

# Bond Financing for Clean Energy Projects

BROOKINGS-ROCKEFELLER

Project on State and Metropolitan Innovation

## Clean Energy Finance Through the Bond Market: A New Option for Progress

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### Summary

State and local bond finance represents a powerful but underutilized tool for future clean energy investment.

For 100 years, the nation's state and local infrastructure finance agencies have issued trillions of dollars' worth of public finance bonds to fund the construction of the nation's roads, bridges, hospitals, and other infrastructure—and literally built America. Now, as clean energy subsidies from Washington dwindle, these agencies are increasingly willing to finance clean energy projects, if only the clean energy community will embrace them.

So far, these authorities are only experimenting. However, the bond finance community has accumulated significant experience in getting to scale and knows how to raise large amounts for important purposes by selling bonds to Wall Street. The challenge is therefore to create new models for clean energy bond finance in states and regions, and so to establish a new clean energy asset class that can easily be traded in capital markets. To that end, this brief argues that state and local bonding authorities and other partners should do the following:

- Establish mutually useful partnerships between development finance experts and clean energy officials at the state and local government levels
- Expand and scale up bond-financed clean energy projects using credit enhancement and other emerging tools to mitigate risk and through demonstration projects
- Improve availability of data and develop standardized documentation so that the risks and rewards of clean energy investments can be better understood
- Create a pipeline of rated and private placement deals, in effect a new clean energy asset class, to meet the demand by institutional investors for fixed-income clean energy securities

### I. Introduction

The financing of renewable energy and energy efficiency projects to reduce carbon emissions and grow the American economy has not gotten easier. The massive infusion of clean energy investments embedded in the American Recovery and Reinvestment Act (ARRA) of 2009 has almost entirely wound down.<sup>1</sup> Additionally, commercial bank lending for clean energy projects is down, and many American banks have opted out of loans with long repayment schedules and for smaller renewable energy projects.<sup>2</sup> The clean energy sector's ability to secure either equity or debt financing for projects has also ebbed following the Great Recession.<sup>3</sup>

"Bond finance holds tremendous potential for clean energy investment, at levels in the tens of billions of dollars in the next several years."

Devashree Saha

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# Outline

Proposition

Clean energy bond financing

The challenge

Toward a new infrastructure finance approach

Progress

## Proposition

Nation's states and metropolitan regions are taking the lead in coming up with **smart, creative, large-scale clean energy financing solutions**

### Brookings-Rockefeller Project on State and Metropolitan Innovation Series:

- Leveraging State Clean Energy Funds for Economic Development (2012)
- State Clean Energy Finance Banks: New Investment Facilities for Clean Energy Development (2012)
- Clean Energy Finance Through the Bond Market: A New Option for Progress (2014)

## Clean energy bond financing

State and local bond finance represents a **powerful but underutilized tool** for future clean energy investment

## The challenge

### Four major finance and policy problems:

- Weak cooperation between development finance agencies and clean energy offices
- Lack of a large market for clean energy bonds
- Spotty performance data and lack of standardized documentation
- Institutional investor demand for clean energy bonds remains limited

## Toward a new infrastructure approach

States and localities can consider pursuing four main agendas:

- Establish **mutually useful partnerships** between development finance experts and state and local clean energy officials
- Expand and scale-up bond financed clean energy projects using **credit enhancements** and through **demonstration projects**
- Improve the **availability of data** and develop **standardized documentation**
- Create a **pipeline of rated and private placement deals** to meet the demand by institutional investors for fixed-income clean energy securities

## Toward a new infrastructure approach

Establish **mutually useful partnerships** between development finance experts and state and local clean energy officials



## Toward a new infrastructure approach

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## Toward a new infrastructure approach

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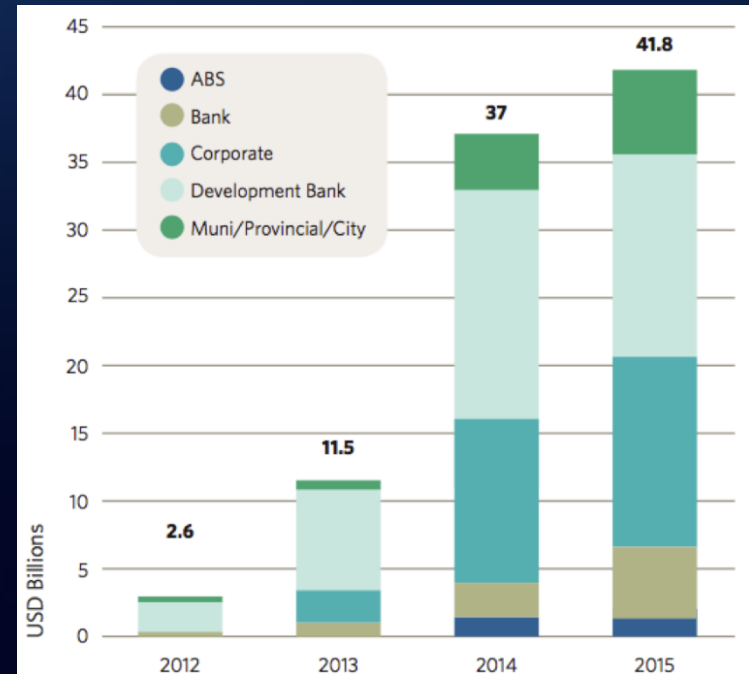
## Toward a new infrastructure approach

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# Progress

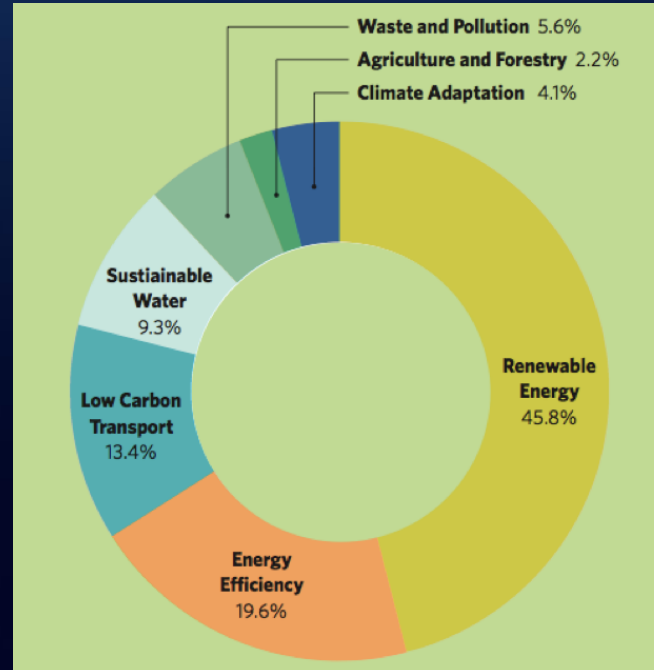
## Growing demand in clean energy / green bonds

- Record \$41.8 billion green bonds issued globally in 2015
- 1/4 of total issued amount came from the United States--\$10.5 billion, mainly driven by municipal green bonds
- Continuously growing investor demand, particularly by institutional investors and corporate treasuries



# Progress

Clean energy projects lead the type of projects being financed by green bonds



Source: Climate Bonds Initiative

## For more information

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