive**	**#3 Merchant BOT**	**#4 Merchant Offtake**
Typical Financing	Debt-equity ratio close to 50/50 approved by FERC or state	Debt-equity ratio close to 50/50 approved by FERC or state	High-cost equity and short-term construction loans during development and build; replaced with low-cost regulated utility financing upon transfer	Equity-heavy development; project finance debt utilized (may be in combination with construction loan) once sufficient contracted revenues secured
Financing Risks	Lowest risk, as all expenditures are typically recoverable in rates as long as they are prudent	Lower risk, though the front-end expenditures related to submitting a bid are high risk	High development and construction risk prior to transfer to incumbent	High development, construction, and potential counterparty credit risks

Regulated models

The regulated cost-of-service framework remains the backbone of U.S. transmission development and financing. Under this framework, revenues are recovered through transmission rates approved by federal or state regulators, which are ultimately paid by retail ratepayers through their utility bills. This creates a highly stable and predictable revenue stream, enabling developers to finance projects using a mix of debt and equity at relatively low cost.

Model #1: Regulated Incumbent

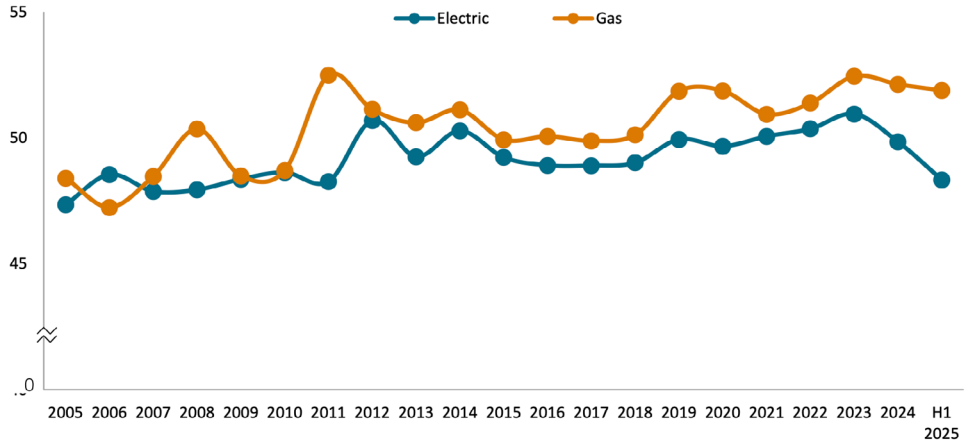
Under the regulated incumbent model, transmission is developed and owned by incumbent utilities within their franchise territories. These utilities recover their costs through Federal Energy Regulatory Commission (FERC)- or state-approved cost-of-service transmission rates, which guarantee repayment of prudently incurred costs plus an additional allowed return. Since revenues from transmission infrastructure are predictably and consistently collected through transmission charges embedded in customers' bills, incumbent utilities finance projects on their corporate balance sheets, drawing on long-term debt and shareholder equity in proportions approved by regulators.[28] The aim is to maintain a balanced capital structure, with utilities typically targeting a mix of about 50% debt and 50% equity.[29] This implies a prescribed *equity ratio* of 50%. In 2024, the average authorized equity ratio for electric utilities adopted by state regulators was 49.84%. Authorized equity ratios fell for electric utilities in the first half of 2025, with the average reaching a five-year low of 48.33%.[30]

28 The Brattle Group, *Introduction to Capital Structure & Liability Management* (Aug. 2018), https://www.brattle.com/wp-content/uploads/2021/05/14344_aga_and_eei_presentation.pdf (hereinafter, "Introduction to Capital Structure & Liability Management").

29 Id, at 5.

30 S&P Global, *Major energy rate case decisions in the US, January-June 2025* (Jul. 2025), at 6, https://psc.ky.gov/pscecf/2025-00114/kyle.j.smith124.civ%40army.mil/09232025013307/MPG_Copyright_Protected_WP_27.pdf (hereinafter, "2025 S&P rate data").

FIGURE 2 | Average equity ratios (%) for electric and gas utilities authorized by state commissions, 2005-2025



Source: S&P Global

Equity

Regulators determine a utility's rate base, which is the value of assets upon which the utility is permitted to earn a regulated return. The return on equity (ROE) is the allowed percentage return on the equity portion of that rate base, typically ranging from 9–11% in the United States.[31] A utility's allowable revenue requirement is then calculated to provide recovery of its capital and operating costs. A simplified calculation might look like:

Allowed Revenue = (Rate Base × (ROE+Interest on Debt)) + Depreciation + Operating Expenses

The average ROE authorized for electric utilities in rate cases decided in the first half of 2025 was 9.68%, slightly below the 9.74% average observed in full year 2024. The median ROE authorized in all electric utility rate cases was 9.70% in the first half of 2025 and 9.70% in full year 2024.[32,33]

Debt

Regulated utilities finance most transmission investments on their own balance sheets using corporate debt. Utilities typically maintain investment-grade credit ratings, often between A and BBB, reflecting the stability and predictability of cost recovery through regulated rates.[34,35] Because these bonds and loans are backed by the utility's full revenue stream and asset base, investors view them as relatively low risk, which allows utilities to borrow at attractive interest rates and long maturities.[36]

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31 Rocky Mountain Institute, *Rebalancing "Return on Equity" to Accelerate an Affordable Clean Energy Future* (Feb 2025), https://rmi.org/rebalancing-return-on-equity-to-accelerate-an-affordable-clean-energy-future/.

32 There were 23 electric ROE authorizations in the first half of 2025 versus 55 in full year 2024.

33 2025 S&P rate data, at 5.

34 S&P Global Ratings, *Industry Credit Outlook 2025, North America Regulated Utilities* (Jan. 2025), at 2, https://docs.cpuc.ca.gov/PublishedDocs/SupDoc/A2503010;A2503011;A2503012;A2503013/8376/574907596.pdf (hereinafter, "S&P Utility Industry Credit Outlook 2025").

35 Saber Partners LLC, *List of Investor-Owned Utility Securitization ROC/RRB Bond Transactions 1997-Present* (Dec 2022), https://saberpartners.com/list-of-investor-owned-utility-securitization-rocrrb-bond-transactions-1997-present/.

36 S&P Utility Industry Credit Outlook 2025, at 8.

Potential financing risks

Financing risk under this model is relatively low. As long as costs are deemed prudent and the project is included in the utility's transmission plan, recovery through rates is virtually guaranteed.[37] This allows utilities to access debt markets at favorable terms and maintain predictable equity returns.

Model #2: Regulated Competitive

Under the Regulated Competitive model, transmission projects are awarded through a competitive solicitation process rather than defaulting to incumbent utilities under a right of first refusal (ROFR). These solicitations are typically overseen by RTOs and ISOs under FERC Order No. 1000, and they are open to both incumbent utilities and non-incumbent developers, including independent transmission companies, generation affiliates, and infrastructure investors.[38]

Once awarded, these projects are financed and recovered through the same regulated cost-of-service framework used in traditional utility builds. The developer recovers prudently incurred costs and an authorized ROE through an approved transmission tariff. Like the Regulated Incumbent model, this structure provides a stable, low-risk revenue stream backed by transmission customers, allowing developers to raise capital on favorable terms. Developers generally target a debt-to-equity mix around 50/50. Equity is supported by the regulated rate base once the asset enters service, while debt may be raised through corporate bonds or project-level financing that may or may not be backed by the developer's balance sheet. Large incumbent utilities will issue investment-grade bonds, while non-incumbent developers may rely on parent guarantees or structured financing to achieve similar pricing. For example, NextEra Energy Transmission is part of NextEra Energy Capital Holdings,[39] which can benefit from a guarantee from its parent, NextEra Energy.[40]

Potential financing risks

Although revenue risk is low once a project is awarded, non-incumbent developers face front-end development risk that is not present in traditional utility builds. Developers must invest significant capital to prepare bids, conduct preliminary engineering, and assemble financial and permitting strategies, well before cost recovery is assured. These expenditures are typically not recoverable if the developer loses the solicitation, which differentiates this model from traditional utility builds where prudently incurred planning and development costs can be rolled into rates.[41]

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37 United States Environmental Protection Agency, *CERCLA 108(b) Economic Sector Profile: Electric Power Generation, Transmission, and Distribution Industry* (Jun. 2019), at 7, https://19january2021snapshot.epa.gov/sites/static/files/2019-07/documents/cercla_108b_economic_sector_profile.pdf.

38 Independent developers that have been selected to build competitive projects include NextEra Energy Transmission, LS Power, Lotus Infrastructure, and Viridon.

39 Next Era Energy, *Annual Report 2024* (2025), at 6, https://www.investor.nexteraenergy.com/-/media/Files/N/NEE-IR/investor-materials/shareholder-resources/2025/2024%20NEE%20Annual%20Report.pdf.

40 Moody's Ratings, *Credit Opinion: NextEra Energy Capital Holdings, Inc.* (May 2025), at 2, https://www.investor.nexteraenergy.com/-/media/Files/N/NEE-IR/fixed-income-investors/download-library/Moodys_Credit_Opinion-NextEra-Energy-Capital-12May2025.pdf.

41 Federal Energy Regulatory Commission, *Promoting Transmission Investment through Pricing Reform* (Order No. 679), 116 FERC ¶ 61,057, Docket No. RM06-4-000, issued July 20, 2006, https://www.federalregister.gov/documents/2020/04/02/2020-06321/electric-transmission-incentives-policy-under-section-219-of-the-federal-power-act.

Merchant models

In merchant transmission models, independent developers initiate projects without guaranteed cost recovery through regulated tariffs. Instead, developers that leverage merchant models rely on commercial strategies to generate revenues, which fundamentally changes their financing profile compared to utility-led cost-of-service projects. These models are often used for long-haul, interregional, or policy-driven projects that fall outside the core mandate of incumbent utilities.[42]

Merchant approaches allow non-incumbent developers to act entrepreneurially, pursuing opportunities in areas where planning may have not yet caught up with market needs. However, since developers bear significantly more permitting and market risk than utilities do and lack guaranteed revenue streams, early-stage development is typically funded with higher-cost equity, and long-term debt is generally available at the earliest after revenue agreements are secured.

Model #3: Merchant Build-Own-Transfer (BOT)

Under the Merchant Build-Own-Transfer (BOT) model, a non-incumbent developer originates, develops, and constructs a transmission project using private capital, then transfers ownership of the completed asset to a utility or other regulated entity at commercial operation. The financing profile of a Merchant BOT project differs significantly from regulated utility builds. During development and construction, the developer must rely on some combination of equity and construction financing, since no regulated revenue stream exists to support long-term borrowing.

Equity therefore funds early activities such as permitting, environmental reviews, routing, and engineering, which can require tens of millions of dollars and carry significant risk. If permitting is denied or the project fails to secure anchor customers, this capital may be lost entirely.[43] These costs, including the high-cost equity, are recovered in a developer fee rolled into the ultimate sale of the asset to a utility.

Potential financing risks

Developers typically use construction loans or bridge financing during the construction phase. These are repaid when the project is transferred to the utility. Once a utility or regulated entity acquires the project, it refinances the asset through its balance sheet, using a mix of debt and equity at regulated ratios, and recovers costs through an approved tariff.

This structure allocates early-stage development and construction risk to the private developer. If permitting fails or costs escalate, the developer bears those losses. By contrast, once transferred, the project moves into a lower-risk regulated environment. The Merchant BOT model therefore combines the entrepreneurial capacity of developers—who may be able to act

42 S&P Global, *Merchant developers fill 'void' in US interregional grid build-out* (Oct. 2023), https://www.spglobal.com/market-intelligence/en/news-insights/articles/2023/10/merchant-developers-fill-void-in-us-interregional-grid-build-out-76447354.

43 Importantly, only the development capital is at risk here; the major construction expenditures (towers, cables, etc.) are typically undertaken only after cost recovery is secured through binding customer contracts or regulatory agreements.

more quickly and pursue projects that utilities might not initiate—with the stable, long-term recovery mechanisms of regulated ownership.

Model #4: Merchant Offtake

With the Merchant Offtake model, a non-incumbent developer builds, owns, and operates a transmission project without transferring it to a utility or relying on regulated cost recovery. Instead, the developer earns revenues by selling transmission capacity through open solicitation processes. Customers, such as utilities, generators, data centers, or other large loads, sign agreements to use the line and pay for capacity. Contracts are often long-term but must be commercially negotiated, which means there is no guaranteed cost recovery for the project.

Because there is no guaranteed revenue stream, financing these projects follows a fundamentally different trajectory than regulated builds. Like the Merchant BOT model, early development is funded almost entirely with equity.[44] Developers must cover the cost of permitting, routing, stakeholder engagement, and interconnection deposits upfront, often over many years, without any assurance of cost recovery. Once enough capacity contracts are signed, project finance lenders can step in. As discussed in Section 2, lenders evaluate project characteristics such as the creditworthiness of the counterparties, the firmness of the agreements, and the overall revenue coverage relative to debt service. If the customer base is investment-grade and contracts are long term, developers can raise substantial amounts of debt at competitive rates. However, if counterparties are non-investment-grade or the contracts are short term or flexible, lenders will price in more risk, limiting leverage and increasing borrowing costs.

Potential financing risks

Because repayment depends entirely on customer performance, developers retain significant residual risk throughout the life of the project. If customers default, renegotiate, or do not fully utilize the line, revenues may fall short, and there is no regulatory backstop. As a result, merchant offtake projects typically require higher equity returns than regulated projects, and financing hinges on developers' ability to assemble a credible and creditworthy portfolio of customers.

Best-fit use cases for CETA's bonding authority

Although CETA's bonding authority can support projects under a variety of transmission revenue models, it is particularly well suited to situations where private capital markets face natural constraints that don't fit the standard underwriting rules—such as limited repayment certainty or elevated early-stage development risk. In these circumstances, CETA's ability to supply structured, selective-risk-tolerant capital can enhance bankability, improve timing alignment, and help projects reach milestones enabling private capital to more readily participate. Three use cases emerge as the strongest opportunities for CETA to add value.

44 Norton Rose Fulbright, *Merchant Transmission Projects: Financing Merchant Risks* (Aug. 2003), accessed September 30, 2025, https://www.projectfinance.law/publications/2003/august/merchant-transmission-projects/#:~:text=MR,not%20in%20the%20early%20stages.

1. **Earlier-stage development strategic support for merchant transmission projects (primary use case)**

   Merchant Build–Own–Transfer (BOT) and Merchant Offtake projects often encounter the greatest difficulty securing early-stage capital because developers must advance permitting, right-of-way acquisition/control, stakeholder engagement, environmental reviews, and engineering work before commercial arrangements provide a clear path to predictable revenue. Private lenders are likely to be hesitant to participate at this stage, and equity financing may be stretched due to capital requirements of multiple derisking development efforts underway.

   CETA's bonding authority is well positioned to help address these challenges. As an example, through milestone-based or delayed-draw revenue bonds, CETA can provide patient, smaller risk-commensurate capital early, aligned with development progress—an approach discussed further in Section 4. These tools can improve timing alignment by making capital available earlier than private debt markets typically would, reduce dependence solely on development equity, and enhance a project's perceived viability by signaling public-purpose support to landowners, communities, agencies, and future utility owners. Once key siting and permitting milestones are achieved, the project's risk profile improves, enabling a transition to lower-cost private capital or standard financing norms. This catalytic role—making selective-early-stage capital available as part of a structured offering while enhancing credibility—is where CETA can create the greatest impact.

2. **Transitional or bridge financing in Merchant BOT structures**

   In Merchant BOT models, a developer advances a project before ultimately transferring ownership to a utility. Even when the long-term revenue model is secure, the period between late-stage development and transfer often experiences capital gaps resulting in developers leaning on higher cost bridge financing.

   CETA can help smooth this challenge by providing structured bridge financing that is flexible and patient to accommodate the uncertainties of the gap period and gets repaid upon transfer to the utility. This approach aligns capital availability with project timing, reduces the need for higher-cost late-stage equity, and strengthens execution confidence for utilities by ensuring that the project reaches transfer in a timely and orderly fashion. CETA's involvement can also enhance project credibility and engagement with regional planners, utilities, and stakeholders, helping ensure a successful transition into regulated rate base once development work is complete.

3. **Targeted support for Regulated Incumbent or Regulated Competitive projects, in defined circumstances**

   While regulated utilities and competitive developers participating in cost-of-service models generally have access to lower-cost capital, there are circumstances where CETA's bonding authority can provide incremental, well-targeted support. In the Regulated Incumbent context, CETA can advance earlier-stage activities for projects that provide broad public benefits but may fall lower on a utility's capital priority list or face delays tied to multi-year rate planning cycles. Support for siting, environmental review, or community engagement can accelerate projects that are already aligned with reliability or policy needs.

In Regulated Competitive contexts, CETA can advance discrete public-benefit upgrades or strengthen competitive bids by supplying capital aligned with project timing and development milestones. This can help improve a project's financial competitiveness, reinforce its execution credibility, and increase the likelihood that the project is selected in competitive solicitations. Although these applications are narrower in scope than those in merchant models, they demonstrate how CETA's bonding authority can strategically complement private capital without displacing utility investment.

CETA's most effective role, without the backing of the state's credit, is not in generating large cost savings during inherently higher-risk early development, but rather in making selective earlier-stage capital available, appropriately structured, and aligned with public-interest objectives so that viable projects can advance to the stage where private financing becomes more feasible and affordable.

SECTION 4

IMPLEMENTING CETA'S BONDING AUTHORITY FOR VALUE CREATION

The statute establishing CETA provides it with important financial tools, including the ability to issue tax-exempt revenue bonds and serve as a conduit for financing transmission projects.[45] Used strategically, this authority allows CETA to participate as a financial intermediary and public-purpose partner for transmission projects that face development or financing challenges under conventional structures. The statute also sets clear boundaries around CETA's role, ensuring that its activities complement rather than compete with the core responsibilities of utilities or private developers.

CETA's statutory bonding authority and financial implications

CETA may issue revenue bonds to finance eligible transmission infrastructure. These bonds are solely backed by dedicated project revenue streams such as tariff collections or lease payments and do not rely on state tax revenues or a state guarantee. Because they are not general obligation bonds, repayment risk remains tied to the specific project rather than to Colorado taxpayers.[46] Investors therefore evaluate the underlying creditworthiness of the specific project when pricing the bonds. This structure keeps the bonds off the state balance sheet, allows for flexible financing tailored to individual project needs, and can modestly reduce borrowing costs relative to private taxable capital.

CETA's bonds are exempt from Colorado state taxes,[47] which improves after-tax investor returns and supports lower interest rates relative to taxable corporate debt.

Tax-exempt bonds are attractive to investors because they allow buyers to accept lower nominal interest rates while achieving the same after-tax return as higher-yielding taxable bonds. For example, an investor in the 35% federal tax bracket might need a 5% taxable bond

45 Colorado Electric Transmission Authority Act, at 12.
46 *Id*, at 22.
47 *Id*, at 20.

to receive an after-tax return of around 3%. A federally tax-exempt bond paying 3% provides the same return, enabling issuers to offer lower interest rates and still draw strong investor demand. While the value of state-level exemption is smaller than the value of federal exemption, it nonetheless provides a cost advantage, particularly for Colorado-based investors.[48]

Limits to public bonds: CETA cannot replace utility equity to drive cost reductions

A common misconception is that substituting public financing for private capital automatically lowers consumer costs. In regulated utility transmission, this assumption can oversimplify how capital structures work. Public revenue bonds cannot be used to alter a utility's regulated capital structure or substitute low-cost debt for high-cost equity in rate base. Because CETA's bonds are secured by project revenues rather than backed by the state, investors price them based on the project's risk profile and its ability to service debt. If additional debt is layered onto an optimally financed project that already has an appropriate debt–equity ratio, this additional debt will be "competing" for unchanged cash flow, reducing the debt service coverage ratio and increasing perceived risk. Lenders will view that higher leverage as increased risk and interest rates are likely to rise accordingly. The resulting financing cost is unlikely to be different than the case of just stretching debt in private financing, but with an increase in complexity of the financing.

In practical terms, substituting utility equity with CETA bonds would not reduce customer rates unless those bonds were backed by a state guarantee, which Colorado's statute explicitly prohibits. Without that guarantee, CETA's bonds are treated by the market as a non-recourse obligation, meaning that borrowing costs only see a modest reduction relative to private capital, mainly through state tax exemption.

CETA's value proposition lies in strategic partnership

CETA's greatest value lies not in attempting to replace utility financing structures, or in materially reducing the cost of inherently higher-risk capital, but in strategically and selectively providing capital where private markets are unable or unwilling to do so. CETA has the authority to enter into partnerships with public or private entities,[49] and can focus on closing gaps where private markets may not be offering strategic tools that help with execution of transmission projects. CETA can create innovative debt instruments that are more accommodative of early-stage and development risks that private investors price prohibitively, such as permitting, stakeholder engagement, and right-of-way acquisition. It can structure financing that aligns disbursements with project milestones, improving cash management during the highest-risk phases of development. CETA's participation can also enhance the credibility of projects with communities, regulators, and utilities by signaling a clear public-purpose mandate. While

48 Unlike federally tax-exempt bonds, CETA's bonds are exempt only from Colorado state taxes, not federal taxes. This limits the effect to a smaller pool of in-state investors, with yield reductions measured in a few basis points rather than a larger step-change.

49 Colorado Electric Transmission Authority Act, at 13.

the cost savings from state tax exemptions are incremental, they can further strengthen the financial profile of projects that otherwise sit at the margin of feasibility. In this way, CETA's value proposition is not solely conveyed through a financing discount. Rather, these tools position CETA as a catalytic partner that increases the probability, pace, and bankability of transmission projects that provide broad public benefits but face hurdles in traditional financing pathways.

Defining the limits of CETA's role

While CETA's bonding authority can be a powerful catalyst for accelerating transmission investment, it is equally important to define the limits of that role. Colorado statute authorizes CETA to act as a developer of last resort, but this paper, as CETA is just starting out, does not consider CETA taking full development, ownership, and operational responsibility of major transmission projects[50] to drive large-scale affordability benefits currently. In theory, CETA could enter into lease agreements or directly own transmission facilities, taking full development responsibility where no other party steps forward. In practice, however, such circumstances often are reflective of a project that is uneconomic or unviable under current conditions. CETA does not have a state balance sheet backing or other credit support to overcome those underlying economics, nor can it substitute public debt for utility equity in a way that would materially reduce long-term financing costs, as discussed above.

Instead, CETA would access the same bond markets as private developers and face identical investor scrutiny and pricing, meaning it cannot make uneconomic projects viable or provide cheap long-term capital where risk profiles do not support it. CETA's comparative advantage lies in targeted intervention, where it supplies structured, selective-risk-tolerant financing to help viable or near-viable projects overcome early-stage barriers that private capital cannot or will not bridge. CETA's role is to unlock projects that are already directionally sound, but face barriers in early stages. CETA's role is not to back or to shoulder the full responsibility for investments that may be uneconomic. This focused role ensures that CETA's involvement strengthens the overall transmission ecosystem effectively without creating misplaced expectations that CETA can resolve across-the-board transmission project financing barriers on its own.

50 Colorado Electric Transmission Authority Act, at 15, 16.

Lessons learned from New Mexico's RETA

New Mexico's Renewable Energy Transmission Authority (RETA) offers a practical example for how a state platform can help advance transmission projects that might otherwise stall. Established in 2007 to plan, finance, develop, and acquire high-voltage lines and related facilities, RETA combines statutory tools such as bonding authority, corridor designation, coordinated permitting support, and state tax advantages within a partnership model that works alongside private developers and utilities.[51] Private developers bring project origination, design, and execution capability, while RETA offers tools that address public-interest barriers that can slow or derail development.

A standardized services agreement underpins RETA's partnerships. Developers pay the agency a recurring fee in exchange for specific state participation. That participation can include engagement with state leadership, assistance with land owners, and coordination with local governments. These payments begin immediately, allowing RETA to cover project related costs well before a line reaches service.

In practice, RETA has applied these tools selectively through revenue bonds and co-development arrangements. For example, RETA issued $50 million in revenue bonds to fund transmission upgrades for the High Lonesome Mesa wind project.[52] One of its most notable successes, the 155-mile, 345 kV Western Spirit project, was developed in partnership with Pattern Energy.[53] Early stages were financed with developer equity and supported by RETA's partnership arrangement. The completed line was ultimately sold to Public Service Company of New Mexico and placed into regulated rate base, preserving consumer protections and ensuring long-term cost recovery. Through this sequence, RETA enabled a complex project to reach completion while aligning ownership with the appropriate utility. The project also delivered long-term local economic benefits by enabling build out of about 800 MWs of new power generation in New Mexico.[54] RETA continues to serve as a platform for multi-party development on major lines including SunZia, Rio Sol, Mora, and North Path—collectively representing more than $20 billion in investments when combined with the related generation investments.

The key lesson for Colorado is that RETA functions as an institutional platform rather than a planner or financier in parallel with utilities or developers. Its value is in solving problems that neither utilities nor private developers may be positioned to solve, such as facilitating permitting, land assembly, multi-jurisdiction coordination, and political engagement considerations. These are all factors that determine whether a promising concept becomes a financeable project. By providing a clear, predictable path to eventual utility ownership (or revenue contracting with developers/utilities) and regulated cost recovery, RETA reduces development uncertainty and increases confidence among investors and partners. That credibility is often the difference between a transmission project that remains stuck in planning and one that ultimately gets built.

51 Renewable Energy Transmission Authority Act, N.M. Sess. Laws 2007, N.M. Stat. § 62-16A-3, https://www.nmlegis.gov/Sessions/07%20Regular/final/HB0188.pdf (hereinafter, "NM RETA Act").

52 New Mexico Renewable Energy Transmission Authority, *High Lonesome Mesa Transmission Project,* accessed September 30, 2025, https://nmreta.com/high-lonesome-mesa-transmission-project/.

53 New Mexico Renewable Energy Transmission Authority, *Western Spirit Transmission Project*, accessed September 30, 2025, https://nmreta.com/western-spirit-transmission-project/ (hereinafter, "Western Spirit Transmission Project").

54 Pattern Energy, *Impacts of Renewable Wind Energy Projects* (2021), accessed September 30, 2025, https://www.nmlegis.gov/handouts/WNR%20090721%20Item%204%20Impacts%20of%20Renewable%20Wind%20Energy%20Projects.pdf (hereinafter, "Impacts of Renewable Wind Energy Projects").

CETA can structure its bond products to match project risk and revenue timing

Transmission projects require substantial expenditures long before any regulated tariff or contract revenue begins, so developers often rely on high-cost equity during this period because lenders will not commit capital until revenue certainty improves. By structuring bond products that align financing with when transmission projects incur costs and when they begin generating revenue, CETA can meaningfully improve feasibility and reduce financing costs during the most vulnerable phases of development.

Aligning capital deployment with development milestones

One of the most effective tools CETA can use is milestone-based or delayed-draw financing. Instead of providing the full amount upfront, the bond authorization would allow proceeds to be drawn only after the project achieves predefined development steps, such as securing critical permits, completing rights-of-way acquisition, advancing to notice-to-proceed, or initiating construction. If a milestone is delayed or never reached, the remaining undrawn bond proceeds are then withdrawn. This structure allows the project to reserve a long-term capital source while avoiding interest expense on idle cash balances. It directly reduces "negative carry," where developers would otherwise accrue interest on undrawn funds that are not yet put to productive use. It also protects investors, since funds are deployed only as risk declines.

A hypothetical Colorado example highlights this benefit. Consider a 200-mile transmission line that requires roughly $30 million in upfront environmental and engineering work years before it can generate revenue. Traditional lenders would likely refuse to provide low-cost, long-term debt so early in the process, forcing the developer to rely on equity or short-term loans at significantly higher cost. Assuming that such a project successfully goes through CETA's due diligence and that there would be a minority revenue bond position for CETA in the capital stack, CETA could approve funding for some critical portions of the early development work to increase the chances of success of the project. These early stage amounts are likely to be much smaller in comparison to the overall revenue bond agreement, but they will be directed to very specific pain points in development and be milestone based.

Capitalized interest and construction-period flexibility

In addition to timing capital deployment to the project schedule, CETA can align repayment with revenue ramp-up. Transmission lines typically generate no revenue during years of construction, creating cash pressures if debt obligations begin immediately. CETA can incorporate capitalized interest or interest-only periods into its bonds so that repayment obligations arise only once the project enters service. Capitalized interest allows the unpaid interest during construction to be added to the principal balance and repaid once revenues begin. Interest-only periods serve the same purpose, keeping debt service requirements minimal until there is cash flow available to support repayment. These types of structures are common in toll road, airport, and water system financing, where revenue does not flow until the infrastructure becomes operational.

Federal financing programs have demonstrated the value of structuring repayment obligations so they begin only once the project has established a secure revenue stream. DOE's Loan Programs Office structured its conditional loan guarantee for the Grain Belt Express project to include $470 million in capitalized interest, so the interest costs during construction were added to the total loan amount rather than paid as they accrued. This structure allows repayment to begin once the line enters service, rather than during the construction period.[55] A Colorado project expecting FERC-jurisdictional cost recovery could adopt a similar structure through CETA bond financing, deferring principal repayment until after the tariff is active and customer payments are collected.

This kind of grace period offers developers more choices to reduce financial pressure in a project's early years. A developer can focus on completing a line without the obligation of servicing debt before any power is flowing. From the investor's perspective, the risk of default is lower because the project isn't incurring more negative cash flow in the interim. Many public bond-funded projects use capitalized interest to ensure the debt is aligned with the project's revenue ramp-up.

Pooling smaller participants to achieve scale

CETA can also use its authority to improve the financing environment for smaller entities that struggle to achieve scale on their own. Many Colorado municipal utilities, electric cooperatives, and local authorities face urgent transmission upgrade needs but cannot easily issue debt cost-effectively due to small project sizes. CETA can act as a pooled issuer, aggregating multiple smaller transmission investments into a single revenue bond issuance that spreads risk across a diversified group of borrowers and creates a bond size that attracts a broader set of institutional investors. Pooling can yield multiple benefits. It can spread risk across different projects (i.e., investors are repaid from a basket of revenue streams rather than one source), lower per-project financing costs (i.e., one set of issuance fees and one transaction to cover many small deals), and can secure better interest rates because investors prefer larger, diversified, and more liquid bond offerings.

This approach is common in the municipal finance world, where state revolving funds or pooled bond banks aggregate local borrowers to achieve lower transaction costs and better pricing.[56] For example, state clean water revolving funds routinely pool dozens of small wastewater projects into large bond issuances, lowering per-project costs and attracting a wider investor base.[57] In the electric power world, the Massachusetts Municipal Wholesale Electric Company (MMWEC) provides a useful analogy in their Pooled Loan Program. This program aggregates capital needs from multiple members, enabling each to access lower borrowing costs and simplified financial administration due to economies of scale, as well as MMWEC's name

55 United States Department of Energy, *LPO Announces Conditional Commitment to Grain Belt Express to Construct High-Voltage Direct Current Transmission Project* (Nov. 2024), https://www.energy.gov/lpo/articles/lpo-announces-conditional-commitment-grain-belt-express-construct-high-voltage-direct.

56 Brookings, *State bond banks, the best kept secret in infrastructure finance, need a bigger role in rebuilding America* (Jun. 2024), https://www.brookings.edu/articles/state-bond-banks-the-best-kept-secret-in-infrastructure-finance-need-a-bigger-role-in-rebuilding-america/.

57 Environmental Protection Agency, *About the Clean Water State Revolving Fund (CWSRF)* (Mar. 2025), accessed September 30, 2025, https://www.epa.gov/cwsrf/about-clean-water-state-revolving-fund-cwsrf#works (hereinafter, "Clean Water State Revolving Funds").

recognition with lenders and investors.[58] A CETA-facilitated pooled issuance could similarly help fund resilience upgrades in mountain communities or modest interconnection expansions that, while locally essential, would be difficult for smaller entities to pursue independently.

As a hypothetical example, imagine several electric co-ops that each need a new substation or line upgrade to support new generation interconnection or reliability. Individually, each might only need $10–20 million, an amount too small to attract large investors or justify bond issuance costs. However, CETA might bundle five or ten of these upgrades into one $100+ million "Transmission Upgrade Revenue Bond." Each participating utility could sign a standard contract, obligating them to pay CETA for the cost of their project share, which in turn pays the bond debt service. By aggregating the projects, all participants benefit from scale, including lower interest rates, shared issuance expenses, and access to investors that wouldn't participate in a smaller, standalone offering.

CETA can provide institutional value

Beyond the direct financial terms of its bonds, CETA can add significant value by lending the credibility of a state entity to transmission projects. When a state or public authority engages in a project after conducting its own due diligence, it sends a clear signal to local governments, consumer advocates, and community groups that the project has been vetted through a transparent and objective process against state priorities. This institutional involvement can help projects navigate permitting challenges. The impact is not simply symbolic. Transmission projects face intense scrutiny regarding routing, land use, and local benefit. Public participation can shift stakeholder perceptions from skepticism to shared purpose, and that shift can markedly increase the likelihood a project proceeds smoothly. CETA's visibility and relationships within Colorado's political and regulatory landscape amplify this "branding effect," and that institutional proximity is essential to creating legitimacy in the early stages for large infrastructure projects that cross communities.

New Mexico's RETA illustrates a useful precedent. In the development of the Western Spirit Transmission project, RETA's participation signaled alignment with the state's economic development and policy objectives. The agency provided support for the complex permitting and land-access issues and facilitated the ultimate transfer of the completed project to Public Service Company of New Mexico, ensuring long-term ratepayer protection. Similarly, in Colorado, CETA's participation could help alleviate concerns from local governments, landowners, or advocacy groups that a line is necessary, beneficial, and anchored in the state's energy strategy rather than external commercial interests.

58 Massachusetts Municipal Wholesale Electric Company, *Pooled Loan Program*, accessed September 30, 2025, https://www.mmwec.org/what-we-do/pooled-loan-program/.

SECTION 5

PATH FORWARD FOR CETA: BUILDING A SCALABLE PUBLIC FINANCING PLATFORM

This paper outlines where public financing tools can matter most. Section 3 demonstrated that different revenue models carry distinct financing risks, while Section 4 showed how CETA can structure its bonds to directly address those risks through milestone-tied funding, revenue-aligned repayment, and pooled issuances. Section 5 applies those findings by defining how CETA can build a public financing platform that is repeatable, trusted, and targeted to the projects where public capital uniquely unlocks value. The goal is not for CETA to finance every transmission investment, but to deploy its authority where it fills financing gaps that private capital is structurally less suited to address.

Public bonds are underutilized despite proven potential

Despite their long history in financing major infrastructure, revenue bonds remain an underutilized tool in the transmission sector. In most jurisdictions, both utilities and private developers rely primarily on conventional financing through corporate debt or project financing with commercial bank loans. This underuse is not because public bonds lack financial value, but because of perceived complexity in accessing them.

From the perspective of large infrastructure sponsors, public financing mechanisms can appear administratively complex, slow to authorize, come with material compliance requirements, and/or are subject to political considerations. Developers and utilities pursuing multi-billion-dollar transmission projects are accustomed to standardized offerings from large commercial banks and underwriters, where timelines, covenants, and investor expectations are well understood.[59] By contrast, working with public authorities may be seen as involving additional layers of monitoring, disclosure, or political oversight, which can potentially introduce uncertainty and delay. Limitations in the statute language and/or inflexibility sometimes make the processes challenging in supporting long term transmission projects where a lot can change during the long development and construction timelines.

59 Brookings-Rockefeller, *Clean Energy Finance Through the Bond Market: A New Option for Progress* (Apr. 2024), at 4, https://www.brookings.edu/wp-content/uploads/2016/06/CleanEnergyFunds.pdf (hereinafter, "Clean Energy Finance Through the Bond Market").

Standardization and building a project execution track record

For CETA's revenue bonds to gain strong, sustainable market traction, they must be structured to look familiar to the large investor base that supports municipal finance and be replicable. Institutional investors typically seek standardized, transparent offerings, making it important to establish a consistent, investor-friendly product that can be replicated for future issuances, minimizing transaction friction costs.[60] The financing tools CETA employs should still "look and feel" like standard municipal bonds to tap into the deep and low-cost municipal bond market. Investor confidence (and thus lower interest rates) comes from familiarity and proven structures. Key features that make revenue bonds palatable to investors include: a clearly defined "flow of funds" (i.e., how project revenues will be collected and used to pay debt), well-defined rate covenants or coverage requirements that ensure the project's revenues will cover debt service by a healthy margin, and debt service reserve funds sized to customary levels (often 6–12 months of payments set aside as a cushion).

New Mexico's RETA found success by packaging its innovative financing within a standard municipal bond format. When RETA issued bonds for projects like High Lonesome Mesa, it did not use any unfamiliar financing instruments. Instead, RETA leaned on typical revenue bond safeguards, such as a lien on project revenues and escrow accounts. The result was a win-win: developers got a low-cost funding source when they needed it, and bondholders got the reassurance of standard protections. RETA's $50 million High Lonesome Mesa bond was successfully executed in the market.

However, the lack of project execution history using CETA bonds creates a chicken-and-egg problem: Investors hesitate to commit without a proven track record, yet that track record cannot develop without early issuances. Investors are going to evaluate the fundamentals of the project based on its own merit and CETA's participation will be viewed as an enhancement. CETA can build its track record by embedding a small, standardized public bond component into its early partnerships. Rather than offering public financing as an optional add-on, CETA could make participation in its standardized "platform product" contingent on allocating a modest share of each project—perhaps around 10%—to revenue bond financing through CETA. This approach ensures that every participating project contributes to building a portfolio of executed transactions, creating the performance data and investor confidence necessary to scale the model. By incorporating the public bond component as a routine part of the financing package, CETA can establish market familiarity with itself and the financing structure while keeping the process streamlined for developers accustomed to conventional project finance. Over time, familiarity and demonstrated success will normalize public bonding as a standard, viable option to be included as part of transmission project capital stacks in Colorado, rather than an exception.

Strategic project selection

CETA's initial bond issuances should target projects that fill gaps rather than compete with Colorado's incumbent utilities. Investor-owned utilities face their own capital constraints,

60 *Id.*

and must manage balance-sheet and rate-impact considerations before pursuing additional projects. CETA can accelerate progress by financing high-value projects without facing such issues. Furthermore, the statutory structure provides clear guardrails that prevent duplication or conflict with existing processes.[61] By statute, if another transmission provider pursues a project identified by CETA, the authority must withdraw. CETA cannot plan, finance, or construct any transmission that another developer is actively developing.[62]

This kind of strategy creates a shared-benefit model: Utilities could proceed with their highest-priority investments at a sustainable pace while CETA accelerates projects that would otherwise sit in planning queues. This would also build CETA's project execution history. The experience of New Mexico's RETA offers a useful precedent. When Public Service Company of New Mexico faced credit challenges around 2010, RETA partnered with private developers and investors to advance transmission projects that were focused on export of power from New Mexico and that the utility was not in a position to finance. By positioning itself as a flexible, reliable partner during periods when utilities might face financial or procedural headwinds, CETA can demonstrate the strategic importance of public bonding in keeping Colorado's transmission buildout on schedule.

Public financing support for reconductoring

Reconductoring projects can deliver significant capacity increases at relatively low cost by upgrading existing lines with High Performance Conductors.[63] However, these projects are well suited to utility balance sheet financing, given the clear regulatory cost recovery mechanisms, and the lower permitting efforts and risks as the projects are on an existing right of way.

Given the well supported nature of such projects, CETA's bonding authority is better reserved for catalyzing larger, more complex projects. That said, utilities may still choose to evaluate public financing options for reconductoring to ensure that they have utilized all available avenues for cost reduction, even if those savings are ultimately relatively small.

61 Colorado Electric Transmission Authority Act, at 16.

62 *Id.*

63 AMP Coalition, Grid Strategies LLC, *Unlocking the Grid: A Playbook on High Performance Conductors* (Oct. 2024), https://acore.org/wp-content/uploads/2024/10/Unlocking-the-Grid-A-Playbook-on-High-Performance-Conductors-for-State-and-Regional-Regulators-and-Policymakers.pdf.

CONCLUSION

Colorado needs more high-capacity transmission to support reliability, economic competitiveness, and surging load growth. While there are several challenges developers face on multiple fronts to develop and build these transmission lines, CETA can provide valuable support on some of these challenges. CETA's revenue bonding authority can play a targeted role in accelerating that buildout. Public financing is not a replacement for private or utility capital. Rather, when applied strategically, it can bridge the financing and institutional gaps that may keep valuable projects from moving forward.

CETA's authority can address these gaps through three primary recommended use cases. First, it can provide selective early-stage development strategic support for merchant transmission projects by providing milestone-based capital for permitting, stakeholder engagement, and right-of-way acquisition when private investors may choose to not finance these activities. Second, CETA can provide transitional or bridge financing in merchant BOT structures by offering short-term financing that reduces expenses for raising such bridge capital and smooths the path to utility acquisition. A third possible use case is for CETA to provide targeted support for Regulated Incumbent or Regulated Competitive projects, in defined circumstances, by advancing discrete public-benefit upgrades or strengthening competitive bids by supplying capital aligned with project timing and development milestones. CETA's value proposition is not in artificially lowering the cost of inherently risky capital, but in strategically providing structured, mission-aligned capital that helps viable projects advance to the point where private financing becomes feasible and affordable.

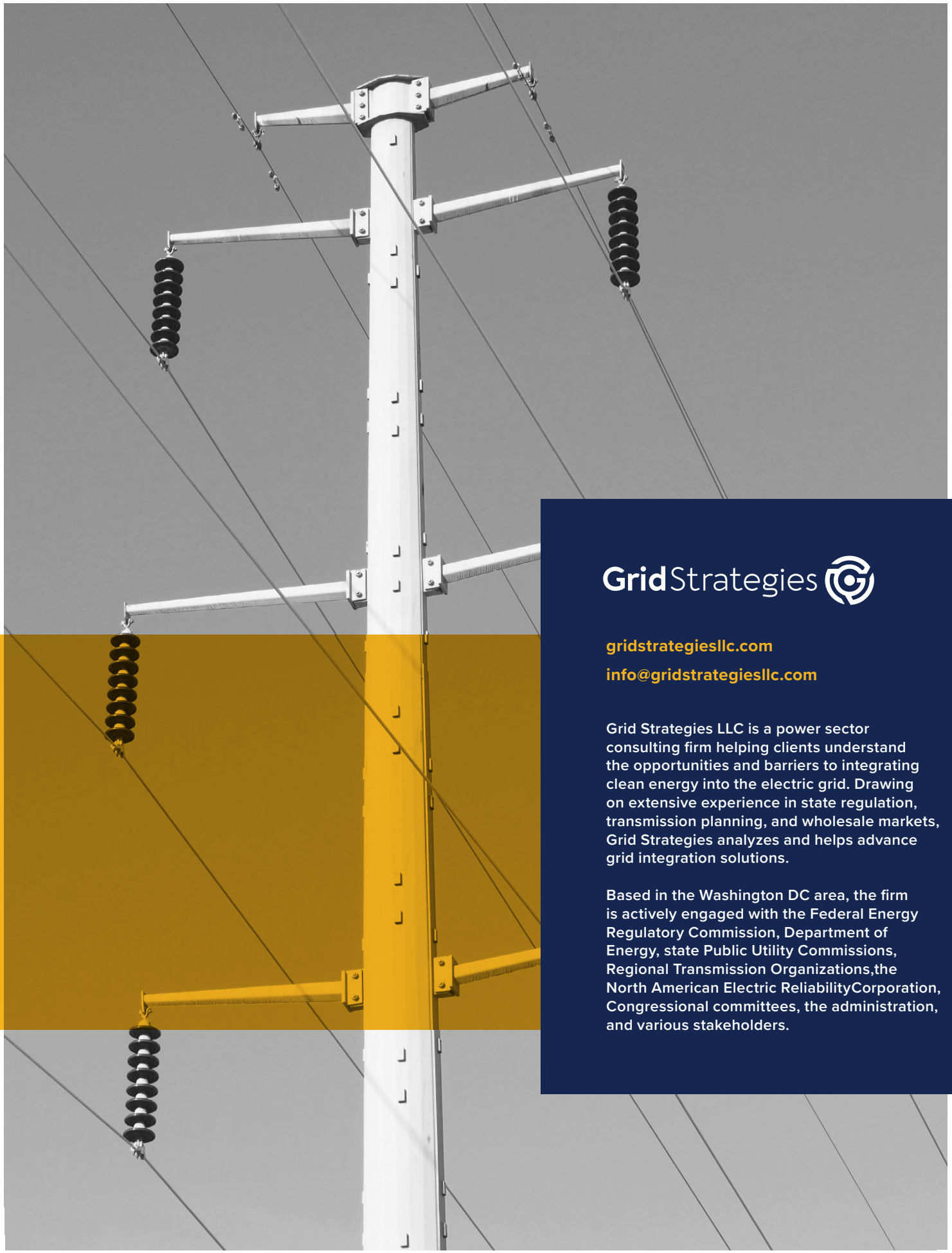
CETA brings credibility as a state-authorized partner, which can improve stakeholder confidence, streamline permitting, and facilitate alignment among utilities, co-ops, developers, and state agencies. Because CETA's bonds are revenue-backed and non-recourse to the state, they support execution without broad taxpayer exposure.

CETA's success depends on disciplined scope, repeatable structures, and clear prioritization. Focusing its early efforts on projects that face barriers under conventional financing—such as Merchant BOT lines or regional competitive projects—will build a scalable execution track record and demonstrate effective deployment of CETA's support. Standardized bond offerings that investors recognize, coupled with transparent documentation, milestone gates, and proven safeguards, will minimize transaction costs and improve pricing over time. Coordination with

regulators and utilities will ensure that financed projects integrate cleanly into existing planning and cost-recovery frameworks.

CETA's revenue bond financing offers incremental cost advantages, but its real value lies in enabling transmission projects that deliver long-term reliability, cost, and policy benefits for Colorado. CETA can generate marginal, incremental cost savings through state tax exemptions on revenue bonds—particularly for early-stage development activities. Far more importantly, CETA can help advance transmission lines that private markets cannot support on their own, which will ultimately deliver long-term net benefits to ratepayers through reduced congestion and improved reliability. Public financing should not replace utility financing to drive affordability through altering cost-of-service economics. Its value is strategic: enabling projects to move forward, which might otherwise stall in development, by selectively funding higher-risk, earlier-stage development activities.

Colorado has an opportunity to convert its statutory authority into a durable public-purpose platform that increases the probability, pace, and feasibility of transmission construction. By lowering borrowing costs at the margins, enhancing project execution, and enabling institutional partnerships that private markets cannot provide, CETA can catalyze infrastructure that delivers statewide benefits: a more reliable grid, improved access to diverse sources of generation, and long-term affordability for Colorado customers.



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