



coalition for green capital

Growing Nevada's Clean Energy Markets Quickly with Green Bank Financing

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Nevada Interim Legislative Committee on Energy

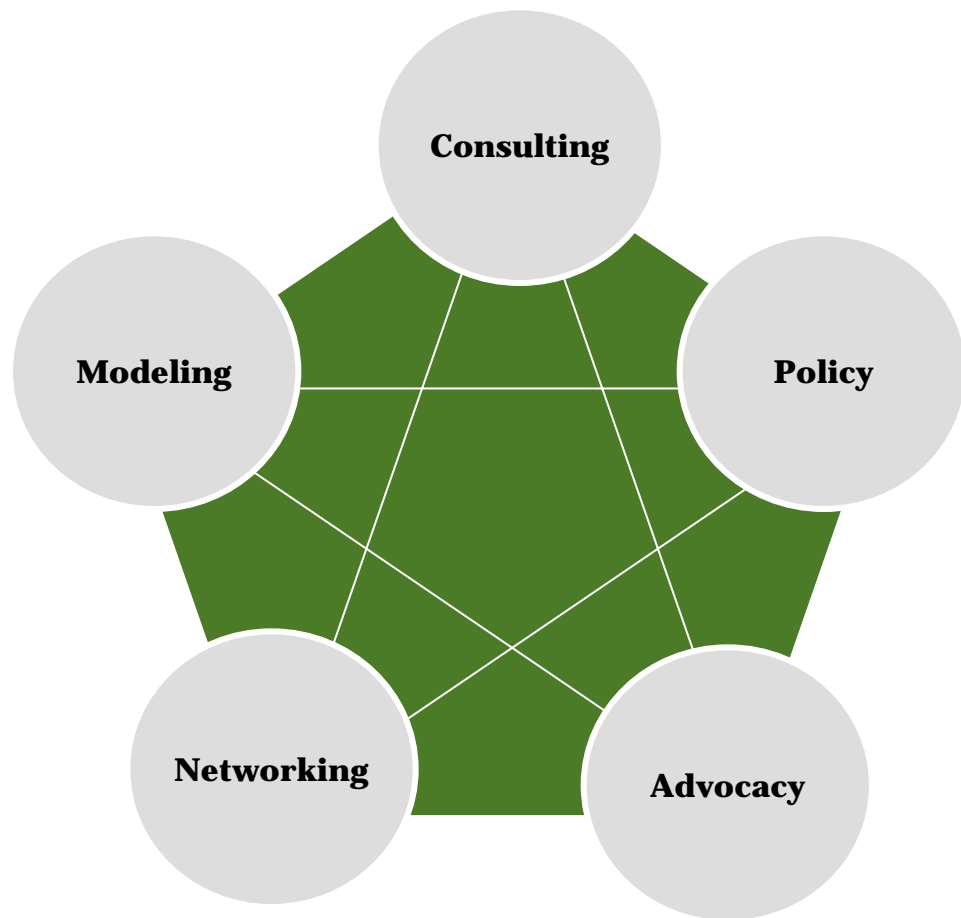
November 20, 2015

Exhibit K - ENERGY
Document consists of 32 pages.
Entire exhibit provided.
Meeting Date: 11-20-15

CGC provides expert support and advice to states exploring green bank creation

CGC's mission is to use state finance, regulatory and legal power to accelerate move to clean power platform.

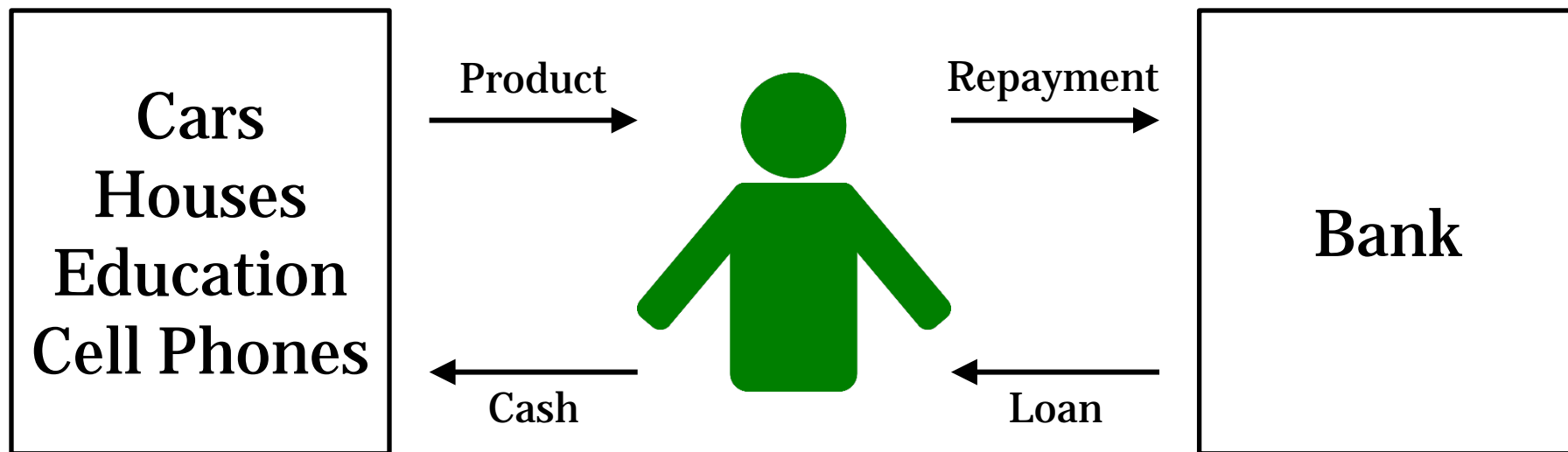
- Nonprofit 501(c)(3) organization
- CGC's leaders have been driving Green Bank movement since '09
- Based in Washington, DC
- Receives pro bono support from Latham & Watkins LLP & Covington & Burling LLP



Contents

- **Intro to Green Banks & Benefits**
- **The Green Bank Landscape**
- **The Role of a Nevada Green Bank**
- **Green Bank Study**

We finance everything to avoid the high upfront cost of a purchasing goods & services, large & small



Would you buy a house without financing?



\$300,000

Mortgage

Down
Payment

Price

Bank financing, aka Mortgage,
eliminates 80% of upfront cost.

Down
Payment

Upfront

Mortgage
Payment

Year 1

...

Mortgage
Payment

Year 30

85% of all vehicle purchases are financed with a loan or a lease



\$25,000

Auto Loan

Down
Payment

Price

Auto loans can eliminate 100% of
upfront cost of a car.

Down
Payment

Upfront

Loan
Payment

Year 1

...

Loan
Payment

Year 5

Like car or house, hard to buy energy efficiency or renewable energy technology without financing



\$25,000

Upfront Cost
with no
Financing

Price



Upfront

Without financing
for clean energy, you
have to pay the
entire cost upfront!

Common public sector approach to stimulating clean energy markets is through grants or rebate



\$25,000

Grants

Upfront Cost
with no
Financing
after Grants

Price



Upfront

A grant is nice,
because it lowers the
technology cost, but
it still leaves huge
upfront cost.
Need financing!



Many large projects – fossil & renewable – can access financing, but not so for distributed projects

Centralized Projects

- Utility-scale
- Power directly to grid
- Strong credit
- Traditional project finance
- Relatively easy to finance

Distributed Projects

- Smaller scale
- Scattered locations
- On-site energy use
- Varying credits
- Range of structures and approaches to finance



Many clean energy markets suffer from expensive or lack of capital

Markets With Adequate Private Capital

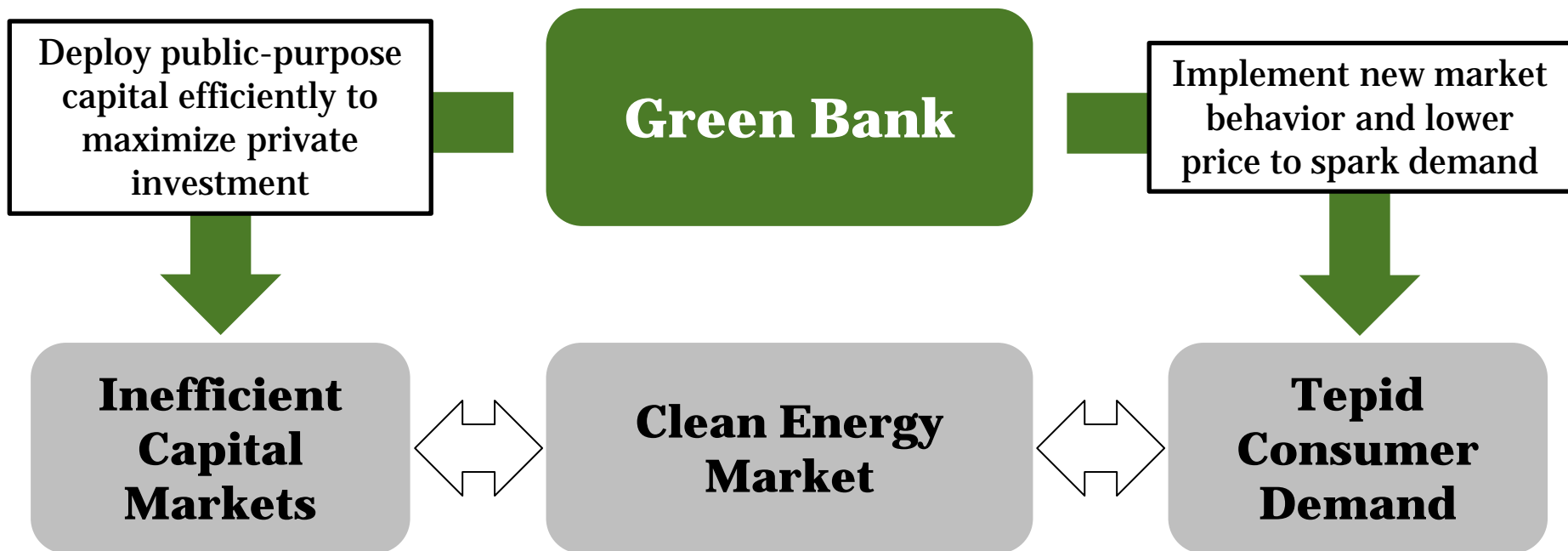
- High-credit residential rooftop solar
- Credit-rated large commercial efficiency projects

Markets With No or Expensive Private Capital

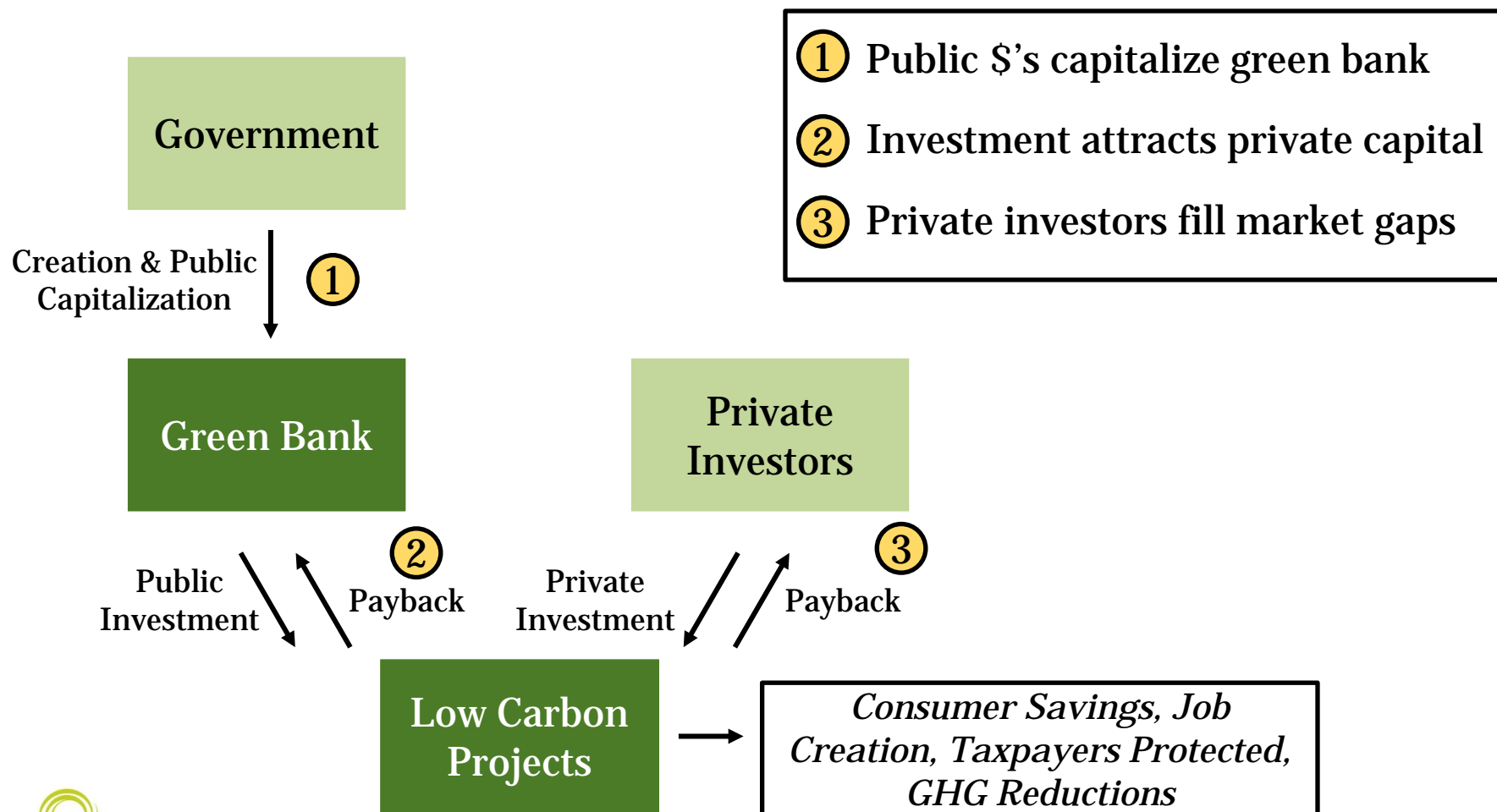
- Low-to-moderate income residential upgrades
- Non-rated commercial solar & efficiency
- MUSH and non-profit rooftop solar
- Community-solar
- Residential energy efficiency
- MUSH energy efficiency
- Grid storage and micro-grids
- Alternative fuel vehicles and infrastructure
- Distributed biomass, biofuels, CHP and fuel cells

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

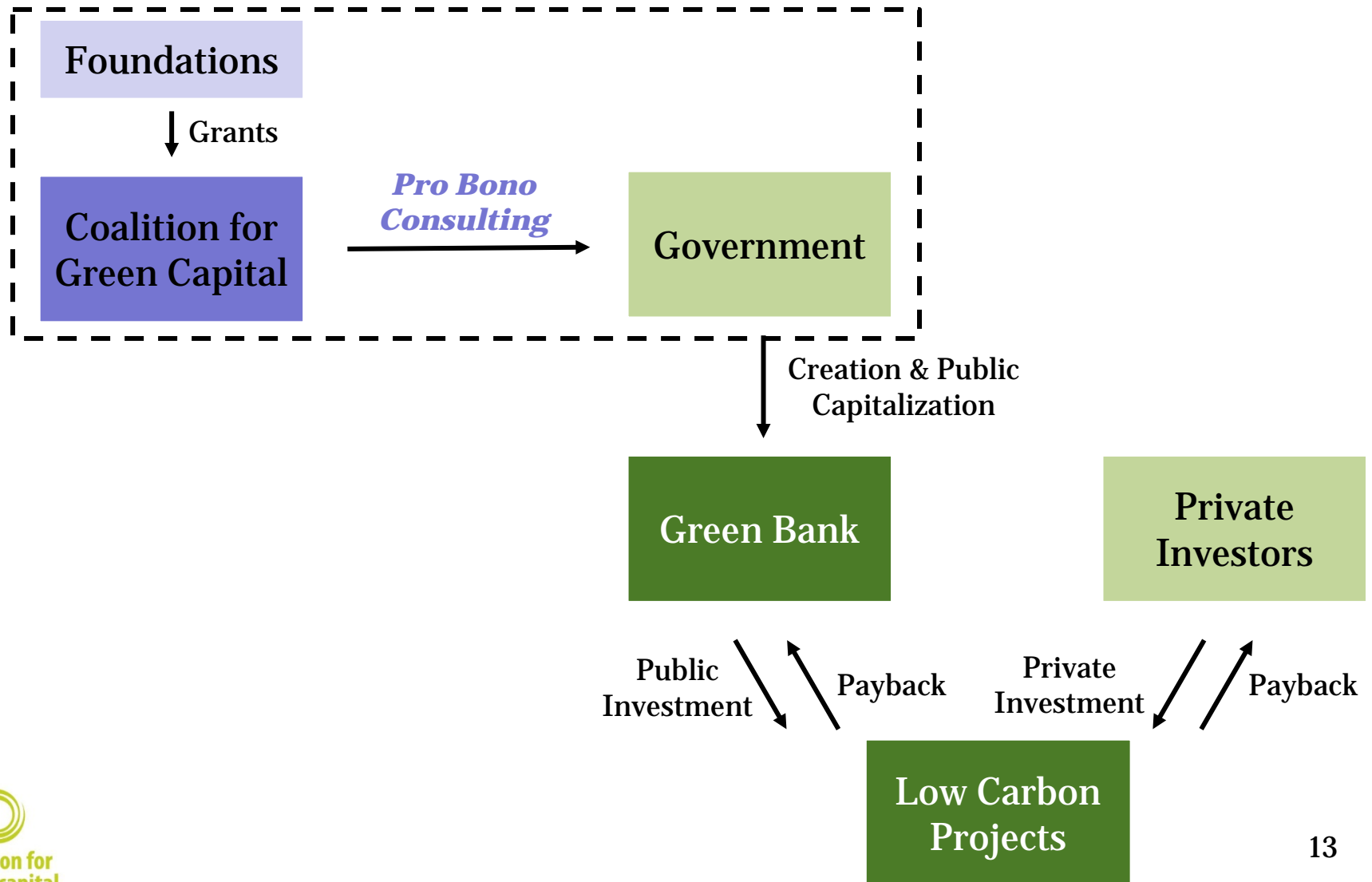
A green bank is a public financing authority that leverages private capital with limited public-purpose dollars to accelerate the growth of clean energy markets



Green Bank is a public institution that channels public & private investment

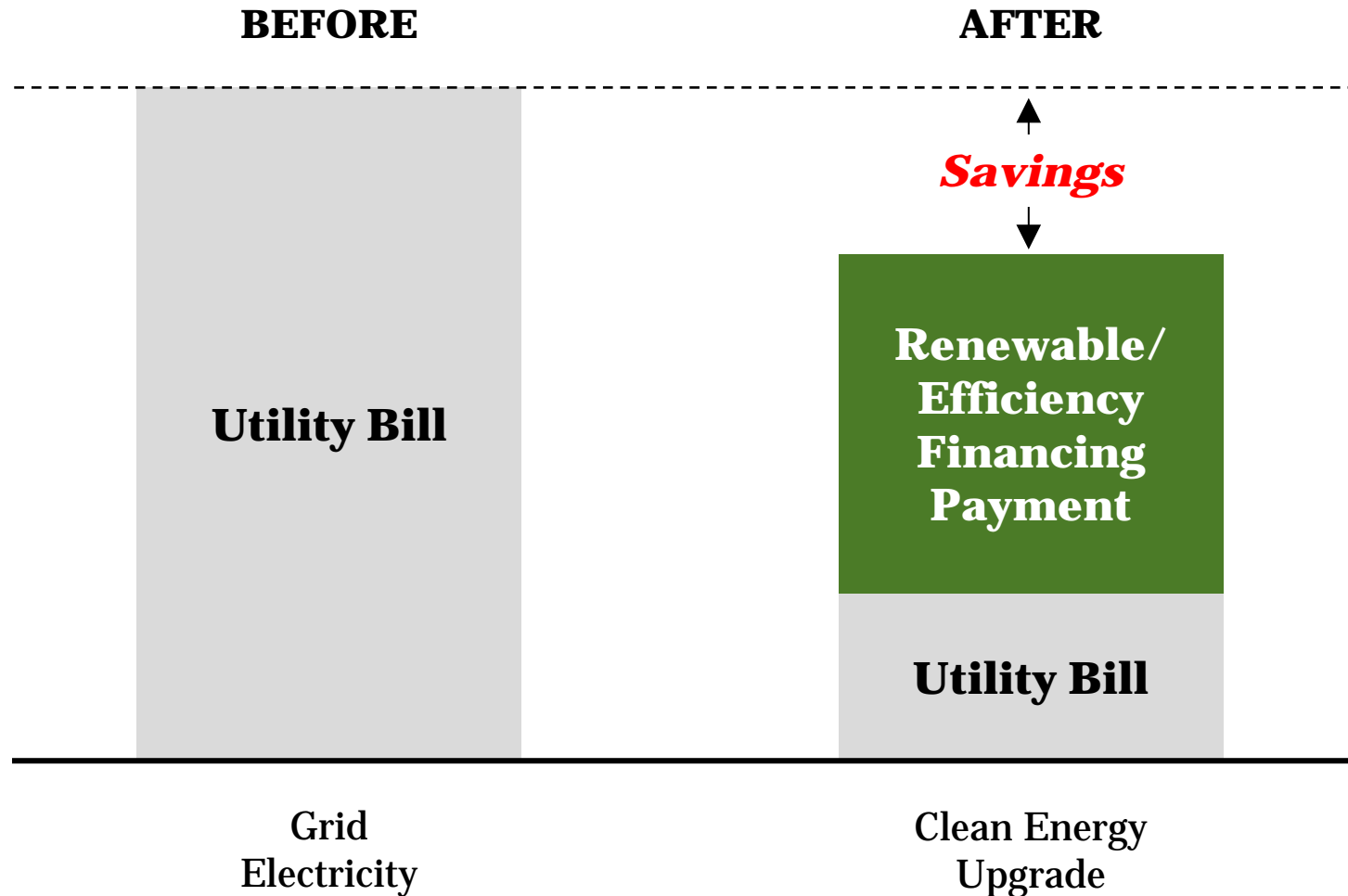


CGC provides expert guidance to state governments to help understand and set up the green bank

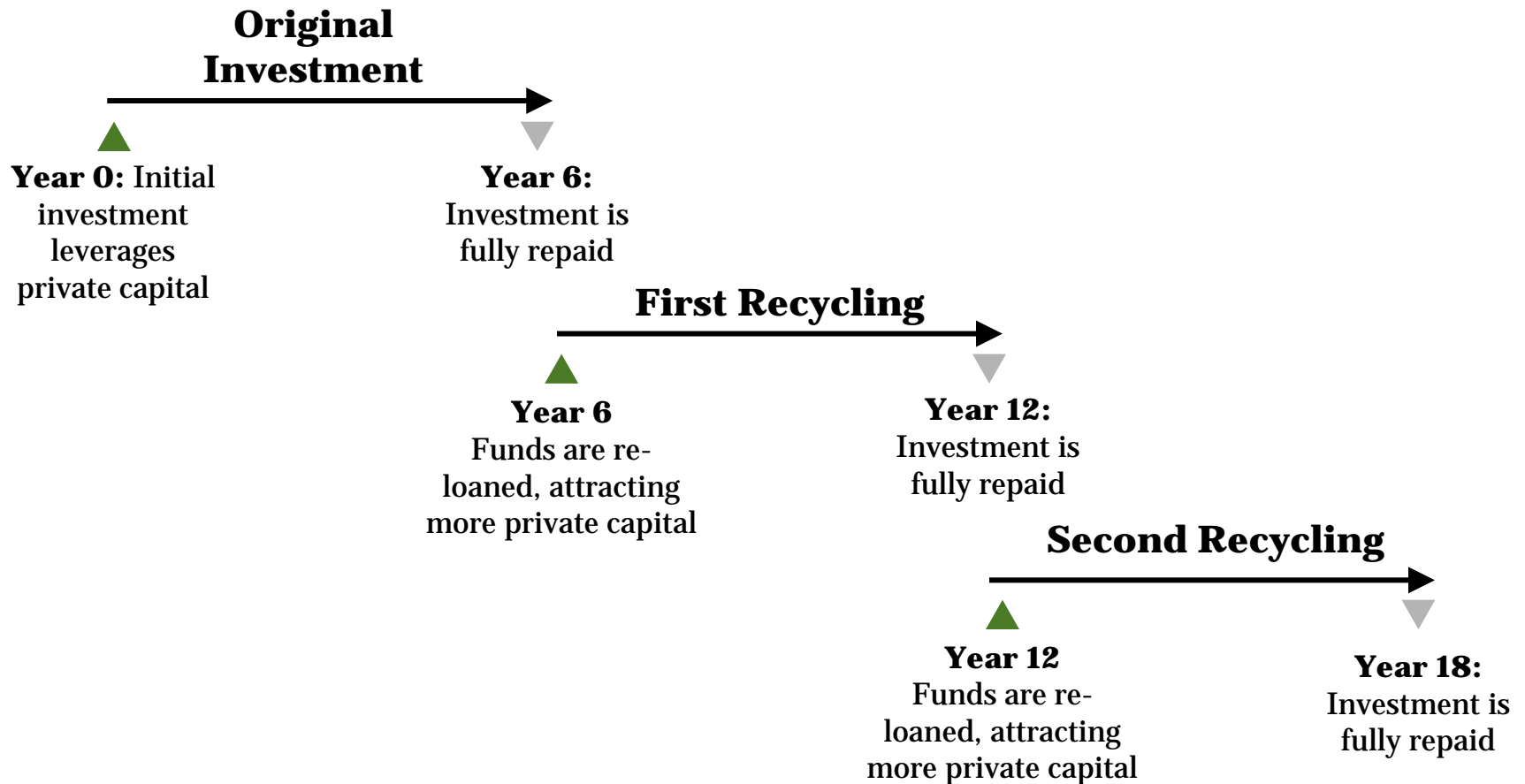




Financing structured so that repayment plus remaining utility bill are less than prior utility bill



Green bank recycles capital, re-leverages private investment multiple times



Green banks are flexible institutions that can employ various financing methods to suit the need

Credit Support



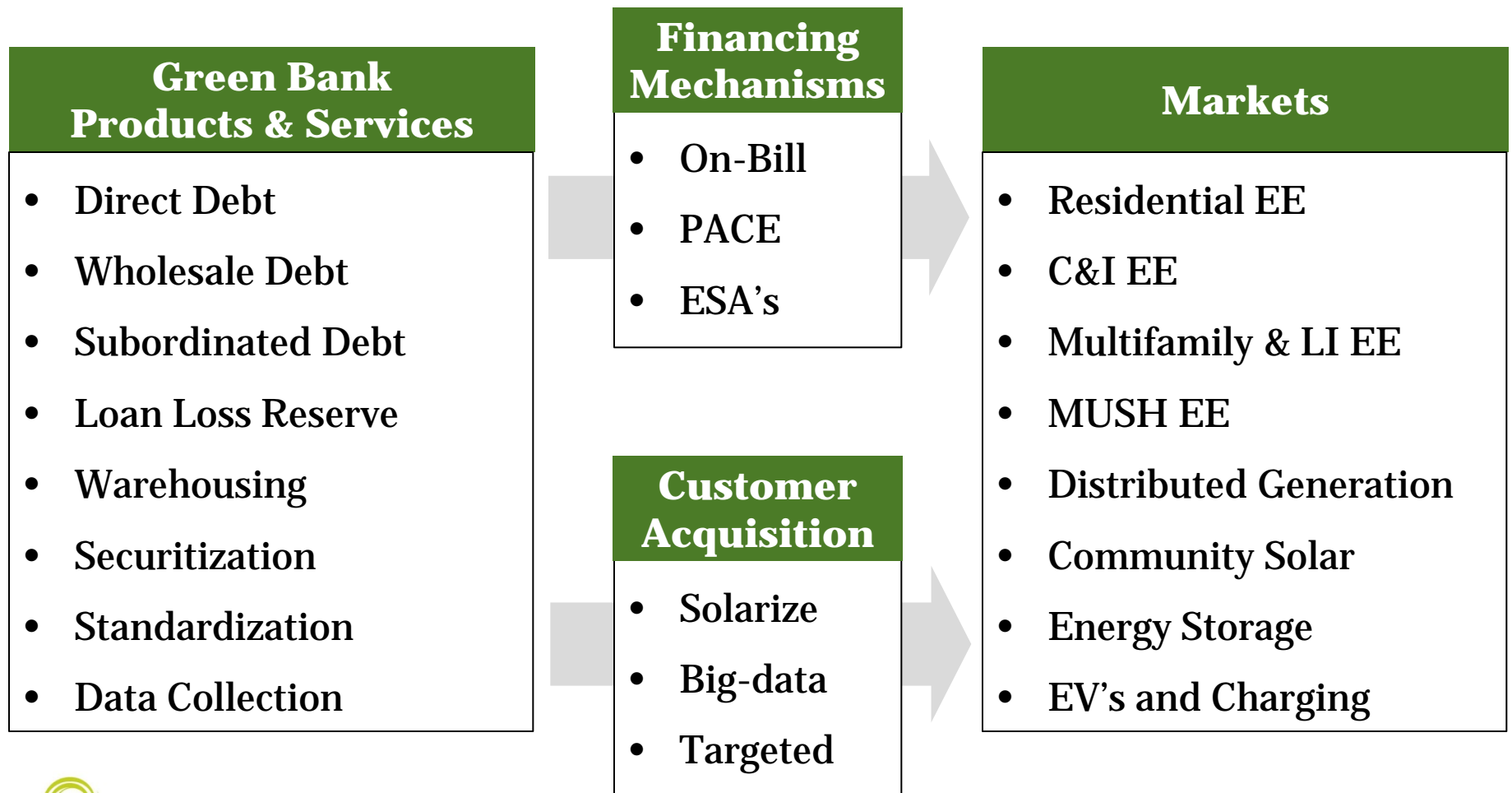
Co-Investment



Warehousing



Range of financial tools, applied to prioritized markets, through innovative structures



Green Banks are a win-win-win for consumers, businesses, investors and government

Green Bank Benefits

- **Private Sector Leverage**
 - Financial tools designed to maximize the amount of private sector investment per public dollar used
- **Efficient Government**
 - Provide loans to preserve public capital & do deeper efficiency projects
 - Work in coordination with other agencies to maximize program value
- **Create Jobs & Economic Growth**
 - Clean energy financing enables demand for projects from contractors
 - Public private partnerships create investment opportunities for lenders
- **Put Money Back in Citizens' Pockets**
 - Less funding needed to support public financing than public grants
 - Reduced energy bills with efficiency, renewables create monthly savings

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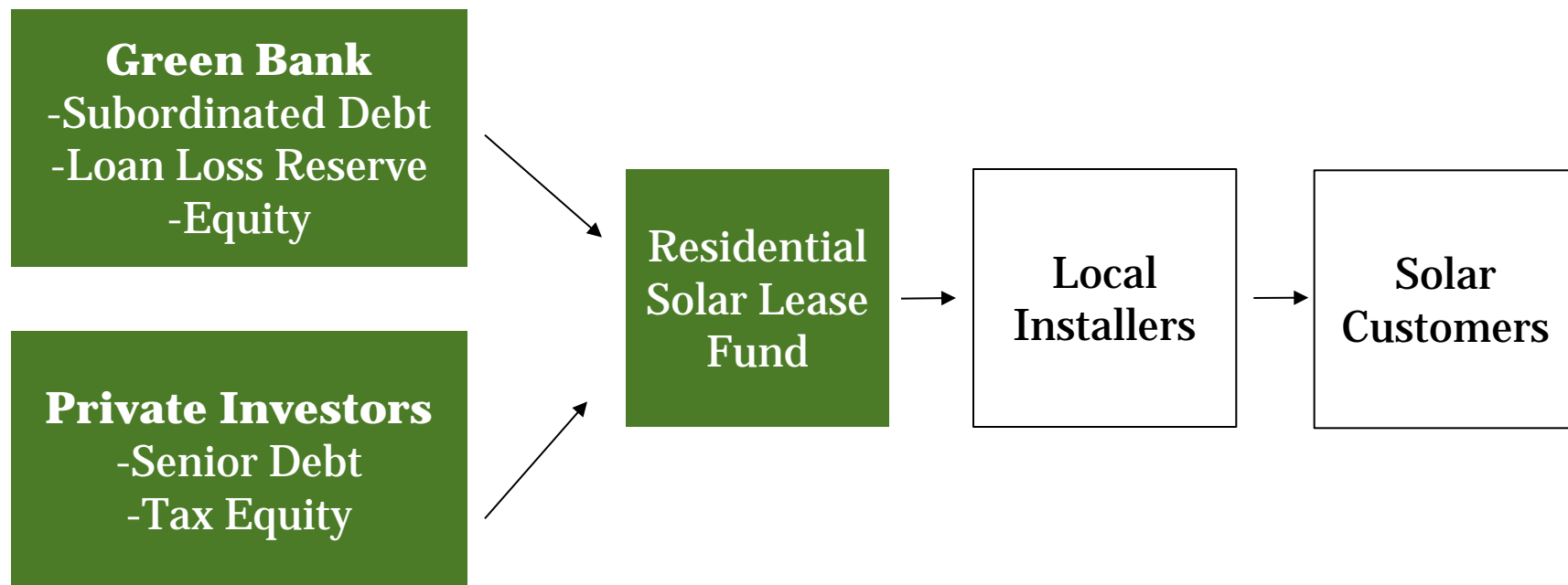
Green Banks are quickly spreading across U.S.

Green Banks Operating Or Under Development/Consideration

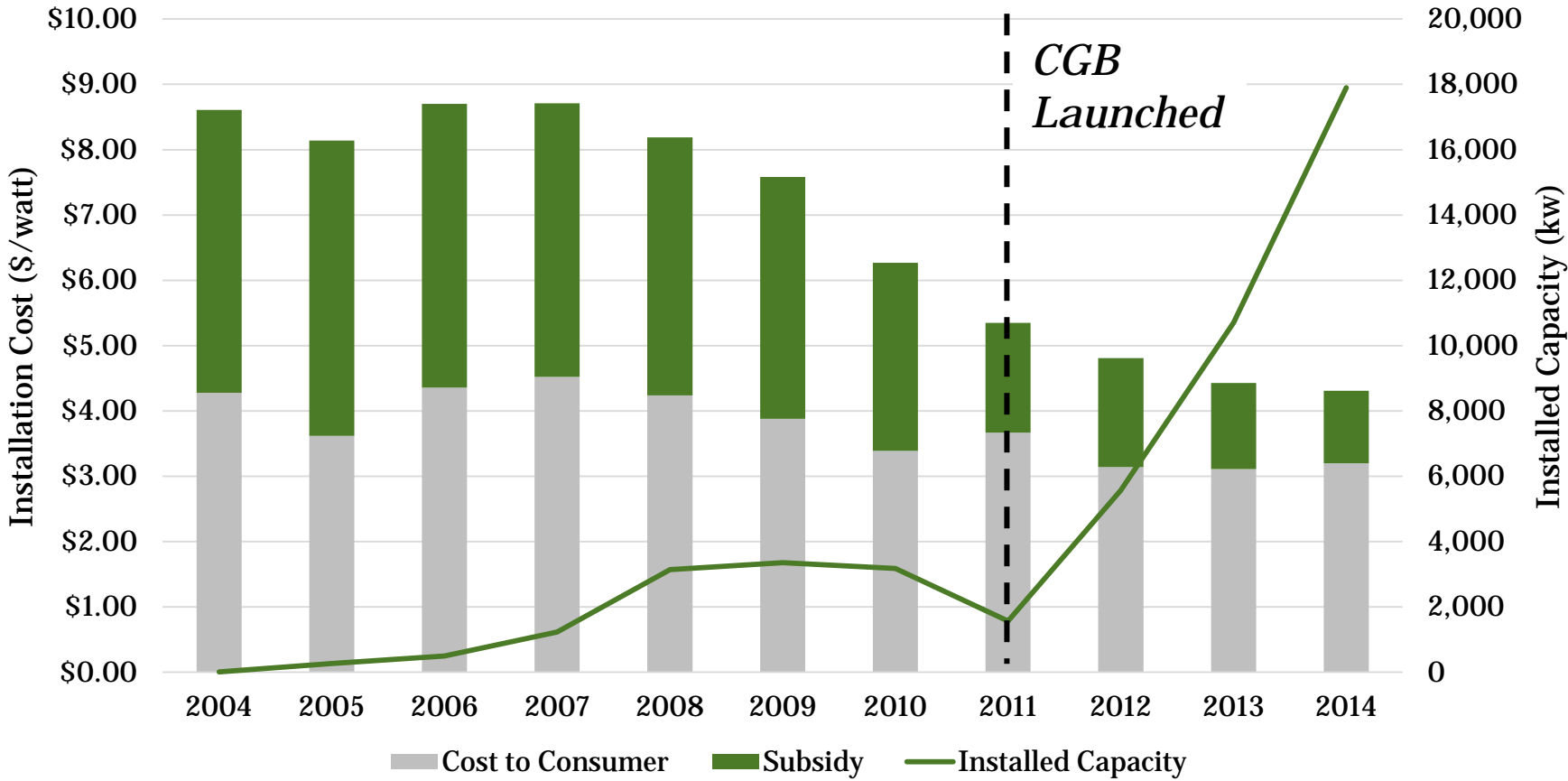


Example: Connecticut GB's Residential Solar Tax Equity Fund expands customer access to rooftop solar

- Conn-GB created unique public-private financing platform
- Product enables local developers to offer financing to customers who otherwise would have to pay all upfront



Example: Connecticut Green Bank changes grants to loans, and expands solar penetration



Green Banks work!

Connecticut Grant-Making Authority versus Connecticut Green Bank

	FY 2000 – FY 2011 (CCEF)	FY 2012 – FY 2014 (CGB)	FY 2015 (CGB)
Model	Subsidy	Financing	Financing
Years	11	3	1
Energy (MW)	43.1	65.3	62.6
Investment (\$MM)	\$350	\$350	\$365
Leverage Ratio	1:1	5:1	5-10:1
Investment % Loans	9%	57%	77%

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Nevada has shown strong commitment to taking advantage of in-state, clean energy resources

Standards, Grants & Rebates

- **Renewable Portfolio Standard:**
 - 25% by 2025
 - 5% of this from solar
- **Renewable Energy Tax Abatement**
- **Green Building Tax Abatement for government buildings**
- **State Energy Program Grant**
- **Performance Contracting for Public Facilities**
- **Home Energy Retrofit for Seniors**

Financing & Hybrids

- **Revolving Loan Funds**
 - Since 2009, \$17M+ to 20 projects
 - 5 projects in 2013-2014
 - Easiest to use with public buildings
- **Energy Fit Nevada**
 - Low-interest loans for energy efficiency
 - \$1,000+ rebate for homes with 20% increase in energy efficiency
 - 550 upgrades completed from 2011 – 2013

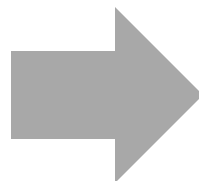
***But Some Programs Closed –
Need More Tools to Take Advantage of Resources***

A Nevada Green Bank can help expand clean energy markets and lower energy costs in many ways

- Provide credit enhancements to enable private lending for residential energy upgrades
- Administer & finance a Commercial Property Assessed Clean Energy (PACE) program
- Lower energy bills for low-to-moderate income households with focused financing solutions
- Build out alternative energy fuel vehicle infrastructure
- Finance energy upgrades in public buildings to reduce state energy bills

Nevada has a \$1.6 billion energy efficiency investment opportunity – where will the money come from?

**Energy Efficiency
Potential**
\$1.6 *Billion*
Investment Need



**Annual Savings
Opportunity**
\$732 Million
in Energy Savings

A Green Bank Can Drive Investment

Nevada is poised to reap the benefits of a growing clean energy market

Nevada Economy

- **Job Creation**
 - Already 5,900 solar workers and growing (fastest solar labor force growth in the nation)
 - Investments in efficiency could add another 4,700 jobs by 2020
- **Economic Growth**
 - Financing enables demand, which is served by NV businesses
- **Energy Bill Savings**
 - More disposable income for citizens to spend in Nevada
- **Fewer Dollars Out-of-State**

Clean Energy Leadership

- **Capitalize on greatest solar market potential in the nation**
- **Easier to meet RPS at low-cost**
 - Especially in later years as EE is phased out
- **Lower cost to comply with the federal Clean Power Plan**
- **Realize opportunity for cheaper, cleaner and more reliable energy**
 - Make Nevada a national model for clean energy policy leadership by enabling markets

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Proposed Scope of Work (1 of 2)

1) Nevada Market & Policy Review

- Energy Efficiency & Renewable Energy Program Review
- Summary of Existing Efficiency & Renewable Energy Policies

2) Review of Existing Green Banks

- Green Bank Structures, Funding Sources & Target Markets
- Summary of Green Bank Outcomes, Including Leverage

3) Market Sizing

- Calculate Addressable Market in Efficiency & Renewables

Proposed Scope of Work (2 of 2)

4) Clean Energy Financing Gap & Needs Assessment

- Interviews with Key Stakeholders
- Identification of Barriers & Gaps in Financing

5) Green Bank & Efficiency Incentive Need

- Overall Need for Nevada Green Bank
- Identification of Possible Green Bank Financing Structures
- Impact and Need of Efficiency Resource Standard

6) Implementation Guidance

- Recommendations & Options for Green Bank Implementation



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Thank You

Comments and Questions:

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