



Addressing Infrastructure Needs through Innovative Financing Mechanisms

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Overview

In the face of ongoing fiscal pressures under austerity, urgent needs often come before strategic, long-term investments. This issue brief identifies infrastructure financing challenges faced by local governments in New York State and introduces new ways to finance infrastructure.

What is the State of New York's Infrastructure?

In 2015, New York State (NYS) infrastructure received a rating of C- from the [American Society of Civil Engineers](#), highlighting the need to invest in maintenance and replacement of infrastructure. Water infrastructure offers a clear example of the scope of the problem—[NYS water systems](#) are in need of “almost \$40 billion in repairs and improvements.” In addressing these needs, local governments face several fiscal challenges, including budget shortfalls, a property tax cap, state mandates, and declining state/federal grant aid.

Under significant fiscal pressure, it is difficult to make capital investments that often require long-term recurring expenditures. Thus, infrastructure investments must be financed using intermittent funding through state/federal grants for specific infrastructure projects. These sources have been decreasing in real terms since at least 2014 and local governments must compete with one another. The short-term nature, high transaction cost, and uncertainty of grants make them unattractive funding mechanisms for capital investments. In summary, fiscal stress has limited the ability of traditional funding tools to sustainably finance infrastructure—governments need innovative mechanisms built for the 21st century.

What are Alternative Financing Mechanisms?

Green Bonds

Green bonds, also known as [climate bonds](#), offer the security of traditional bonds while taking advantage of the momentum of a global trend in environmental sustainability. These two combine to deliver an appealing product to local governments and investors alike. There is strong and growing demand for green certified bonds from investors looking to diversify their portfolios with projects that contain a green mandate without incurring much additional risk. In utilizing green bonds, governments leverage expected increases in the value of resources from one of the science-based categories identified by the [Climate Bond Initiative](#) to make investments in infrastructure (Daigneau, 2013).

The [State of Massachusetts](#), [San Francisco Public Utilities Commission](#) (SFPUC), and [New York City's Metropolitan Transportation Agency](#) (MTA) have all issued green bonds to help fund critical infrastructure projects and improvements in their jurisdictions with values of \$100mn, \$240mn and \$662mn, respectively.

New York State has a strong AA+ credit rating for general obligation bonds that would attract investors. A collective of local governments in New York State could pool projects under the green bond criteria and lobby the State to oversee their submissions, provide investor confidence, and coordinate the disbursement of funds as well as ensure timely repayment of the bond.

Ecosystem Services

The role of ecosystem services should not be overlooked in the discussion of infrastructure financing. Wetlands and forests can be used to efficiently manage stormwater, drinking water quality, improve property values, and moderate temperatures



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around buildings and sidewalks. When used creatively in this way, so-called ecosystem services represent cost effective methods for employing natural, as opposed to mechanized, processes. As an indication of the power of ecosystem services, Costanza, et al. (2014) estimated that the global value of ecosystem services is \$125 trillion.

The most relevant ecosystem services in New York relate to flood mitigation and water quality improvement. Permeable land cover and water catchment, like bioswales, reduce flood risk and delay the advancement of floods if properly planned. Even without upfront capital costs, local governments can ameliorate the cost of flood recovery while preserving property values by protecting existing parks, recreation, and open spaces in flood zone. In New York State, the greatest amount of funding for these services is through NYSDEC's Water Quality Improvement Project, which totaled \$87 million in 2016 .

Public Banking

A public bank is a bank primarily capitalized with public monies, such as tax revenue. Public banks have the same fundamental profit-motives, organizational structures, and functions as private banks, but are driven by citizen interests. Public banks can help correct market failures such as lack of funding for small-scale infrastructure projects, which may result from private sector capital constraints, unwillingness to lend, or the projects' low profitability.

Founded in 1919, the Bank of North Dakota ("BND") is the oldest and only currently operating state-level public bank in the U.S, although the federal government has [explored the idea](#) of a National Infrastructure Bank for some time. In 2015, the BND started the Infrastructure Loan Fund ("ILF"), which aimed to finance new infrastructure for waste, wastewater, sewers, stormwater, and curb/gutter transportation infrastructure. Seven North Dakotan cities were [given loans](#) for a maximum of \$15 million with a term of up to 30 years at 2% interest. Through the ILF, cities are able to save on interest and bond issuance costs.

Aspects of the BND model could translate to NYS. First, entities funding infrastructure should exhibit market discipline and resist political pressures to avoid distortion of the decision making process. Second,

public banks could allow local governments to pool resources to access cheaper financing and better compete for federal grants. While state municipal bond banks provide some of these functions, they could be expanded to the local level. Third, umbrella institutions that provide advisory and technical capacity to local governments should be created. These institutions should not separate infrastructure funds by sector, but rather commingle them to permit cross-subsidization. In summary, by either creating sub-national level institutions that 1) pool financial resources and technical capacity and 2) consolidate accounting/governance functions, local governments will be better able to manage the capital planning of infrastructure investments under fiscal stress.

Conclusion

There is not enough funding for infrastructure investments in NYS. The methods and constraints under which local governments are currently trying to operate do not allow for proactive strategic investments with long-term benefits. As traditional methods of infrastructure financing fail to meet rising needs, localities must assess the potential benefits and risks of new and innovative financing methods such as green bonds, ecosystem services, and public banking in order to finance infrastructure.

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