



Green Banks 101: How They Work and How to Make Them Work For You

Tuesday, 3:45 – 5:00
PM

Green Banks 101

- Today's speakers:
 - Jeffrey Schub, Coalition for Green Capital
 - Ben Healey, Connecticut Green Bank
 - Jeff Diehl, Rhode Island Infrastructure Bank



coalition for green capital

Creating State Financing Tools to Make Clean Energy Markets Grow Quickly

*Jeffrey Schub, Executive Director
Coalition for Green Capital*

May 2016

Green Banks fill the financing gap and draw in the capital needed to make clean energy markets grow

A Green Bank is a public financing authority that leverages private capital with limited public-purpose dollars to accelerate the growth of clean energy markets



Green Bank plays dual role of increasing the flow of capital and building market to increase demand

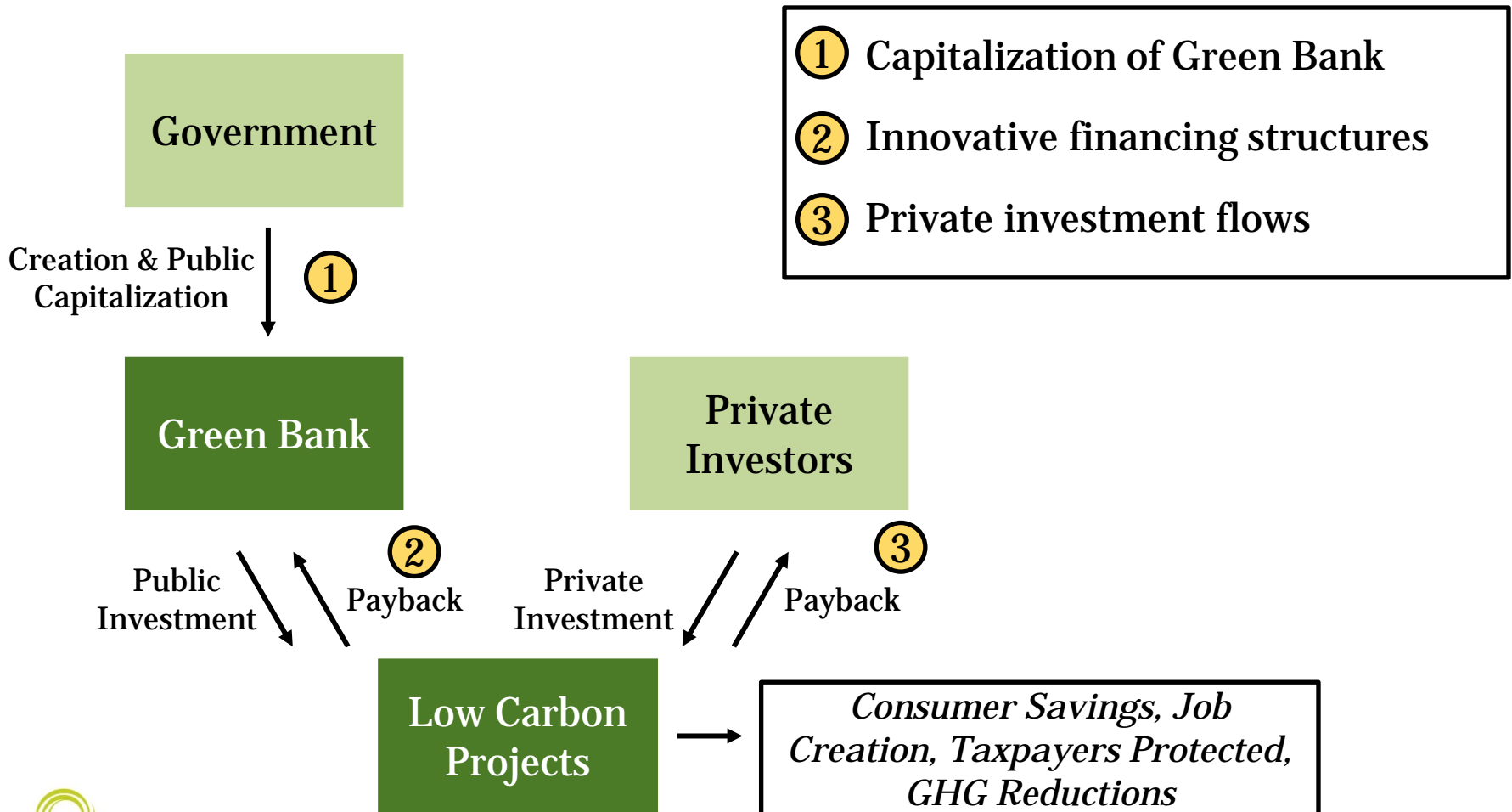
Financing Projects

- Leverage public dollars
- Stimulate private investment
- Fill market gaps

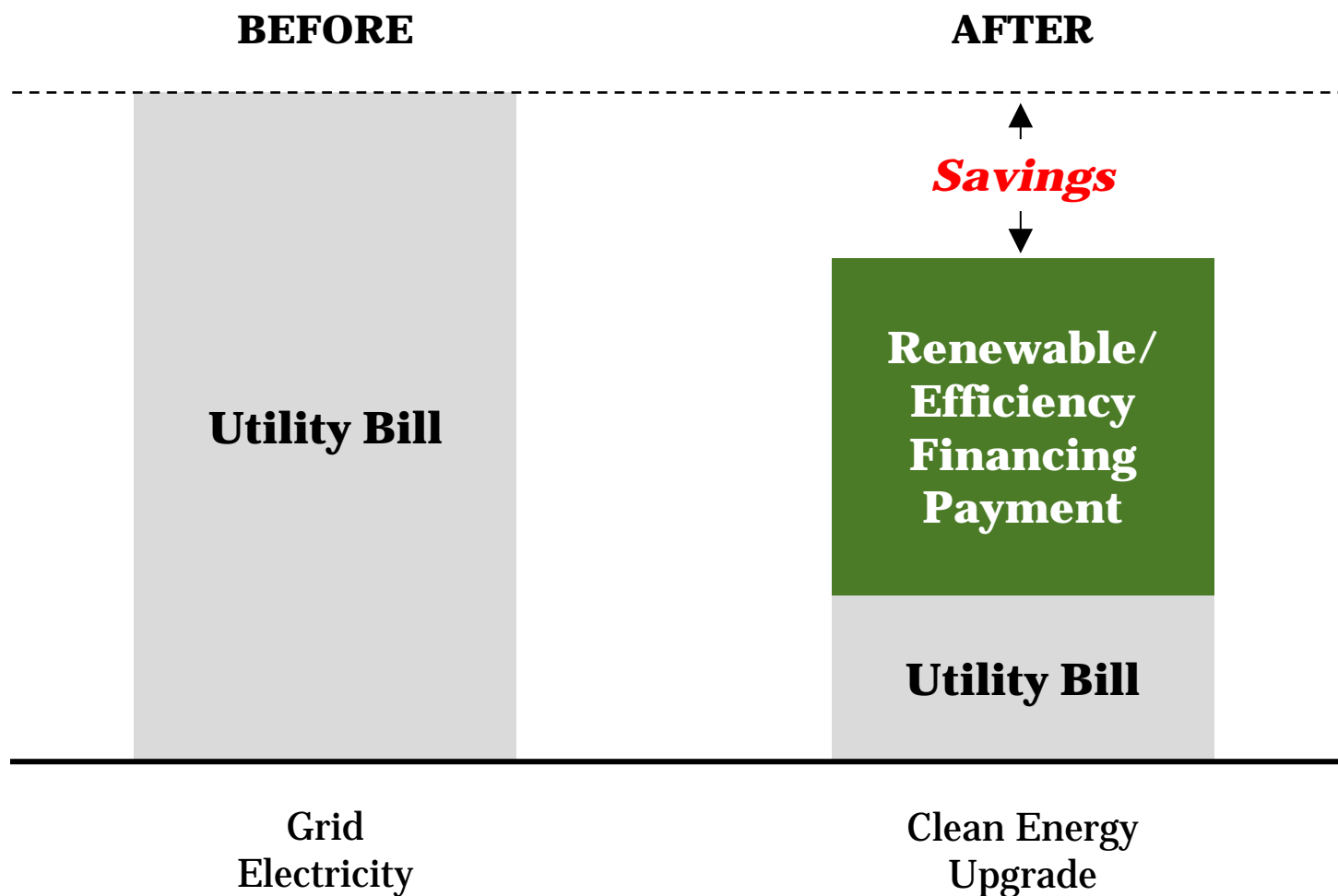
Generating Demand

- Turn-key solutions
- Harmonized programs
- Local Community-based Marketing
- Trustworthy source of reliable consumer information
- Cross-agency coordination

Green Bank channels public investment to leverage private capital and lower energy costs



Financing structured so that repayment plus remaining utility bill are less than prior utility bill



Green Banks create jobs and economic development with local investment

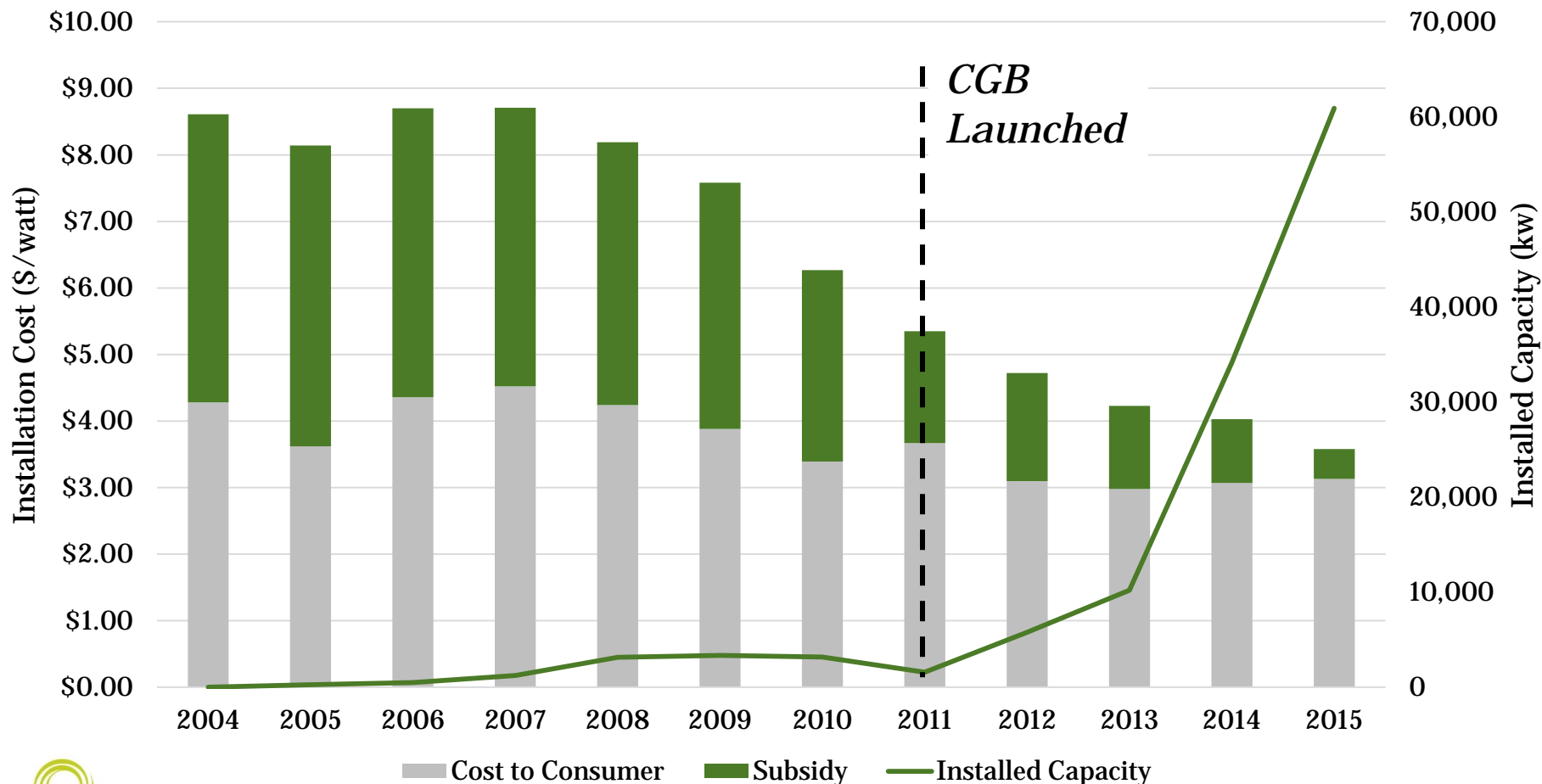
More Jobs for Contractors

- **Increased Demand**
 - Greatest barrier to adoption of clean energy technology is the upfront cost
 - Public-private financing eliminates that barrier, enables demand for clean energy services
- **More Local Jobs**
 - Trained professionals with good wages needed to install equipment
 - Must be done locally, jobs cannot be outsourced
 - More demand and an expanding market meets new businesses

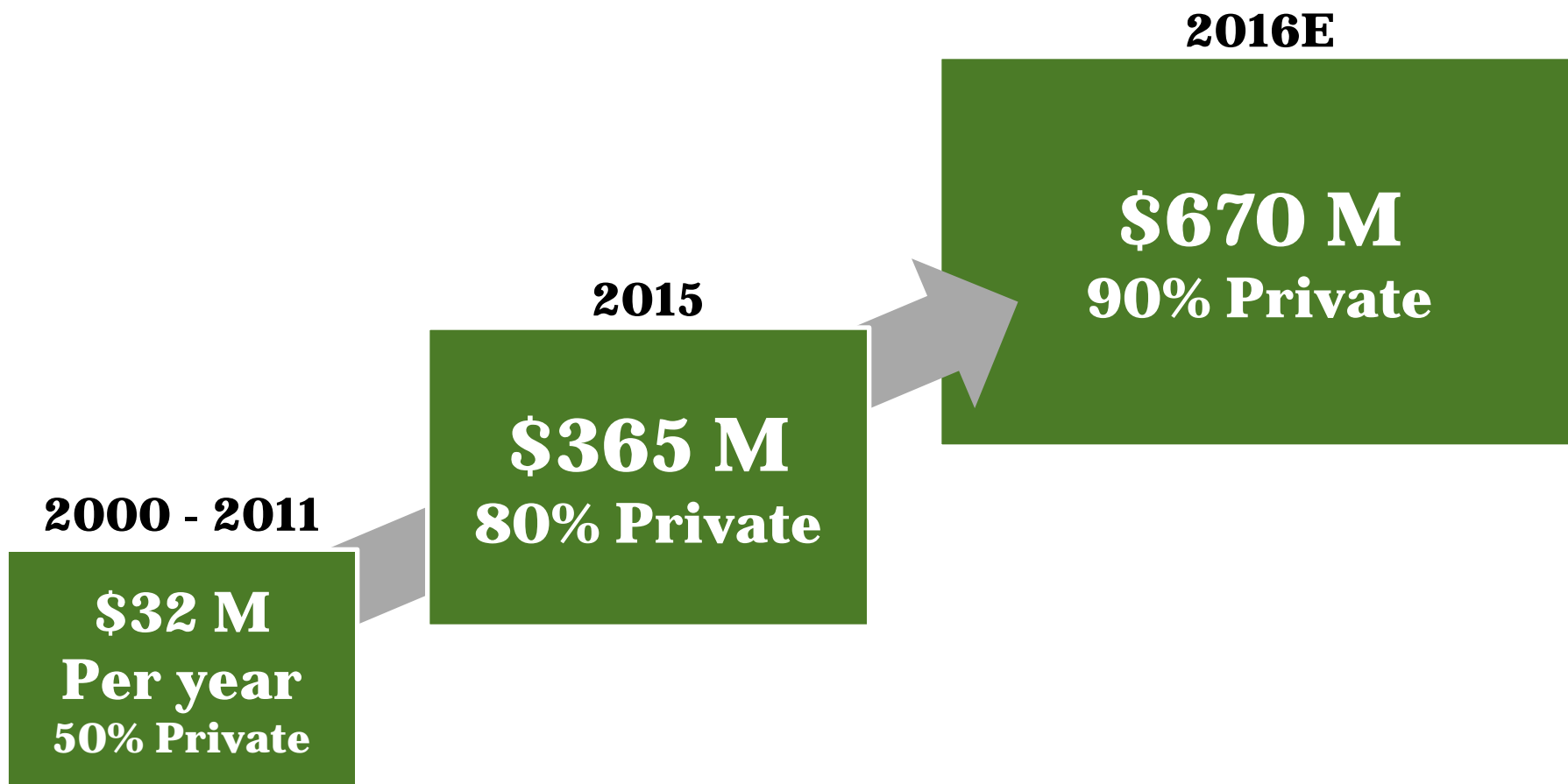
New Investments for Lenders

- **New Profitable Opportunities**
 - Green banks stimulate market growth, create demand for financing products
 - Lenders become active in growing, low-risk market
 - Lenders can expand business
- **Early Safety Net**
 - Green Bank partnership provides initial assurance about risk
 - Credit enhancements encourage market entry
 - Lenders can learn about market structure with govt security

Example: Connecticut Green Bank grows residential solar with more financing and less subsidy



In only 5 years, Connecticut Green Bank increased clean energy investment 20x per year!



Green Banks are quickly spreading across U.S.

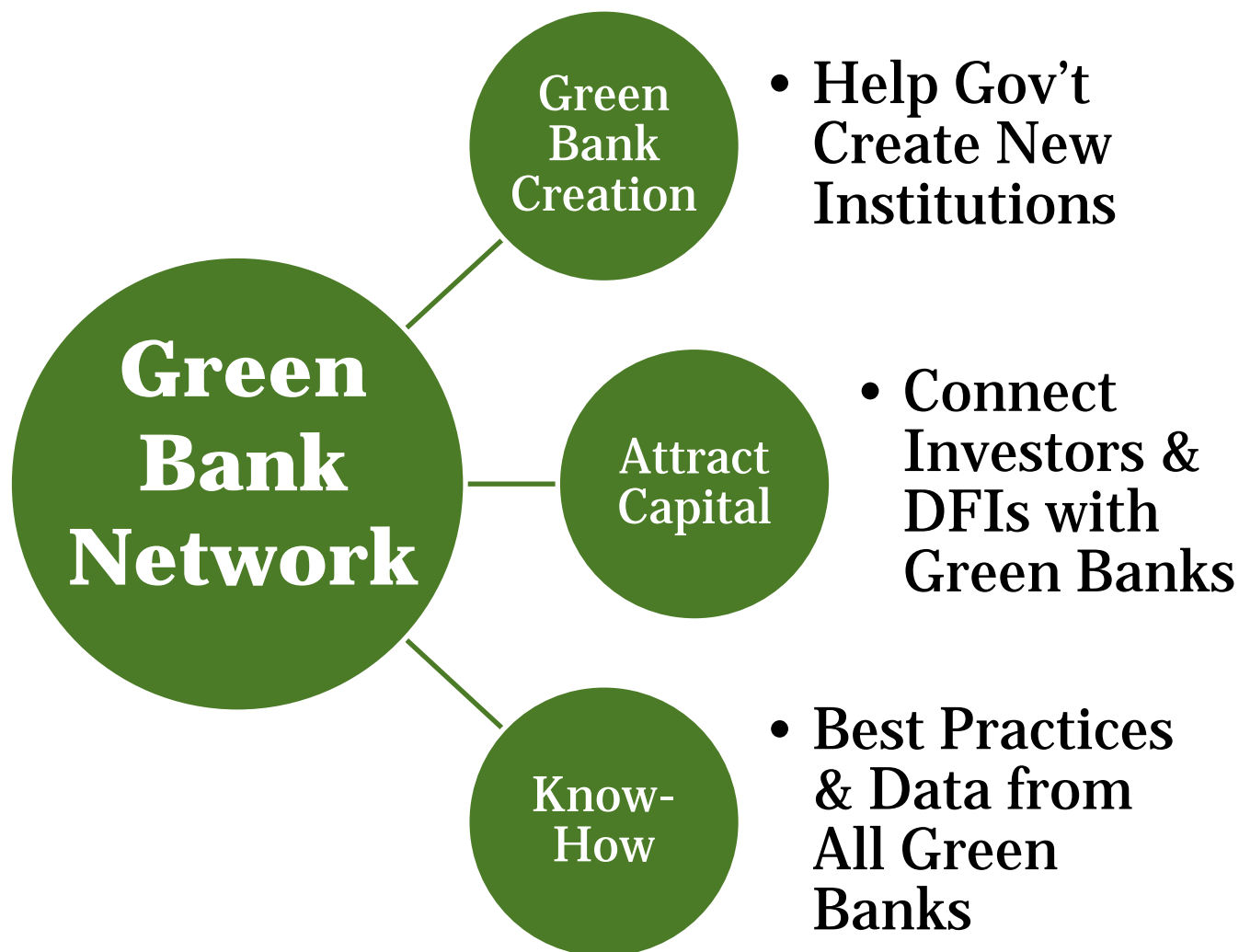
Green Banks Operating Or Under Development/Consideration



Green Bank Trends

- Green Banks moving to new Purple & Red states
- Demand, demand, demand!!
- Must make clean energy accessible to all
- Federal government supports Green Banks
- Global recognition of Green Bank role after Paris

Global Green Bank Network just launched, hub for new Green Bank development, knowledge sharing





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Thank You

Comments and Questions:

Jeffrey Schub, Executive Director,
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Connecticut Green Bank

Sparking a Movement to Accelerate
the Growth of Green Energy

May 10, 2016



Connecticut Green Bank

1st Green Bank in the United States

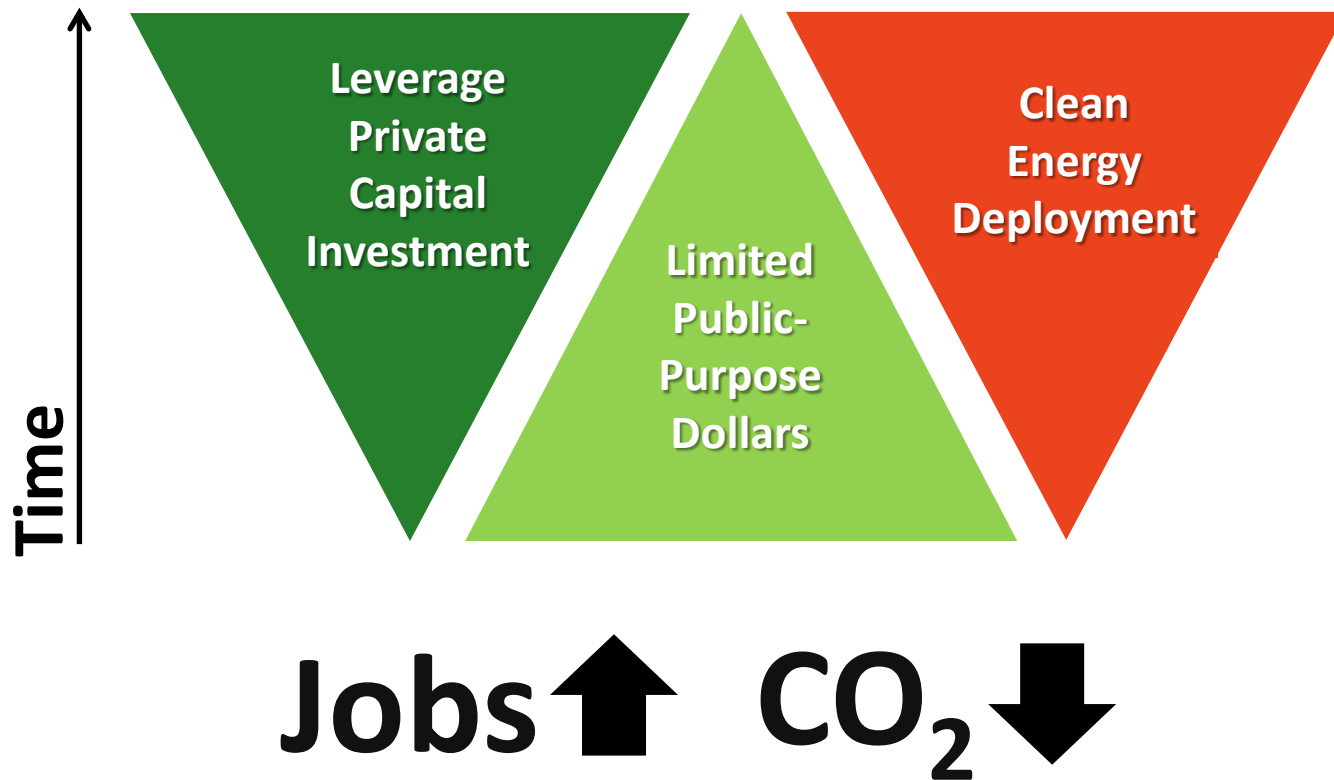


...transitioning programs away from government-funded grants, rebates, and other subsidies, and towards deploying private capital

...the Green Bank was established in 2011 to develop programs that will *leverage private sector capital to create long-term, sustainable financing for energy efficiency and clean energy to support residential, commercial, and industrial sector implementation of energy efficiency and clean energy measures.*

Green Bank Model

Public-Private Partnerships



Financing (Solar Lease)

\$60 to \$100+ MM PPP

Connecticut
Green Bank

Sub Debt
Equity
Loan Loss Reserve
PBI (incentive)
Developer services

Debt Syndicate led by
First Niagara



Debt



greentechmedia:

Connecticut's Green Bank: A Model for Public-Private Renewables Partnerships?

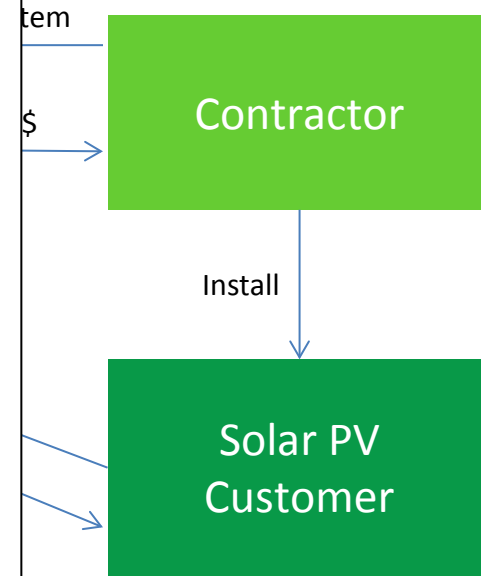


Fostering competition among installers and goodwill among taxpayers

Breaking Energy, Conway Irwin
July 8, 2013

Connecticut's Clean Energy Finance and Investment Authority (CEFIA) -- the state's Green Bank, and the first of its kind in the country -- has established a new solar financing system in a bid to expand capacity in the state. CT Solar Lease II seeks to avoid some of the most frequently cited criticisms of renewable energy finance, in that it uses less and recovers more taxpayers' funds, as well as fosters market competition.

Lease provides local in important sales tool, customers benefit from simple, no-money-down financing and peace of mind.



Financing (C-PACE) Public-Public-Private Partnership



- An innovative and affordable way for businesses, manufacturers and non-profits to **pay for green energy upgrades**. C-PACE covers **up to 100% of project costs** with **no money down** and is repaid as a **long-term assessment on the property**. C-PACE allows owners to **immediately increase cash flow**.

Private capital may provide 100% upfront, low-cost, long-term funding, cash flow positive

Repayment of benefit assessment through property taxes

A senior C-PACE lien is put on the property and stays regardless of ownership

In C-PACE, commercial property owners pay back their loans using the savings created by the energy projects. As a requirement of the program, the energy savings must exceed the cost of the loan payments, creating positive cash flow.

“That is what drives repayment of loans. How can that not be good?” - Tom Mongellow of the Connecticut Bankers Association

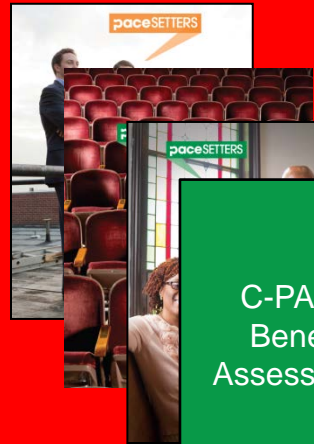
CT Banks Move into Green Financing
Hartford Business Journal
November 25, 2013

Financing (C-PACE)

\$40 MM RGGI to \$100 MM PPP



Connecticut
C-PACE Ware



C-PACE
Benefit
Assessment

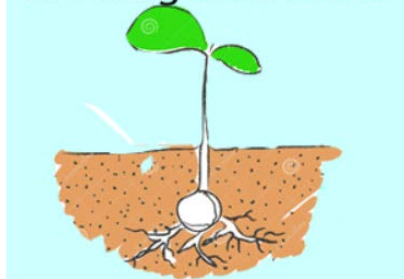
paceSETTER

paceSETTERS

monitordaily
The Independent Voice of Equipment Finance

Hannon Armstrong Provides \$100 MM Funding for Commercial Clean Energy

Growing Businesses



The Connecticut Green Bank and Hannon Armstrong have reached an agreement that will increase the deployment of energy efficiency, solar and other clean energy projects throughout the Connecticut commercial and industrial sector.

December 28, 2015

Be a paceSETTER. Get started at C-PACE.com

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Be a paceSETTER. Get started at C-PACE.com

energize CT epace

energize CT epace

energize CT epace

cut
bank

Class C Bonds
(10%)

Funding
Instruments &
Markets

Bonds

Marketing

Solarize Connecticut

RMI OUTLET
plug into new ideas

What Electric Vehicles Can Learn from the Solar Market

October 29, 2015



“...Inspired by the success of pooled purchasing programs for residential rooftop solar...a non-profit advocacy group administers programs to facilitate group purchases...engage EV manufacturers and dealers...LEAF sales increased almost 300 percent during the program.”

144
Durham

125
Fairfield

97
Westport

62
Portland

2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014

REFERENCES

Graphic created by Ken Gillingham , Assistant Professor at Yale University School of Forestry and Environmental Studies (2013)
“What Electric Vehicles Can Learn from the Solar Market” by Rocky Mountain Institute (October 29, 2015)

Thank You

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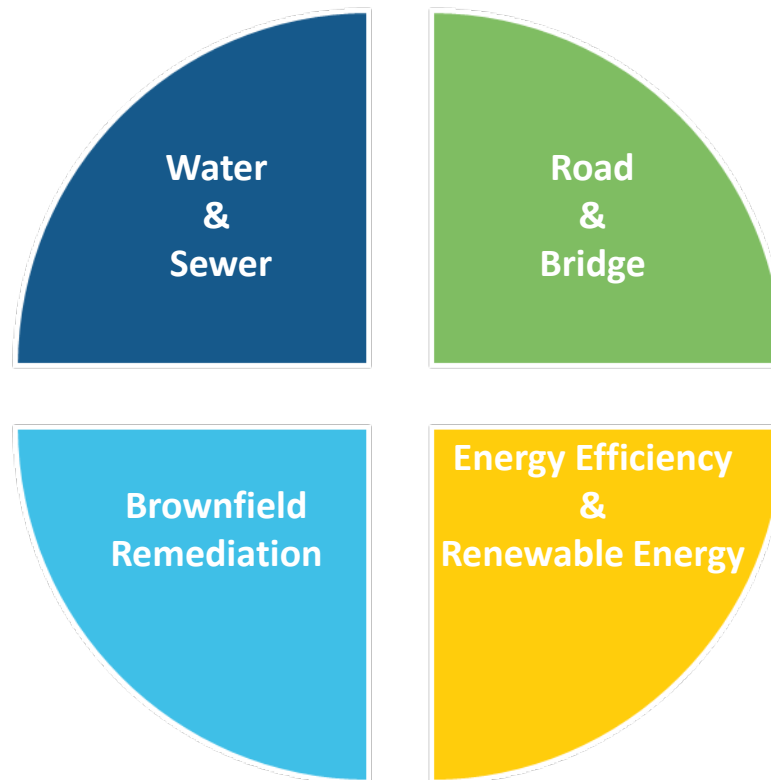


Background

- Overview
- Process to create a Green Bank
- Program Development
- Future Solutions

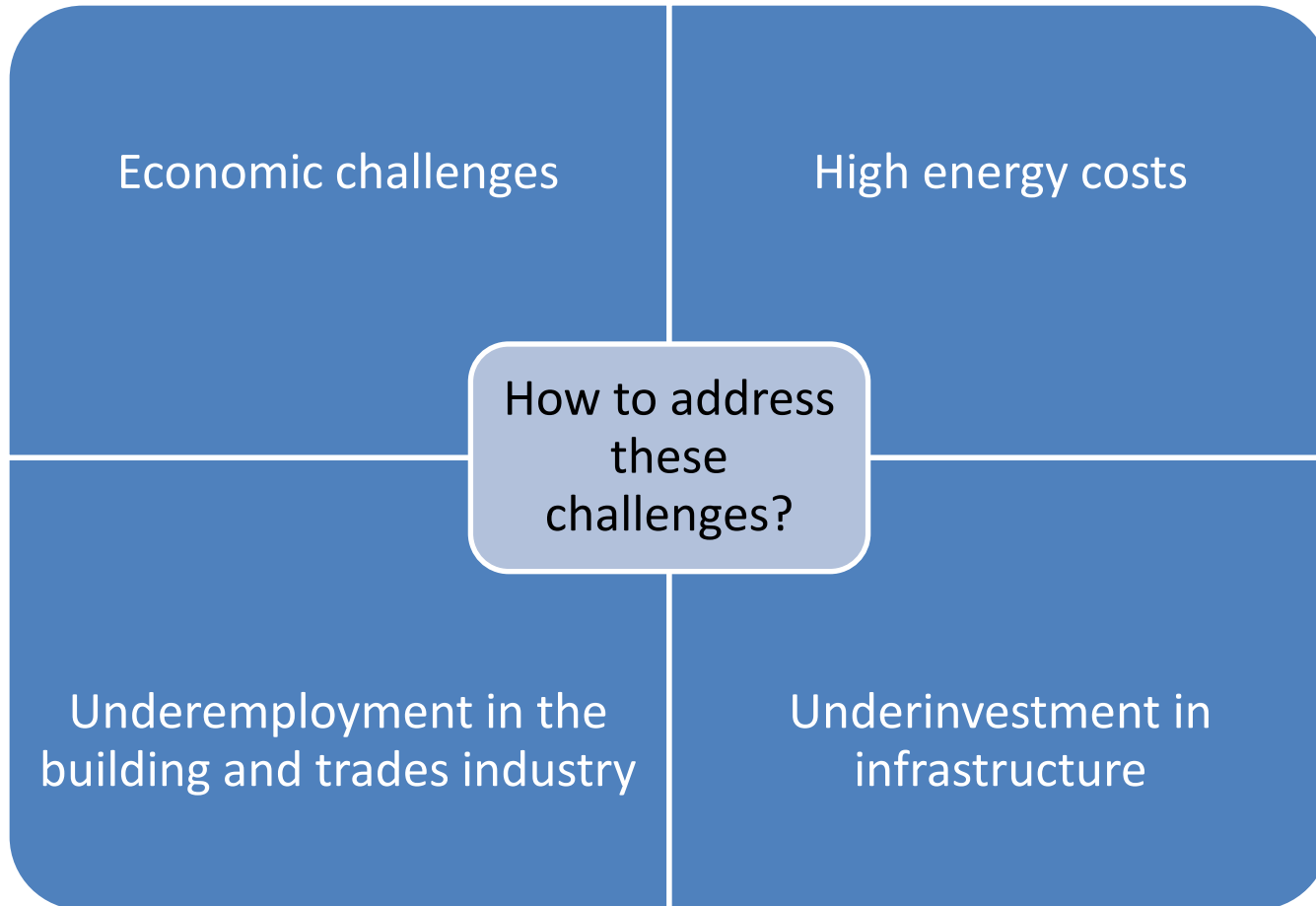


*The RIIB is Rhode Island's centralized hub
for new and existing environmental infrastructure
financing programs*





Clean Water to Infrastructure





RIB's energy programs address market gaps



Long term financing options non-existent in Rhode Island

✓

Lack of State and utility capital to address the overall needs

✓

Deep energy retrofits unaddressed

✓

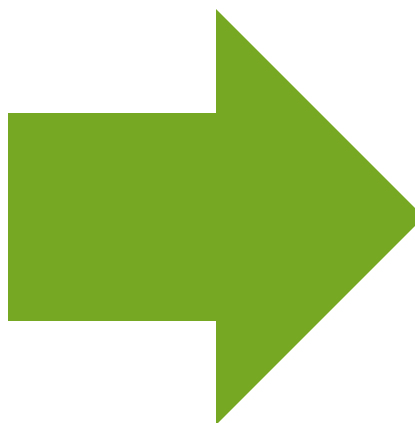
Public-owned buildings underserved

✓



Clean Finance Offerings

Infrastructure Bank Programs
Efficient Buildings Fund
Commercial PACE
Residential PACE
Community Septic System Loan Program
Sewer Tie-in



Markets
Public Buildings
Residential
Commercial
Low-Income
EE and Renewables



How RI achieved success





Future Green Bank Growth

- Integrating climate adaptation with mitigation
- No/low-carbon transportation
- Micro-grids and distributed generation
- Grid modernization