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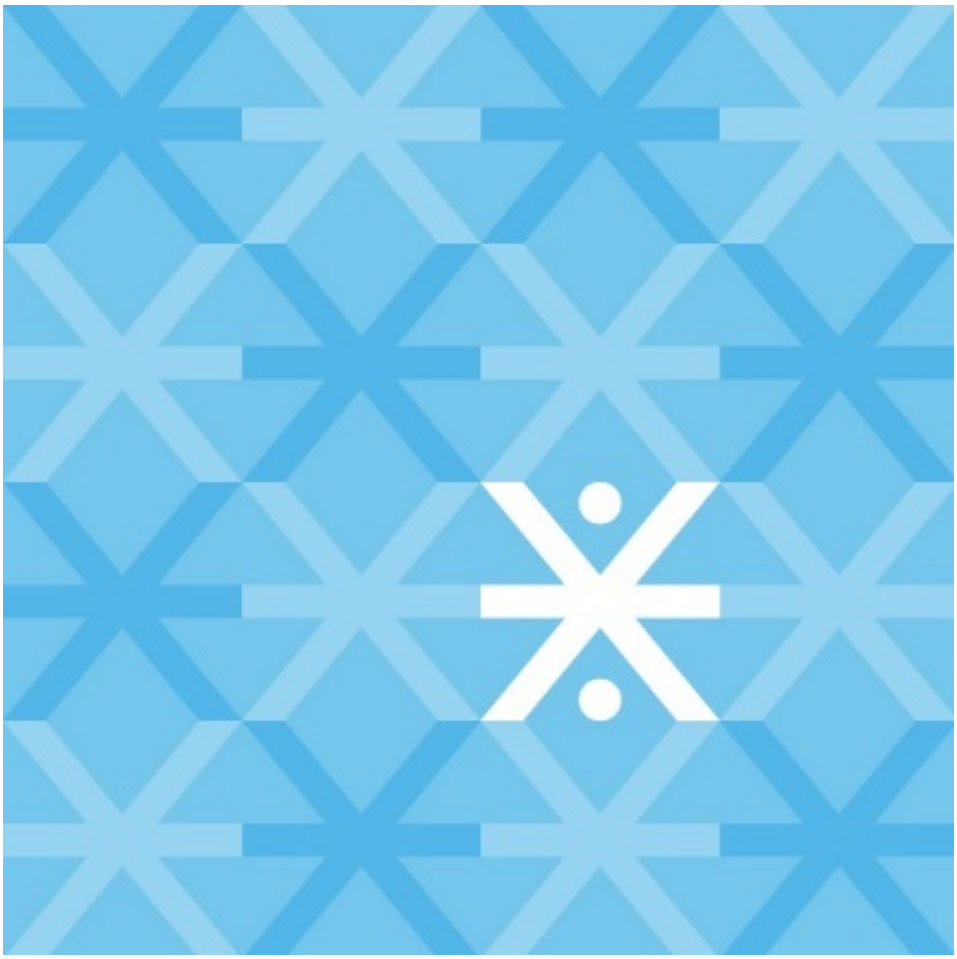
Using Federal Credit and Tax Policy to Stimulate Infrastructure Development

White Paper



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Introduction

In the wake of an unprecedented 2017 hurricane season, Washington policymakers are likely to refocus attention on how to address the nation's growing infrastructure investment gap. This refocus will come on the heels of current tax reform efforts the results of which may enhance or hamper the flow of capital to infrastructure asset classes. Today, the American Society of Civil Engineers rates America's infrastructure a D+ and estimates that no less than a $3.6 trillion investment will raise our grade to an A. However, investment dollars in infrastructure have dwindled over time. The federal government's investment in public infrastructure has decreased, and overall infrastructure investment as a percentage of gross domestic product (GDP) is at a post-World War II low of 1.9% from its peak of 3% in 1965. Federal policymakers have a limited number of viable tools to incentivize public infrastructure investment and stimulate development, which most often occurs at the state and local level.

This paper explores how federal policymakers can promote locally driven infrastructure projects by incentivizing private investment using tax policy and federal loans, both on their own and in tandem with public funding.

Why focus on infrastructure investment?

For a generation after the Second World War, state, local, and federal governments made enormous investments into our nation's infrastructure. These included the interstate highway system, expanded ports and waterways, and a robust national airport system. Measured as a percent of GDP, state and local government infrastructure investment began increasing in 1946 and accelerated rapidly until peaking in 1965 at 3% of GDP. That investment then slowly declined until it leveled off in the mid-1980s at around 2.25%. Today, it has fallen to 1.9%,[1] which is a one-third reduction from the peak and still falling. Concurrently, the federal investment in infrastructure peaked at 1% of GDP and has fallen to approximately 0.5%.[2]

LOCAL GOVERNMENT OWNS ALMOST ALL PUBLIC INFRASTRUCTURE

The federal government owns only 7% of the nation's non-defense public assets, while state and local governments own 93%.

Localities and regions drive infrastructure investment, and state and local governments finance, build, and maintain most infrastructure. The federal government owns only 7% of the nation's non-defense public assets while state and local governments own 93%.[3] Federal funds often provide partial capital to build state and local assets, but state and local governments foot the bill for 75% of the ongoing maintenance cost.[4] Local fees and local borrowing finance approximately two-thirds of upfront capital costs, while federal capital (grants, loans, and other capital) covers a little less than one-third of capital costs.[5] During the infrastructure boom of the 1950s through the 1970s, the United States built many of the public assets that Americans use daily. These assets are reaching end of life, and they need replacement or require rising maintenance costs.

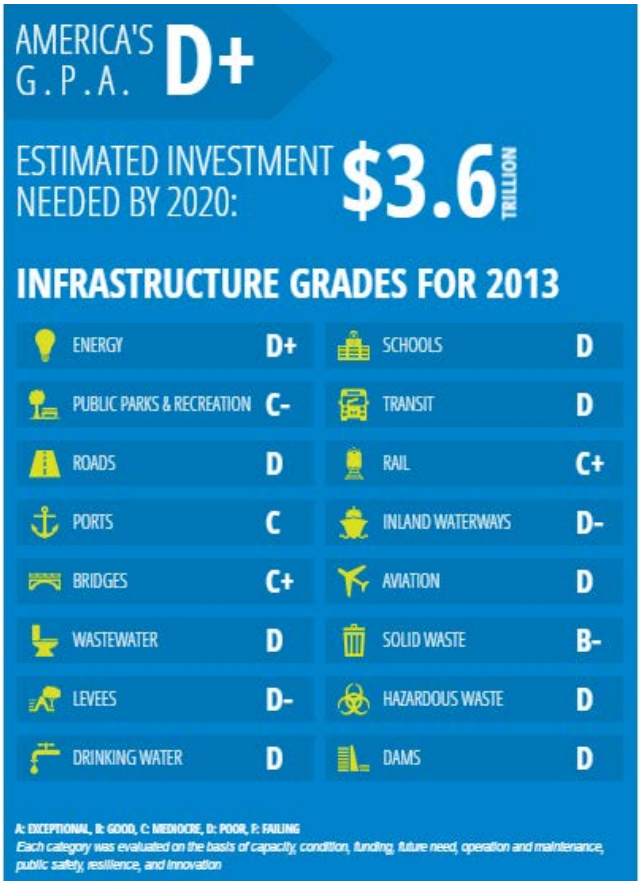
[1] "It's Time for States to Invest in Infrastructure." Center on Budget and Policy Priorities, February 2016. https://www.cbpp.org/research/state-budget-and-tax/its-time-for-states-to-invest-in-infrastructure.
[2] Ibid.
[3] Ibid.
[4] Ibid.
[5] *State Expenditure Report*. National Association of State Budget Officers, 2015. https://www.nasbo.org/mainsite/reports-data/state-expenditure-report.

The American Society of Civil Engineers argues, as the 2013 Report Card in Figure 1 illustrates, the United States needs $3.6 trillion in investment to bring infrastructure up to an A rating from its current rating of D+.[6] Beyond the general recognition that investment is below historical averages when our infrastructure most needs it, experts warn of specific needs that require attention.

For example, the U.S. Environmental Protection Agency (EPA) reports that the nation's drinking water treatment and distribution system needs almost $400 billion in new investment over the next 20 years. According to a recent survey of the Federal Highway Administration, one out of five American roads is in poor condition.

Federal policymakers interested in strengthening America's infrastructure face realities that may limit their ability to act at the federal level. Considerations regarding the federal government's traditional limited role in infrastructure development as well as deficit concerns leave policymakers with few options to drive infrastructure development.

Figure 1: American Infrastructure Report Card, American Society of Civil Engineers



Source: American Society of Civil Engineers, 2015.

However, policymakers can incentivize state and local development through investment programs that lever borrowing and private capital for these infrastructure projects. The government has successfully used two policy tools, tax credits and federal loans (also known as federal credit), to encourage private investment, albeit on a limited basis. Expanding these two tools to cover more infrastructure categories is key to driving America's infrastructure renewal.

How does the United States typically finance infrastructure projects?

Funding ultimately stems from a combination of tax revenue and user fees for almost all infrastructure projects in the United States in the following two ways:

- **Tax revenue,** including property taxes, income taxes and dedicated taxes all of which can be used to secure debt in the form of municipal bonds or distributed directed through federal grants, and state and local expenditures.
- **Revenues ultimately funded by user fees** include tolls, fees, and charges generated by enterprise systems such as toll roads, water and sewer systems, airports, and public power

[6] *American Infrastructure Report Card*. American Society of Civil Engineers, 2013. http://2013.infrastructurereportcard.org/.

utilities that rely upon ratepayers. These sources of funding can be applied on a pay-as-you-go basis or used to secure revenue-backed debt.

State, federal, and local governments generally share financing, with the relative contribution shifting depending upon the asset class and circumstance. Specific instruments that are employed include municipal bonds, grants, private investment, and federal loans. Below is a description of each instrument and its relative merits.

Municipal bonds

State and local governments in the United States have used municipal bonds to finance infrastructure for almost two hundred years. In most cases, the interest income is exempt from state and local income taxes in the jurisdiction where issued, and since enactment of the U.S. federal income tax in 1913, interest on municipal bonds is also exempt from federal income tax. Private activity bonds are tax-exempt debt instruments that can be used to finance private purpose facilities (subject to certain restrictions and limits). This tax-advantaged debt instrument translates to a lower cost of capital compared with taxable debt. The U.S. municipal market is by far the most developed in the world; no other country can boast such a liquid market for local government debt. It facilitates decentralized infrastructure development, financing, and execution without the need for leadership from Washington.

Municipal bonds for infrastructure projects are typically backed by government-wide taxes, dedicated taxes, fees, or charges, and are not limited to the specific project. For municipal enterprises that generate user fees, such as toll facilities, water and sewer systems, and airports, new projects are supported by the revenues of the entire system.

Grants

In 2014, federal, state, and local governments spent approximately $416 billion on transportation and water infrastructure. Most of this went to highways ($165 billion), followed by water utilities and mass transit and rail. Approximately 25% (or $100 billion) was funded by the federal government with roughly two thirds of that amount applied toward new, improved, or rehabilitated structures and equipment.[7] Data form the Office of Management and Budget suggest this funding level will remain unchanged with grant funding to state of local governments for transportation and the environment estimated at $71.1 billion and $67.3 billion in FY2017 and FY2018, respectively. [8]

Private investment

Private participation in public infrastructure is not a new concept in the U.S. In fact, the first private toll road was built in the 1790s, connecting Philadelphia and Lancaster, Pennsylvania. Today, private, for-profit entities play a large role in the provision of infrastructure across the country. Over 70% of American households receive electricity from private, investor-owned utilities whose rates are regulated by public utility commissions. Likewise, the landline and cellular telecommunications networks in the United States are owned by for-profit, private entities. Private companies also own oil and natural gas pipelines, although the federal government closely regulates the rates they set, among other practices. Furthermore, railroad freight infrastructure is privately owned and maintained.

Investor-owned infrastructure could have a larger market share. However, private investment in public infrastructure is limited by a competing source of highly liquid, low-cost capital (i.e., municipal bonds),

[7] *Spending on Infrastructure and Investment.* Congressional Budget Office. March 1, 2017.
[8] https://www.whitehouse.gov/omb/budget/Analytical_Perspectives.

public perceptions of infrastructure as a "public good," and complex Internal Revenue Service (IRS) rules related to the use of tax-exempt debt with private ownership.

Federal credit

The term *federal credit* refers to loans extended by the federal government or federally guaranteed loans from financial institutions to infrastructure project developers. The United States has dozens federal credit programs, each of which is targeted to address a specific policy objective. Several of these are targeted at infrastructure, including the following programs:

- Transportation Infrastructure Finance and Innovation Act (TIFIA) Loan Program—U.S. Department of Transportation (DOT), Federal Highway Administration
- Water Infrastructure Finance and Innovation Act (WIFIA) Loan Program—U.S. Environmental Protection Agency (EPA)
- Clean Water State Revolving Fund (CWSRF) Programs—EPA
- Railroad Rehabilitation & Improvement Financing (RRIF)—DOT, Federal Railroad Administration
- Federal Ship Financing Program (commonly referred to as Title XI based on the part of the Merchant Marine Act of 1936 that established the program) —DOT, Maritime Administration
- Loan Programs Office—U.S. Department of Energy
- Rural Utilities Service—U.S. Department of Agriculture, Rural Development

The government has used federal credit for decades to advance locally led infrastructure projects and leverage private capital. Federal credit programs are intended to supplement, not replace, funds available in the private capital markets. Accordingly, most programs are structured to address needs that are not well supported by currently available sources of capital. To that end, federal infrastructure credit programs generally offer more flexible terms coupled with attractive interest rates. Examples include:

- Long-dated maturities
- Extended periods of interest capitalization and interest-only repayment periods
- Repayment profile structured around other providers of debt and/or project cash flow generation
- Ability to slowly disburse loan principal for a single project over long construction periods without incurring negative arbitrage expense
- Ability to extend very large individual loans that reach into the billions of dollars without relying upon lender syndication

As policy tools, federal credit programs are appealing because the borrower is expected to repay loans and under federal budgeting rules, this means that appropriated dollars can be leveraged. On average, federal credit programs leverage appropriated dollars on a 20:1 basis. Such leveraging relies on the consistent application of rigorous underwriting standards, and the record of accomplishment of federal credit programs is strong. For policymakers, federal credit is appealing; loans can accelerate infrastructure investment at a fraction of the cost associated with grants. And in a small but growing number of cases, user fees can be leveraged to avoid the need for grants altogether.

What are federal tax incentives?

While the use of private capital to finance public infrastructure has been an unrealized opportunity for decades, the use of tax incentives has been promoted recently as a potential solution. Tax incentives allow investors to offset current and/or future tax liabilities over a specified period and can attract

private capital to investments that otherwise would not provide sufficient financial returns or where public financing is unavailable. Historically, tax incentives have included accelerated depreciation, bonus depreciation, production tax credits and investment tax credits. Federal and state governments have long used such tax incentives to attract investment to prioritized sectors, such as low-income housing, energy, or infrastructure. For example, the federal government's use of Investment Tax Credits (ITCs) began in 1962 when Congress established ITCs at various rates before suspending, reinstating, and ultimately eliminating them in the Tax Reform Act of 1986.

Since 1986, a limited number of tax incentives remained for energy-related investments with Congress sustaining or increasing these through the Energy Policy Act of 2005 (EPACT 2005) and the American Recovery and Reinvestment Act (ARRA) of 2009. This tax policy has been effective in stimulating investment and has been credited with transforming the U.S. solar industry, which grew from $8.2 billion in annual revenues from electricity generation in 2011 to $24.9 billion in 2016. The sustained availability of the solar ITC together with state-level renewable portfolio standards and production cost efficiencies attracted substantial private investment and enabled the development of highly efficient financing structures. As a result, approximately 90% of the nearly 5,000 megawatts of solar capacity in the United States has been installed since the ITC expansion.

How are tax incentive-based financings structured?

Among the different types of tax incentives, ITCs are particularly well suited to infrastructure as they reward investment at the time assets are placed into service. ITCs typically provide a credit of 10% to 30% of eligible costs, providing a dollar-for-dollar reduction in taxes payable early in a project's life and resulting in an effective and compelling financial incentive. To monetize the value of tax credits, project developers often collaborate with financing entities who have an appetite for tax reductions and are willing to trade cash "tax equity" for a stream of tax benefits. Tax equity represents a source of capital for projects qualifying for tax incentives and reduces the amount of funding required from conventional debt and equity sources. Third-party tax equity investors tend to be large, sophisticated institutional investors, and in 2016 funded approximately $13 billion in tax equity investments, largely in the renewable energy sector.[9]

Tax equity financing arrangements are complex and geared toward efficiently transferring tax credit to the tax equity investor. Three common forms of tax equity financing arrangements have been used extensively in the renewable energy sector, include:

- **Sale-Leaseback**—In this arrangement, a developer installs generation systems and leases them to customers. The tax equity investor in turn buys the systems and related contracts from the developer. The developer then leases the systems and contracts back from the tax equity investor. Customers pay the developer, and the developer repays the tax equity investor. This transfers 100% of tax benefits to the tax equity investors.
- **Partnership Flip**—In this arrangement, a developer and tax equity investor form a joint venture and transfer allocation of cash, tax benefits, and profits between the investor and developer one or more times (flipping). Flip arrangements allow developers to retain equity in installed systems, while transferring the vast majority of tax benefits to the tax equity investor for a period of time (typically 99%). Flips typically happen between year 5 and 9 of a project.
- **Inverted Lease** (or **Lease Pass-Through**)—In this arrangement, the developer and tax equity investor fund a company called a Master Tenant (typically, 99% of the Master Tenant belongs to

[9] *Tax Equity Update 2017*. Bloomberg New Energy Finance. March 7, 2017.

the investor, and the remaining 1% belong to the developer). The Master Tenant and Developer then funds an Owner/Lessor, which owns the generation systems and leases them back to the Master Tenant. The Master Tenant then leases the system to a customer. The customer pays the Master Tenant, who pays the Owner/Lessor.

Through the use of transaction structures like those above, project sponsors are able monetizes a government incentive and provide a new source of project funding. In turn, investor equity and debt are proportionately reduced.

How can tax incentives and federal credit work together in the same project?

While current tax reform efforts carry provisions such as the elimination of private activity bonds that will deter private investment in infrastructure, the infrastructure policy debate will likely turn once again to public-private partnerships as a potential solution to our nation's infrastructure needs. Existing infrastructure federal credit programs and targeted tax incentives may garner consideration as these tools could be harnessed to advance the infrastructure agenda. When used in combination, project sponsors can effectively combine the benefit of both tools and increase the availability of low cost, patient capital to the infrastructure sector.

An expansion of tax incentives will present important considerations for federal credit programs, as it will introduce a new class of infrastructure investor: the tax equity investor. Importantly, the singular goal of tax equity investors is to monetize tax benefits. As such, tax equity investors do not have an appetite for assuming risks related to the project's technical or financial performance.

Given the limited number of tax equity investors, they wield considerable influence over transaction structures. This will challenge federal credit lenders, as their ability to adapt to new transaction structures is often limited by statute or regulation and may be subject to oversight and approval processes involving the Office of Management and Budget.

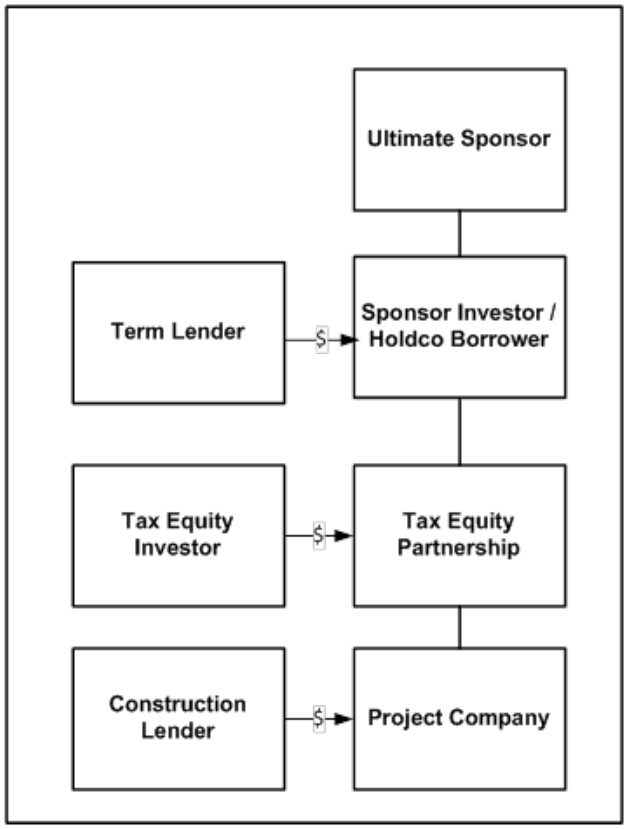
The most significant impact of tax equity is that it makes obtaining project-level debt more difficult. Project-level debt introduces a senior claim on the project's collateral, meaning that in the event of a project default, the debt holders, not the tax equity partners, have first claim on project assets. Because tax equity does not have the senior claim on project assets, many tax equity investors will not invest in a project where there is also a lender providing debt.

ACCEPTANCE OF INVESTMENT TAX CREDITS

Broader acceptance of ITCs requires learning from the experience of the renewable energy sector and adopting financial structures that optimize tax efficiency and support debt leverage to deliver a competitive cost of capital. Project sponsors will face the challenge of balancing the demands of tax equity investors against the underwriting requirements of lenders.

Recent project financings in the energy sector reflect an increasingly common approach that involves developer equity and tax equity invested at the project company level with debt introduced at a holding company level. Also known as "back leverage," this structure protects the interests of the tax equity investor by structurally subordinating the lender and avoiding the issues associated with a lender taking a security interest on Project assets. Figure 2 summarizes this structure. Key features of this structure include:

Figure 2: Typical Financing Structure for ITCs



- **Sponsor equity** invested into the tax equity partnership that in turn invests into the project company.
- A **construction loan** invested in the project company that is sized for the tax equity introduced at the commercial operation date to repay the construction loan.
- A **holding company loan** (HoldCo Loan) introduced at the sponsor level and secured by distributions from the tax equity partnership. As such, the lender cannot foreclose on the project company assets. Its remedies will be limited to foreclosing on the equity interests of the holding company.

This structure is designed to address several requirements of the tax equity investor including:

- The tax equity investor can impose cash traps, cash sweeps, or other reallocations of distributed cash in favor of the tax equity investor to address indemnity claims or project under performance.
- The tax equity investors can minimize issues related to change of control and ownership under conditions where lenders are exercising remedies due to project default or underperformance. In the context of an infrastructure financing, this is highly relevant as a change in ownership resulting from under performance could result in the asset being owned by a tax-exempt entity, subjecting the tax equity investors to the risk of recapture.

For federal lenders, the use of back leverage structures introduces a host of questions, such as:

- What happens if the project encounters performance difficulties? During the five to six years following the project's in-service date, tax equity investors are potentially exposed to recapture risk. Therefore, the federal lender's ability to step in to help remedy the situation will be limited.
- What happens when the project company incurs indemnity claims? Such a scenario could result in blocking distributions and interrupting debt service to the federal lender.
- What happens in a payment default? In this scenario, the federal lender would only be able to assume ownership of the project company and would be precluded from liquidating assets.

- What about tax reform? Tax reform legislation passed after a project closes could affect tax equity returns, potential delaying returns and timing of the tax equity investor's exit from the transaction.

For federal credit lenders these considerations could be particularly challenging as many programs rely on an unfettered right to collateral and/or pledged revenues to support the underwriting of the loan. In addition, any limitation on such rights could increase loss-given-default expectations and increase the budgetary cost of making the loan (i.e., the credit subsidy). However, the challenges are not insurmountable and precedent transactions exist within the federal credit community. For example, the Department of Energy Title XVII loan guarantee program successfully navigated all of these challenges in its ARRA-funded 1705 program. At the time, a weakened economy severely constrained the availability of tax equity, leading to the enactment of the Section 1603 Treasury Cash Grant Program that provided additional liquidity to the marketplace by allowing project developers to receive a direct federal grant in lieu of a tax credit. This program proved to be enormously successful, leveraging nearly $39 billion in private sector investment.[10]

What are the implications for federal credit programs?

Infrastructure projects require large upfront capital investments. Therefore, the cost of capital represents a key driver of affordability. Private financing and ownership often competes against more traditional public ownership models. The cost of capital for private financing can be significantly higher than publicly owned infrastructure that typically benefits from large amounts of low-cost, tax-exempt debt and grants. Infrastructure financing involving private participation typically includes private equity in combination with long-term debt.

As project sponsors must contribute equity capital alongside debt capital, tax incentives provide an effective tool for incenting private capital investment. Monetizing tax incentives to could introduce a new source of capital to infrastructure projects, making them more affordable and potentially accelerating investment and development.

As lenders to infrastructure projects, federal credit providers will need examine their authorizing legislation, program regulations, and internal underwriting criterial to determine if/how their credit instruments can be adapted to attract tax equity while protecting the interest of the US taxpayer.

While tax incentives have enjoyed the lion's share of public discussion since the election, federal credit may be better positioned to move projects quickly. As policymakers combine the perhaps increased use of federal credit and tax incentives to reinforce locally driven projects, the lessons of the past should be carefully considered to minimize delay and unintended consequences.

[10] *Section 1603 Treasury Grant Expiration: Industry Insight on Financing and Market Implications*. National Renewable Energy Laboratory, June 2012: pp. 22. https://www.nrel.gov/docs/fy12osti/53720.pdf.

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Mr. Curcio is an expert in the Federal Credit Reform Act of 1990 and has led engagements across more than fifty federal loan programs, where he develops, audits, and validates predictive risk models for federal credit. He has more than twenty years of experience in finance and financial markets.

Earlier in his career, Mr. Curcio served at OMB as a member of the "Credit Crew," where he guided multiple areas of federal credit program management, including credit subsidy cash flow model development, auditing, verification, and validation. He has a strong background in the audit, accounting, and budgeting requirements of federal credit programs, including a comprehensive knowledge of Statement of Federal Financial Accounting Standards (SFFAS) Nos. 2, 18, 19, Technical Release 6, and OMB Circular A-11.

Mr. Curcio is the co-author of the white papers "Fair Value in Federal Credit" and "Should Federal Lending Programs Mitigate Concentration Risk?" He is a frequent lecturer on the topics of federal credit and model risk management in the federal space. He earned an M.B.A. from Georgetown University, an M.A. from Johns Hopkins University, and a B.A. in economics from Centre College.

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