

National Infrastructure Bank: A Permanent Solution and Timely Budget Work-Around

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ABSTRACT

The passage of time, chronic underinvestment, and climate change have left America's public infrastructure dangerously overstretched and vulnerable. The bipartisan Infrastructure Investment and Jobs Act (IIJA) of 2021 provided billions of dollars in new Federal spending for infrastructure. While a significant start, the IIJA addressed only a small fraction of the nation's current, unfunded needs. A \$5 trillion National Infrastructure Bank, as proposed in HR4052, would fill that gap, provide technical/regulatory assistance, and turbocharge the American economy, with no need for added spending, taxes, or increases to the National Debt.¹

Introduction

In the landscape of industrialized economies, the United States stands as a testament to the critical role of robust infrastructure in driving economic vitality. The intricate network of transportation, digital communications, energy grids, and water systems forms the backbone of the nation's economic engine, catalyzing growth and enhancing the quality of life.

Investment in public infrastructure is not merely a matter of maintenance or upgrade; it is a strategic imperative for economic expansion and social progress. Conversely, the failure to adequately invest in and modernize public infrastructure can have dire consequences. Stagnation in infrastructure development can serve as a precursor to broader economic malaise. Outdated or inadequate infrastructure hampers efficiency, stifles innovation, and can create obstacles that impede economic activity. The ramifications may extend beyond mere economic metrics; they can erode the fabric of communities, as deteriorating infrastructure disproportionately affects disadvantaged populations.

Businesses, particularly those reliant on efficient supply chains and logistics, encounter escalating operational costs as they navigate the repercussions of neglected infrastructure. The resulting inefficiencies not only diminish the competitive edge of businesses but also contribute to increased costs for consumers.

1 HR4052 text here: <https://www.congress.gov/118/bills/hr4052/BILLS-118hr4052ih.pdf>

And competitor countries that heavily invest in critical infrastructure have a distinct advantage in economic efficiencies, bringing products to market, and growing their industrial base.

Thus, the imperative for continuous investment in public infrastructure is clear. It is a critical lever for economic stability and social equity, ensuring that both businesses and families not only survive but thrive. As we chart the course for future economic policy, prioritizing infrastructure investment is a commitment to the United State's collective prosperity and well-being.

In its 2021 Report Card, the American Society of Civil Engineers (ASCE) estimated that \$6.1 trillion over ten years will be needed just to bring the nation's infrastructure up to a state of good repair (ASCE, 2021). Of that total, \$2.6 trillion remains unfunded for roads, bridges, freight corridors, and mass transit; electric grids; schools; dams, levees, waterways, and ports; airports; rail; drinking water and wastewater; public parks and recreation; and hazardous waste (ASCE 2023; see Table 1 below). In addition to these categories, the United States needs:

- Intercity High-Speed Rail linked to improved urban transit networks (USHSR)
- Complete Broadband access (FCC)
- Affordable Housing (NLHC)
- A Renewable Energy Super-Grid (Behr)
- Major Water Management Projects to supply water to America's driest regions (CBS News)

All of these investments require a steady source of long-term funding, strategic planning, and the latest smart technologies for optimal return on investment and minimal environmental impact.

Despite these pressing needs, however, vital improvements have not been adequately financed by the Federal budget, nor by state and local budgets, nor by private capital markets for that matter. In fact, Federal money for infrastructure as a percent of Federal spending has fallen sharply since the 1980s, and now state/local dollars and borrowing pay for the bulk of infrastructure projects (McNichol). At present, the U.S. faces a budget constraint, with mounting national debt (Ritcher), fast-rising interest payments on the debt (Reuters, Oct 2023) and more military spending (Stein, 2023). A politically divided Congress can't agree on a budget, while one faction is demanding broad spending cuts, including for infrastructure legislation that has already been enacted. Therefore, it is unlikely that adequate financing to cover the substantial infrastructure funding gap will come from the Federal budget.

Table 1

**Table 1. Comparison of the National Infrastructure Bank (NIB) and Bi-Partisan Infrastructure Bill
Cumulative Infrastructure Needs over Ten Years: 2020-2029**
(In billions of 2019-dollars)

Infrastructure Categories	NIB Total Lending Amount	2021 Bipartisan Infrastructure Law (BIL, or IIJA) Over 5 Years 12/
Total	\$5,000	\$550
ASCE 2021 Report Card 1/	Funding Gap 2/ 3/ 4/	New Money
Subtotal for 16 Categories	\$2,626	\$436
Surface Transportation Including:	\$1,205	
Roads & Bridges	\$785	\$110
Transit	\$250	\$39
Passenger Rail	\$45	\$66
Half the amount for Schools	\$125	
Electric Vehicles		\$15
Safety / Reconnecting Neighborhoods		\$12
Water Infrastructure Including:	\$1,089	
Drinking Water, Wastewater, and Stormwater 5/	\$801	\$55
Dams, Levees	\$85	\$3
Public Parks	\$78	
Half the amount for Schools	\$125	
Power Infrastructure 6/	\$197	\$73
Aviation	\$111	\$25
Inland Waterways & Ports	\$25	\$17
Hazardous 7/ & Solid Waste	\$0	\$21
Infrastructure Resiliency		\$50
Additional Mega Projects Including:	\$2,374	
Affordable Housing 8/	\$720	
High Speed Rail 9/	\$1,074	
Broadband Complete Access 10/	\$100	\$65
Renewable Energy Super-Grid Overlay 11/	\$80	
Large Water Management Projects	\$400	

1/ See 2021 Report Card: https://infrastructurereportcard.org/wp-content/uploads/2020/12/National_IRC_2021-report.pdf.

2/ See Failure to Act, Table 2 at <https://infrastructurereportcard.org/the-impact/failure-to-act-report/>. May not add due to rounding.

3/ Already funded means: Baseline Federal grants and loans appropriated through the Federal budget; and state, local, utility, transit and port and airport authorities' spending financed by: local government revenues, special taxes, user fees, and borrowed money.

4/ Funding gap excludes money already funded. The National Infrastructure Bank will cover all of the funding gap, plus additional for mega projects.

5/ Comprises \$434 B for drinking and wastewater, \$286 B to meet the EPA Copper and Lead Rule, to remove all lead service lines, and \$81 B for stormwater repairs.

6/ Excludes \$3 trillion estimated as governments cost to electrify vehicles and move all generation and distribution off of fossil fuels.

See DOT Study: <https://www.ourenergypolicy.org/resources/mobilizing-for-a-zero-carbon-america-jobs-jobs-jobs-and-more-jobs/>

7/ 2021 Report Card states there are 35 shovel ready projects in the Superfund that have not received Federal funding, but gives no dollar amount.

8/ Estimated 7.3 million affordable housing units needed (<https://nlhc.org>) times \$100,000 per unit.

9/ High Speed Rail Alliance estimate for 100% of Federal Railroad Administration's 11 High Speed Rail Corridors covering 8965 miles.

10/ [Federal Communications Commission 2016 Broadband Progress Report. Jim Clyburn Broadband Bill proposes \\$94 billion.](#)

11/ US 2019 DOE estimate, see: <https://www.eenews.net/stories/1061403455>. Also see 2021 estimate of \$50 billion at: <https://theconversation.com/the-us-needs-a-macrogrid-to-move-electricity-from-areas-that-make-it-to-areas-that-need-it-155938>.

12/ [What's in the \\$1.2 trillion Senate infrastructure package. By Heather Long. Aug. 10, 2021.](#)

Infrastructure Makes Up Decreasing Share of Federal Spending

Federal infrastructure spending as a percentage of total federal spending

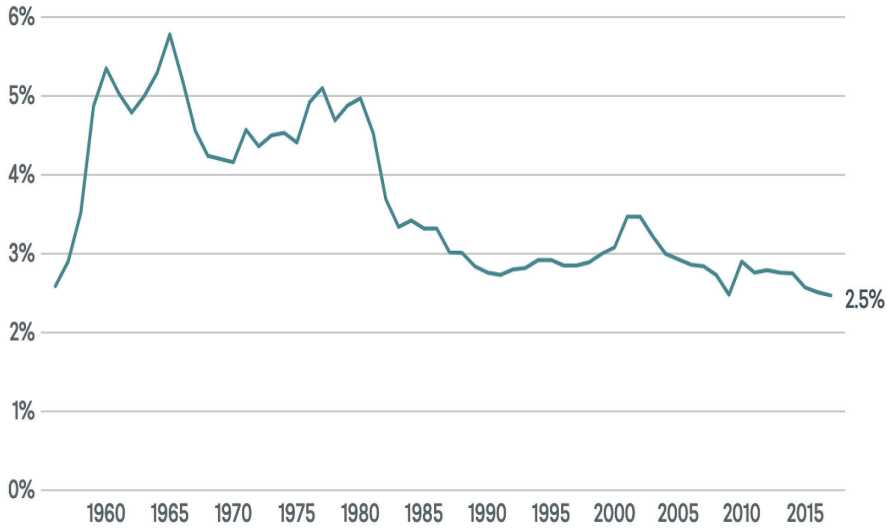
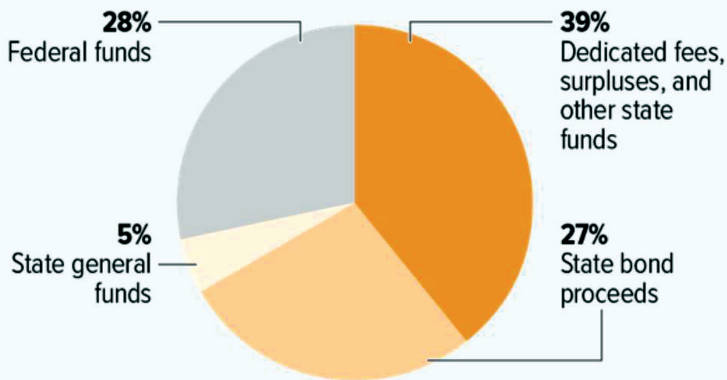


Figure 1

State Dollars and Borrowing Pay for Most Infrastructure Projects

Sources of state funding for infrastructure, 2017



Note: The National Association of State Budget Officers capital spending data include the costs of new construction, purchases of buildings and major equipment, and major repairs and improvements. Totals don't equal 100 percent due to rounding.

Source: National Association of State Budget Officers 2018 State Expenditure Report

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Figure 2

Legislation in Congress to Create a National Infrastructure Bank

As the United States grapples with the challenge of rebuilding its aging infrastructure, policy analysts agree that traditional methods may no longer suffice. The Council on Foreign Relations underscores this urgency, noting that despite the IJA and related legislation, experts believe much more funding is required to overcome the country's infrastructure deficit. Similarly, the National Governors Association has made a strong appeal to Congress for increased investment in water infrastructure, highlighting the critical needs for modernizing drinking and stormwater systems. This raises a pivotal question: if the combined resources of federal and state budgets, along with private capital (as identified by CNIB in 2022), fall short, what alternative financing solutions can be tapped? As previously noted, addressing this gap is not just a matter of prudent policy but a crucial step towards ensuring sustainable and resilient infrastructure for future generations

Congress is currently considering a groundbreaking legislative proposal (HR4052, as detailed on [Congress.gov](https://www.congress.gov)), aimed at revolutionizing America's approach to infrastructure financing. This bill introduces the concept of a \$5 trillion National Infrastructure Bank (NIB). Unlike traditional funding sources, the NIB, which would operate outside the national budget, represents an innovative solution to bypass the limitations of Federal and local budgets. As a federally incorporated entity (as per Wikipedia, Oct. 2023), the NIB would be uniquely capitalized by swapping existing private sector Treasuries for equity in the Bank.

This model isn't new to American economic history. It mirrors successful precedents, such as the First Bank of the United States, established in 1791 by Treasury Secretary Alexander Hamilton (referenced in Wikipedia, Nov. 2023), and the Reconstruction Finance Corporation initiated under FDR (Butchiewicz). Like a commercial bank, the NIB would offer low-cost loans for specific infrastructure projects to entities in control of public infrastructure.

The operating costs of the NIB would be minimal, requiring only a small initial appropriation from Congress (CNIB, 2021). This self-sustaining model would not only avoid adding to national deficits or debt but could provide an annual dividend payment to the government. This unique financial structure is designed to garner bipartisan support, reflecting the long-standing consensus that infrastructure development is a cross-party priority. As David Leonhardt (Leonhardt, 2023) has pointed out, such a national infrastructure investment program would unleash numerous synergies, significantly advancing the nation's economic and structural resilience.

Fully Complements Federal Programs

The NIB is a pivotal initiative designed to bridge crucial financing gaps in America's infrastructure landscape. Uniquely positioned to complement, not duplicate,

existing Federal programs like the IIJA and the Inflation Reduction Act, the NIB would be a game-changer for multiple critical infrastructure sectors. It would provide essential funding where it is most needed—in areas like U.S. transportation for both passengers and freight, the power grid, water systems, and housing. For instance, imagine a scenario where the NIB steps in to finance a critical section of a high-speed rail network, connecting communities previously underserved by public transportation. This approach not only raises U.S. productivity but also ensures that tax dollars are utilized more effectively. The creation of the NIB marks a significant stride towards a more organized, efficient, and forward-thinking infrastructure system. This bold step would change the face of American infrastructure from one reliant on legacy systems to modern, future-oriented systems rivaling our most formidable competitors.

Sectors and projects requiring immediate attention include:

Water infrastructure and water management. ASCE estimates that \$801 billion is needed over 10 years to update drinking water (Greenfield), wastewater, and stormwater systems (Rubenstein), and to replace all lead water supply lines (Pittman). However, the IIJA only provides \$55 billion. Similarly, \$110 billion is needed to re-build ports and inland waterways—locks (Thomas), dams (Klemm), and levees—but the IIJA appropriates only \$20 billion. And there is no provision in current legislation (including the next 5-year Farm Bill) to provide new water resources for the drought-stricken Southwest where 50% of our nation's farm-to-table food. The NIB will make strategic, sustainable investments in all of these areas, including by formulating a national plan for water management.

Transportation. As depicted in HB4052, the NIB would finance all of the roads and bridges where IIJA financing is slated to be insufficient (\$785 billion needed vs. \$110 billion provided). Beyond that, the bank would orchestrate a fundamental shift, by financing projects that move more passengers and express freight onto rail, so as to relieve congestion on roads and at airports and better save on CO2 emissions (Mineta). Accordingly, the NIB incorporates \$1.1 trillion to build a fully electric high speed rail network across America (Jones), as well as \$406 billion in added financing for transit, passenger rail, and airports to rationalize and speed transportation systems. Projects would include critical improvements along the busy Northeast Corridor as well as completion of the NY-NJ Gateway Project (Forczek).

Electricity and Broadband. Although they are mostly privately-owned, these two sectors are struggling to deliver new capacity where it is most needed. The nation's electric grid is vulnerable to weather events, cyberattacks, and problems of peak demand, and is not ready for a shift to renewable energy (Englund). This includes accommodation of electric vehicles (cars, trucks buses, etc.). The NIB will specifically finance a power grid overlay to transport renewable generation around

the country that is not financed in the IRA (Behr). And it will build a more resilient grid to protect against escalating problems associated with climate change (Biesecker). Moreover, the NIB will fill in holes where privately financed telecommunications companies have failed to deliver broadband services because it is not initially profitable to do so.

Affordable Housing. Although not normally thought of as infrastructure, affordable housing is in crisis, and efforts to increase supply through the Federal budget have fallen woefully short (GAO). Currently, two million Americans are unhoused, while 40 million live below the poverty line (Lee) and are just a paycheck away from being evicted from their homes. The National Low Income Housing Coalition estimates that the U.S. faces a shortage of **more than 7.3 million homes** which are affordable and available for renters with the lowest incomes, a shortage that worsened during the COVID pandemic (NLHC). The NIB could provide \$720 billion over ten years to build or refurbish units for these lowest income earners, and would employ best practices for social housing to ensure that units remain sustainably affordable (Gowan).

Building Resiliency. Over the past two decades, storms, floods, heatwaves, droughts, and wildfires have taken lives and destroyed property, with global warming making events more frequent and severe. New data indicate that two thirds of this damage is due to storms (Carrington), while at the same time sea levels are rising. Meanwhile, costs for remediation to protect infrastructure and property from climate-induced damage do not yet appear to be fully factored into total financing needs, even those estimated by ASCE. For example, Houston requires a dyke to protect its port and oil facilities estimated to cost \$34 billion (Drane), plus enhanced drainage to fight property damage arising from bigger storms (Borenstein). New Orleans needs billions of dollars and planning to rebuild wetlands to protect its Port and surrounds (USGBC and Mooney Aug. 2023). Florida has yet to devise a plan to protect cities like Pensacola from rising sea levels that contribute to tropical storm intensity (Mooney, 2023). The NIB would make strategic, sustainable investments in all of these geographic areas, and support U.S. Army Corps of Engineers programs which remain chronically underfunded in the Federal budget (Helwig).

Reaching Rural America. Rural communities face a critical infrastructure funding gap, an issue increasingly acknowledged by local legislators and supported by insights from Rebuild Rural. The funds allocated through the IIJA are disproportionately missing these areas, and private capital investment is similarly lacking. The consequences are starkly evident: a dramatic decline in small business formation in non-metropolitan areas over the past decade, as highlighted by Meyerson's research, and a concerning trend of rural populations migrating in search of better employment opportunities, as noted by Johnson.

Addressing this imbalance is where proposed NIB financing will come into play. Crucially, the Bank's mandate includes a requirement for appropriate geographic distribution of funds, ensuring that rural areas are not overlooked in the national push for infrastructure revitalization. In partnership with the U.S. Department of Agriculture, the NIB would enhance community development programs that have been historically underfunded. Moreover, it would provide vital engineering and technical assistance, empowering local municipalities in rural America to effectively manage and execute infrastructure projects. This comprehensive approach promises to not only to bridge the current urban-rural divide in infrastructure development but also to foster more resilient economies across the country.

Turbocharges the Economy, Productivity, and Worker Pay

NIB's launch is set to significantly benefit the American economy, reminiscent of the transformative impact of historical infrastructure initiatives. Key among these benefits is the creation of approximately 25 million new jobs, as defined by the Bureau of Labor Statistics standards, offering union-level "Davis-Bacon" wages. This is expected to catalyze economic growth and enhance productivity, mirroring the achievements during the era of the Reconstruction Finance Corporation (RFC) from 1933 to 1957. During that period, the economy experienced an average growth of 5.5% per year (as indicated by FRED data), with Total Factor Productivity peaking at 3.4% annually in the 1940s, alongside a significant rise in unskilled wages (Williamson) and Federal income tax receipts.

In today's economic context, even with near-full employment, similar outcomes are achievable. A 2014 study by the University of Maryland commissioned by the National Association of Manufacturers projected that increased infrastructure spending could accelerate annual economic growth to 2.9 percent and raise real disposable income by 3.4 percent, compared to the stagnant growth average of 1.8 percent per year (Werling). This is critical, as the ASCE's 2021 Report Card on America's Infrastructure presages severe economic repercussions if the infrastructure investment gap remains unaddressed. The NIB, therefore, stands not just as a financial institution, but as a catalyst for sustainable economic growth and prosperity in the United States. By 2039, a continued underinvestment would cost an estimated:

- \$10 trillion in cumulative lost GDP,
- More than 3 million jobs in year 2039, and
- \$2.24 trillion in exports over the next 20 years.

Meanwhile, well-targeted investments will help to control inflation because, for every dollar borrowed and spent on infrastructure, three new dollars

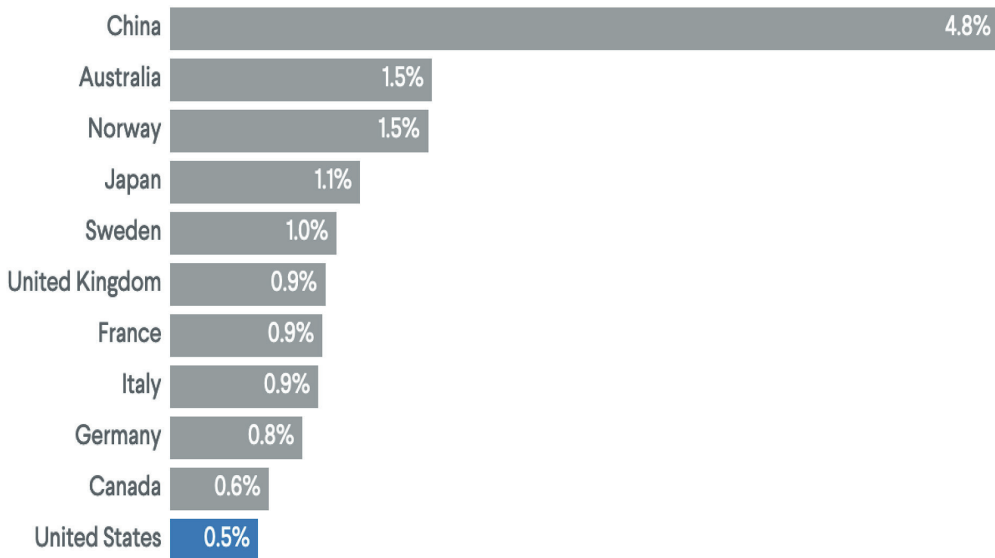
in economic output will be created: a greater supply of goods means lower prices (Werling). Moreover, NIB-financed spending will provide a steady demand for manufactured goods made in America, which grows that sector and adds more high-paying jobs. Spending can also be accelerated to offset the effects of any potential future.

Restores International Competitiveness

For anyone traveling abroad, it's obvious that the United States lags behind other developed countries including China in terms of infrastructure quality and competitiveness. The disparities can be traced back to lower levels of infrastructure investment (see chart below), less integrated national planning, and more costly construction compared to many international peers (Ziegler).

U.S. Invests Less in Transportation Than Other Developed Countries, China

Annual inland infrastructure investment as a percentage of GDP, selected countries



Note: Data is from 2021 or the most recent year available. Inland infrastructure includes roads, rail, inland waterways, maritime ports, and airports. All sources of financing are accounted for.

Figure 3

Source: Organization for Economic Cooperation and Development

It should come as no surprise to learn that Europe, Japan, Canada, India, and China all employ national or international development banks to finance their infrastructure projects and better plan to meet ongoing development needs. In fact, many countries copied the “American System” after sending delegations to Amer-

ica in the mid-1800s to study it (Wikipedia, Sep. 2023). They understood that the economic and environmental benefits of such banks were substantial. China, for example, has relied on three state-owned “policy banks” to finance high speed rail that is unrivaled anywhere on earth. Built in just over just 12 years, China’s HSR has linked rural populations with urban centers, enabled the buildup of new manufacturing centers, helped to lift 800 million people out of poverty, and paved the way for China’s global trade supremacy (Whitney). Added to that, China’s banks financed a nation-wide water grid that tamed rivers, diverted water supplies to where they were needed, produced electricity, and greened parched farmlands to ensure adequate food supplies for a growing population (Brown). America needs a comparable set of projects if we are to compete, prosper and succeed.

Conclusion

The stark reality highlighted in the 2014 “60 Minutes” documentary, *America’s Crumbling Infrastructure*, remains a pressing issue. Despite the clear and present danger posed by deteriorating infrastructure—from blocked ports and unstable bridges to regular electric outages and a critical housing shortage—effective solutions have been elusive. The IIJA and other recent outlays will have significant impact in this arena but does not contain sufficient financing to fundamentally improve the full range of inadequate or deteriorating infrastructures.

At this juncture, it is vital to ask: How can we finance comprehensive infrastructure that not only reach every American but also buttress our economy? Traditional approaches, limited by stretched Federal and state budgets—as well as insufficient interest from private capital markets —fall short. The answer may lie in innovative legislative solutions like HR4052, which proposes the establishment of a \$5 trillion National Infrastructure Bank. This initiative is ambitious in scope and capable of addressing the entire financing gap. Moreover, it has a historical precedent, having been successfully implemented four times in U.S. history and emulated by other nations.

The National Infrastructure Bank promises to extend its reach to every corner of the country, bolstering local economies and creating high-paying jobs without burdening the federal budget. With 19 Congressional co-sponsors and a growing chorus of support from state and local legislators, this legislation stands as a beacon of hope. It represents a tangible, proven solution to a problem that has long plagued the country. The time for decisive action is now—to rebuild, revitalize, and future-proof America’s infrastructure for generations to come

Author Capsule Bio

Stanley Forczek serves as the Advisory Board President for the Coalition for a National Infrastructure Bank. He is a diversified infrastructure expert with a comprehensive background in transportation and energy management. His career spans over four decades, including significant roles with Amtrak. At Amtrak, he served as the first Director of Finance for the Northeast Corridor and the initial Director for Strategic Planning. His responsibilities at Amtrak also involved managing a substantial energy budget and playing a key role in the economic dispatch of a 1,200-mile electric transmission network and power pool.

He has a notable history of involvement with electric regulatory bodies, such as PJM, NY-ISO, ISO-NE, FERC, and several State Commissions. His work has covered areas including market development, transmission utilization, transmission overbuild, and generation development. In the realm of energy management, he has overseen the procurement of approximately 900 megawatts of electricity and over 750,000 dekatherms of natural gas. His strategic procurement initiatives led to significant Amtrak cost savings. His expertise also extends to integrating traction/transit operations with energy management and planning.

Outside of Amtrak, he has managed energy procurements for various large-scale institutional users. His experience covers the entire range of processes, from presentation and negotiation to the execution and management of procurement contracts. This work has spanned across the U.S., with a particular focus on the mid-Atlantic and New England regions.

He runs his own consulting firm in the New Jersey/Pennsylvania region, offering services to clients, including Goldman Sachs, Exelon, and Concord Engineering. He holds an Executive MBA from the University of Virginia, Darden School of Business, and a BS in Accounting from Fairleigh Dickinson University. He has also completed coursework at the University of Illinois, focusing on Energy Engineering Business Strategies.

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