



# RHODE ISLAND FINANCING RESEARCH Meeting #3: Green Banks and Financing Opportunities

November 21, 2014



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# AGENDA

## *RI Financing Study: Sub-Committee Meeting #3*

November 21: 9am-1pm

1. Introduction: Progress on research goals and deliverables 20 minutes

2. Financing Options for RI: Identified Opportunities 40 minutes

3. Green Banks: A range of tools and options 60 minutes

*- Break: 15 minutes -*

4. How do identified opportunities and GB fit RI's needs 45 minutes

5. Next Steps: Analysis of opportunities for final report 60 minutes



# 1. INTRODUCTION

# WHITE PAPER RESEARCH APPROACH

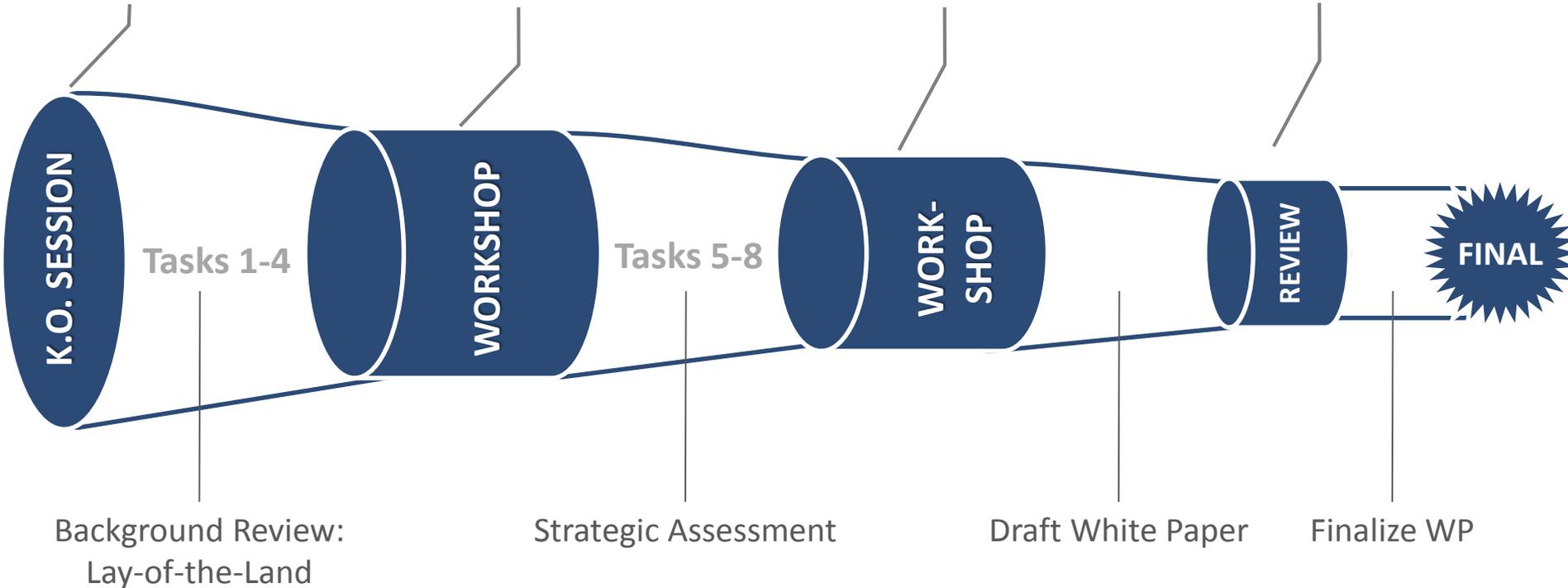


Productive Meeting  
Facilitated discussion  
+ learning re. R.I.

Half-day session: Oct. 27  
present findings; set  
strategic priorities for R.I.

Half-day session: Nov. 21  
thoughtful consideration  
of preferred options for R.I.

Feedback  
present draft WP;  
collect feedback



# FINANCING STUDY APPROACH

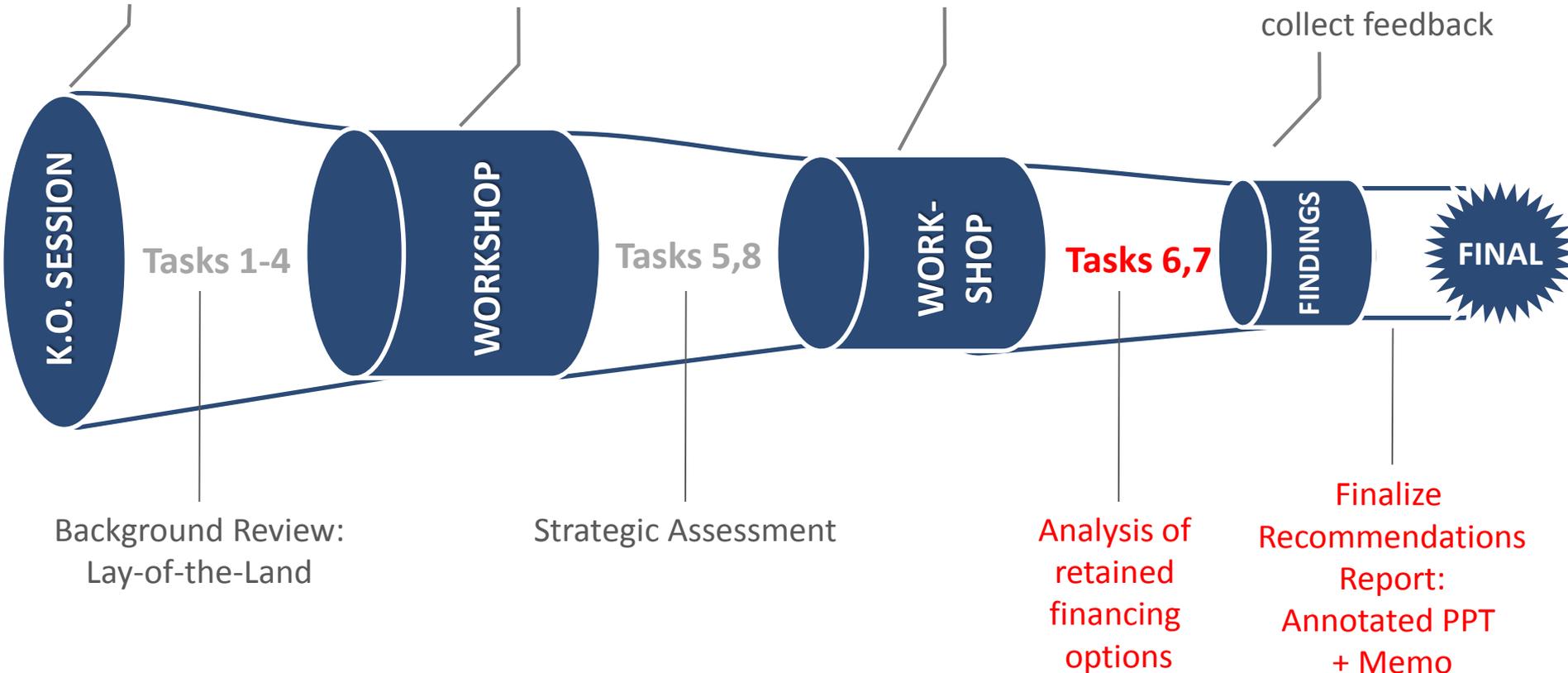


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present draft  
recommendations;  
collect feedback



# RESULTS SO FAR...



## ■ Challenges

- ▶ Handling range of programs within capacity
- ▶ Narrow scope for SB – measures and duration
- ▶ Cost of 0% buy down is expensive

## ■ Opportunities

- ▶ PACE, Off-balance sheet, OBR mechanisms
- ▶ Increase in electrical charges improves investment
- ▶ Brown University as a successful model for C&I

## ■ Needs

- ▶ Wrap-around financing – all fuels
- ▶ Go deeper and bigger with EE financed projects
- ▶ 3<sup>rd</sup> party lenders: Capital and Capacity



What does  
EE financing  
success look like for RI?

- Impacts
- Perspectives
- Benchmarks
- Fit with least-cost procurement
- Links with rebates

# MEETING #2 RECOMMENDATIONS



- Go deeper with the commercial savings
  - ▶ Long term financing on bundles that deliver bill parity (PACE)
- Go after middle players with innovative products
  - ▶ Multi-family buildings
  - ▶ Medium size commercial
- Do more with the concierge type service for deeper larger commercial retrofits, new construction, MF, Institutional, Munis
- Be more cost efficient in the residential sector
  - ▶ Observe how HEAT and PACE interact, do they drive deep savings
  - ▶ Consider broader inclusion of non-energy measures
- Evaluate and Adjust: some investigation of financing's effectiveness

# TODAY'S OBJECTIVES



## ■ Background (Tasks 1-4)

- ▶ Overview of financing landscape
- ▶ Lessons learned and experiences from other jurisdictions
- ▶ Review current RI financing programs

## ■ Next Steps: Opportunities Analysis (Tasks 5-8)

- ▶ **Best Financing Options for Rhode Island:**  
Specific examples that may respond to RI's needs
- ▶ Benefits and Costs of Financing
- ▶ Expanded Use of Financing
- ▶ **Wider Financing Opportunities:** Green Bank option and other approaches to broaden the financing offer in RI.



## BACK END

Structures, Partnerships,  
Distribution of Funds

How to structure the players  
to create new financing  
opportunities?

### EXAMPLES

- Green Bank/Fund
- Roles for Private Capital
- Uses of SBC – LLR, OBR etc.

## FRONT END

Filling the Gaps,  
Adjusting Programs

What are the specific and  
promising financing  
programs for RI?

### EXAMPLPES

- Sector by Sector
- Detailing other examples
- Identify specific players and roles

# LESSONS LEARNED

## FINANCING GOALS



### Grow the Pie...

- More projects
- Deeper savings
- Do it cheaper?



#### Reduced Friction

- Process simplicity, quick turnover, access to technical resources and contractors, DI
- *PACE or OBR programs*

#### Cheaper Loans

- Reduce lender risk, better loan conditions for customers
- *Typically LLR and/or interest buy down programs*

## 2. FINANCING OPPORTUNITIES FOR RHODE ISLAND

# OPPORTUNITIES BY SECTOR



## ■ Major Sectors for Financing

- ▶ Residential
- ▶ Multi-Family
- ▶ Low-Income
- ▶ Small Business
- ▶ Large Commercial
- ▶ Institutional



## ■ Areas to Consider

- ▶ Key Challenges
- ▶ Current Financing
- ▶ Other Financing/Delivery Models
- ▶ Strategies and Tools to Attract 3<sup>rd</sup> Party Capital

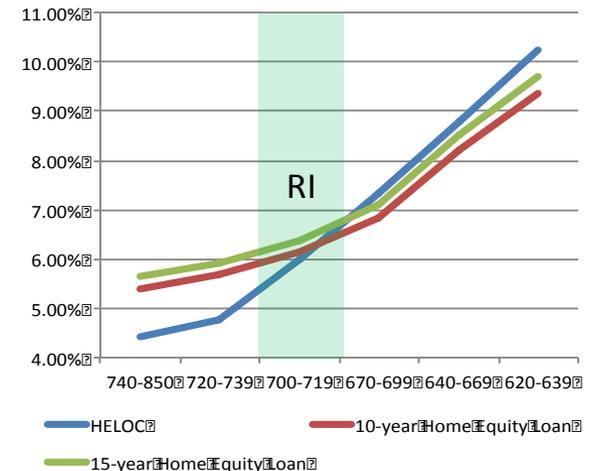
# RESIDENTIAL MARKET FINANCING LANDSCAPE



- Average RI FICO score of 704 (in 2012)
  - ▶ Most EE financing programs require 640
- Private Lenders: Citizens Bank EE Loan and EZ Home Improvement Loan
  - ▶ 3%-6% APR, \$10,000 max, 3–7 year term (preferential rates)

Home Equity Interest Rates by applicant's FICO Score, Rhode Island 2014

Source: MyFico.com



- How Homeowners pay for EE upgrades:
  - ▶ 58% with cash,
  - ▶ 14% with credit cards,
  - ▶ 17% with financing.
  - ▶ 6.5% with home equity loans.

Median FICO Scores by State



Source: scoreinfo.org

# RESIDENTIAL HEAT AND PACE LOANS

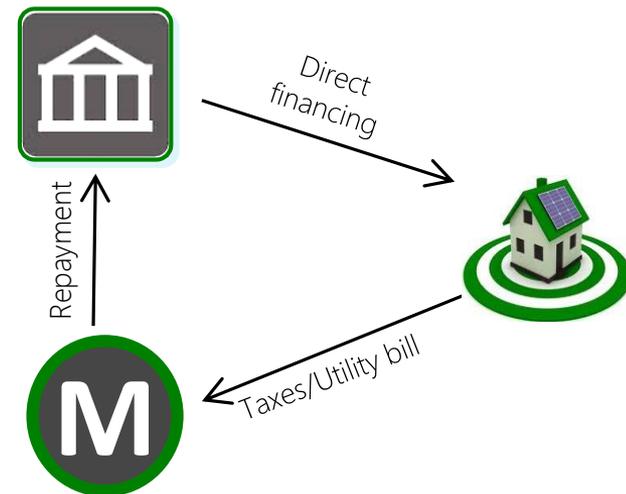


## HEAT Loans

- 0% loans
- 5-7 year term
- \$25,000 maximum (\$6k average)
- Measures
  - ▶ Weatherization
  - ▶ Doors and windows
  - ▶ Heating
  - ▶ Cooling
  - ▶ DHW

## PACE Loans

- 3<sup>rd</sup> party origination, UW administration and capital
- 15 year loans – Solar PV



# RESIDENTIAL PACE

- Energy and water improvements on homes or businesses through the issuance of a municipal bond, amounts paid back as a line item on the property tax bill.
- Secured by a lien on the property
- Minimum \$5k, Maximum 15% of property value
- term 5-25yrs but can't exceed the useful life on the asset
- Interest and Fees: reserve fund, CAEATFA loss fund, capitalized interest, past due interest, administration fees
- CaliforniaFirst – Administered by Renewable Funding

- Unsecured consumer loans
- AFC First originates loans
- Renewable Funding funds deals, provides impact reporting, and trade ally training
- Credit facility provided by Citi and the State of Pennsylvania Treasury, aggregated into diversified pools, securitized, and sold to institutional bond investors
- 9.99% interest rate, bought down by states or contractors
- Pennsylvania, Ohio and Kentucky

# RESIDENTIAL ON-BILL REPAYMENT



**Type** On-bill, or secured off-bill loan through UCC or mortgage

**Source of Capital** 3<sup>rd</sup> party lenders, including CDFIs and Credit Unions

**Administration** CEWO NGO

**Program launch** 2011

**Uptake** 2,633 total projects, \$33.4M loans (average loan of 12 694\$)

**Max loan amount** \$30,000

**Max tenor** 20 years

**Min interest rate** 3.75%

**Main access criteria** FICO 590

**Delinquency rate** As of 2013, 2% from Craft3, 0% for Oregon and Pacific Crest FCUs

- Turnkey program integrates tiered EE incentives (deeper energy savings), tax credits and rebates from several entities
- Private lenders: LLR no longer needed after 2 years due to excellent track record.
- Online self-audit, free on-site audit streamlined application process
- In case of default, loan is taken off-bill for conventional collection procedure

# SUCCESS STORY

## HERO PACE



Type PACE

Admin Renovate America

Source of Capital Western Riverside County  
Revolving Fund, initially seeded by  
ARRA but self-sustaining now

Program launch 2011

Uptake 5,890 loans, \$104M issued bonds  
for both residential and commercial  
programs combined

Max loan amount \$200,000 (\$5,000 min)

Max tenor 20 years (not to exceed EUL)

Min interest rate 5.95%

Main access criteria Mortgage and tax bill payment  
history

Delinquency rate Less than 3%

- Self-sustaining through interest rates and fees to participants and lenders
- A municipal bond is created and sold to Renovate America, a large PACE provider for local governments.
- Information systems allow for quick processing and automation
- Approximately 65% of all residential projects have been for energy efficiency measures.

# RESIDENTIAL CHALLENGES



- 0% loans are expensive and may be squeezing community lenders
  - ▶ No mechanism to respond to rising interest rates
  - ▶ High transaction costs and complications
- Longer term measures largely ignored



- Minimal information about financing performance available: effectiveness, challenges for partners, measures financed

# RESIDENTIAL OPPORTUNITIES



- Longer term lending
  - ▶ Deeper measures, larger projects
  - ▶ 1 year in term length can have as much impact as a 5% interest rate buy (CT Green Bank)
- Expand PACE to target EE and solar PV
- On-bill repayment with LLR to encourage conventional lenders to originate loans
  - ▶ No interest rate buy down
- Use PACE and FICO scores to create loan stream attractive to Deutsche Bank and Citi etc.



- EE retrofits, RE projects, PV, wind, solar thermal, GSHP, CHP, biomass, Envelope etc
- Savings to meet payments - financial assessment
- Launched in Sept 2014
  - ▶ Built on left over ARRA funds from OER
  - ▶ \$2.1M in the fund, still some small assets
- 1-3% interest, \$500k cap (unverified) 5-10 year payback
- Challenges:
  - ▶ No savings evaluation for annual savings target
  - ▶ Still new, no history

# LOW-INCOME / MULTI FAMILY



- 10% HEAT Loan for Low Income
- CT Multi-Family
- ESPA Model for multi-family master metered
  - ▶ Specialized off-balance sheet lending (small ESCP)
  - ▶ Designed for community projects and low income
  - ▶ Savings insurance and savings based repayment terms
  - ▶ 10 years maximum term at 7%-8%
- Not much here in RI: how big is the market?



## Small Business (\$4M)

- 0-24 month 0% interest
- free audit upfront, with DI
- 70% of costs bourn by incentives, 30% by financing
- One-time payment (upfront) receives 15% discount
- One-page loan agreement
- Impact 45% of customers moved ahead with EE due to financing.

## Large Commercial (\$9M)

- Customized financing with 5 RI large industrial
- Custom approach: no threshold
- 2 year low or 0% interest loans with rebates (25% +/-)
- Applies NPV analysis to generate larger projects, moving to ROI assessment (\$ per unit savings)
- Since 2010 program spending and savings has nearly tripled



- EE retrofits, RE projects, PV, wind, solar thermal, GSHP, CHP, biomass, Envelope etc
- Savings to meet payments - financial assessment
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# SUCCESS STORY

## SB ENERGY ADVANTAGE



**Type** Interest rate buy-down

**Source of Capital** United Illuminating Company (UI) = loan capital, CT EE Fund = rate buy down and LLR of 1%

**Admin** UI

**Program launch** 1993

**Uptake** 4,075 loans, \$34.6M since inception. The program has served over 25% of UI small business customers since 2000

**Max loan amount** \$100,000 (minimum \$500)

**Max tenor** 4 years

**Min interest rate** 0% (buy down from 6.3%)

**Main access criteria** Utility bill payment history

**Delinquency rate** Cumulative rate less than 1%

- The program pays for energy assessments and covers up to half of project costs with tiered rebates.
  - ▶ An episode of depleted rebates has caused the program's uptake to drop to zero
- The financing is attached to the meter, making it transferrable
  - ▶ 80% of SBEA program participants are tenants
- Turnkey approach and combined financing and incentives are key success elements of the program
- Almost immediate positive cash flow for the customers

# SUCCESS STORY

## PG&E COMMERCIAL ON-BILL



**Type** On-bill financing tariff

**Source of Capital** Ratepayer

**Admin** PG&E + CPUC

**Program launch** 2010

**Uptake** 506 loans, \$14M since inception  
(2012 data). 0,1% of the customer  
base

**Max loan amount** \$100 000

**Max tenor** 5 years, can be extended up to EUL

**Min interest rate** 0.00%

**Main access criteria** Utility bill payment history

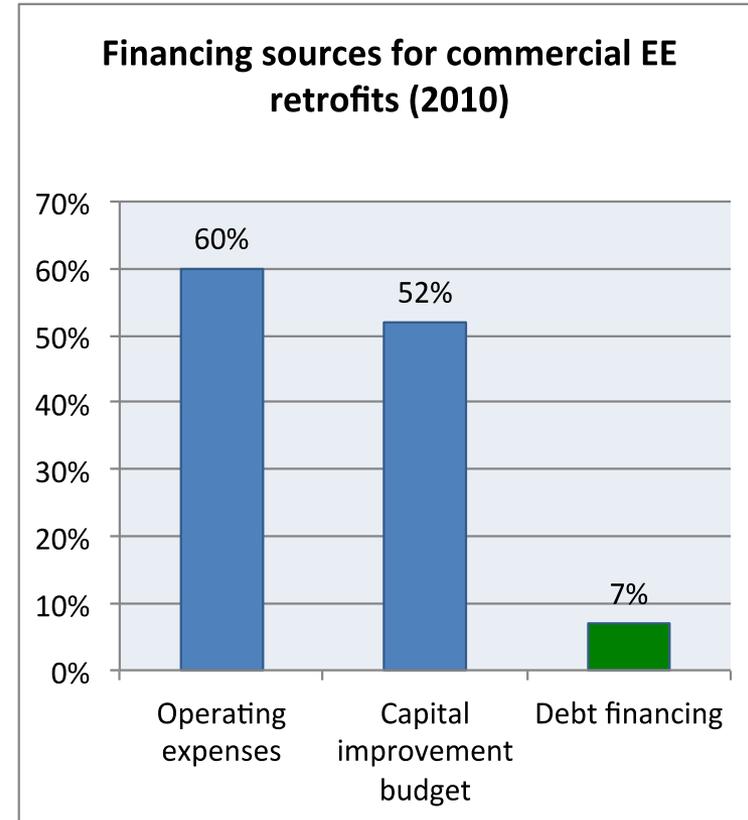
**Delinquency rate** 0% so far

- Program caps lighting projects to 20% of the total loan amount
- Customers consider financing more important than rebates
- 3<sup>rd</sup> party financing would resolve lack of funds, but would be much more complex administratively
- Tariff approach interesting to renters due to transferability
- Disconnection has an uncertain benefit in reducing default rates compared to on-bill without disconnection

# LARGE COMMERCIAL MARKET FINANCING LANDSCAPE



- Access to utility EE rebates and on-bill, low interest financing
- Large commercial players (especially Class A buildings) have access to customized financing through their lenders
- Class B and C buildings are harder to reach sectors that can benefit from targeted program outreach
- Commercial customers are interested in being able to write EE investments off their balance sheets
  - ▶ Energy Service Agreements
  - ▶ Operating leases



# COMMERCIAL MARKET INNOVATIVE APPROACHES



## ■ Metered Energy Efficiency Transaction Structure: MEETS

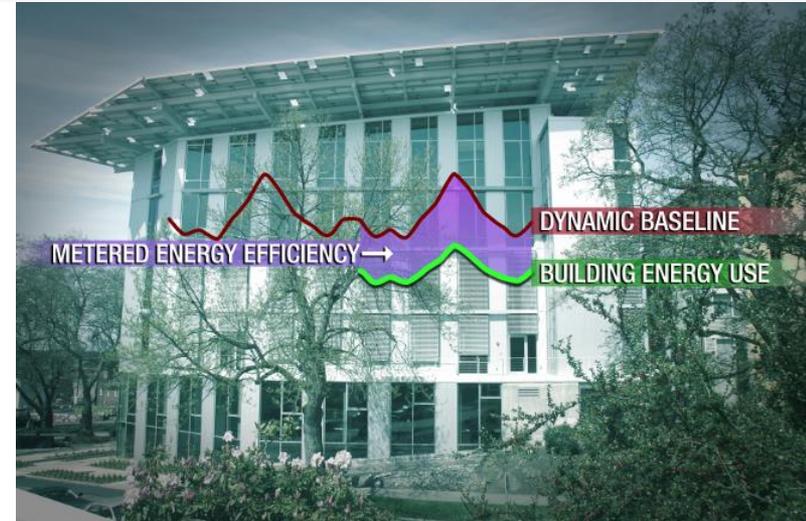
- ▶ Utility creates EE metering

## ■ Concierge Service: NOESIS

- ▶ Financing approval prior to project development

## ■ Energy Savings Performance Agreement (Toronto Atmospheric Fund)

- ▶ Innovative ESA model based on repayment from actual savings
- ▶ Stays off book, and includes savings insurance to mitigate performance risk



# COMMERCIAL FINANCING ISSUES

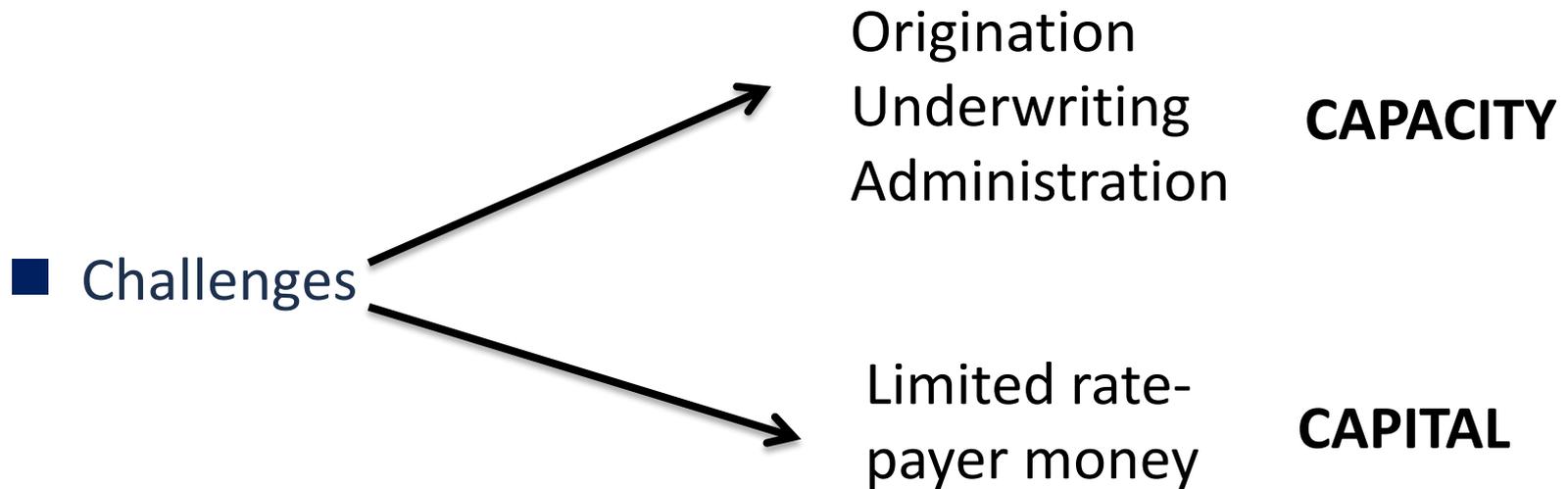


- SB and Large Commercial Programs very focused on accessing low-hanging fruit
  - ▶ Limits bundling efforts and future EE targets
- 24 month financing is very short
  - ▶ Not long enough to qualify as a term loan
- Small Business program
  - ▶ Successful transaction friction reduction
  - ▶ Program tantamount to payment terms
- Large Commercial
  - ▶ 24 months is within hurdle rates for own capital or borrowing – FREE RIDERS
  - ▶ Need to offer longer term, or an arrangement that encourages lender to go to their FI for longer or bigger deal.

# COMMERCIAL FINANCING OPPORTUNITIES



- Longer terms 5 year to 15 years



- **CAPACITY:** On-bill repayment to attract lenders

- **CAPITAL:** Credit Enhancements and OBR

# COMMERCIAL FINANCING BREAKDOWN



## ■ <50K: Small Business/Small Ticket

- ▶ Direct Install (70% Incentive)
- ▶ Short term financing (24mo or less)
- ▶ Equipment Leases



## ■ \$50K to \$2M: Medium Ticket

- ▶ Prescriptive incentives
- ▶ Equipment based leases and loans (72mo or 15 yrs for secured)
- ▶ Conventional banks and finance



## ■ \$2M+: Large Scale (Project Finance)

- ▶ Custom incentive approach
- ▶ ESCo projects/ESPC (15 yrs)



# PROJECT FINANCE



- Typically for project of \$2m +
- Structured using Energy Savings Performance Contracts; cashflows from either energy savings or an ESCo
- Off balance sheet for the business; cashflows are isolated in the SPV
- ESCo or specialty insurer take performance risk; if guaranteed savings not achieved, SPV receives difference between what was guaranteed and what was actually achieved.
- RENEW (MUSH), Johnson Controls, SDCL (MUSH and Commercial)

# INSTITUTIONAL MARKET

## ACCESS TO CAPITAL



- Current NG program as small revolving fund
- Institutional borrowers can access long term debt at low rates
- Locally-dependent criteria for borrowing rules and EE financing
  - ▶ Debt ratio limits
  - ▶ Project Screening Techniques
- Capital sources
  - ▶ Direct access to bond market
  - ▶ Banks, specialized lenders
  - ▶ Infrastructure funds / provincial government
- Often deferred maintenance needs take priority

# RENEW

- Wraps deferred maintenance in with EE financing
- Provides technical support to develop projects
- Creates positive cashflow with long term financing
- Combined with savings insurance, avoids impacting municipal bond rating or debt ratio limits

# 3. GREEN BANKS: EXAMPLES AND MODELS



- **Public or quasi-public** financing institution that leverages **public funds with private capital** and lending expertise to provide **low cost and long term** financing for EE/RE upgrades
  - ▶ Reduces dependence of EE/RE programs on shrinking federal funds (subsidies, tax credits, grants)
  - ▶ Can issue revenue bonds without the restrictions faced by states
  - ▶ Drives project standardization by financing projects from several programs across the state
  - ▶ Can aggregate projects with similar risk profiles into investment grade portfolios

## Sources of funds

- State grants
- Private investment
- Bonds
- GHG allowance proceeds
- Federal grants
- System Benefit Charges
- Internal revenue

# THREE POTENTIAL MODELS



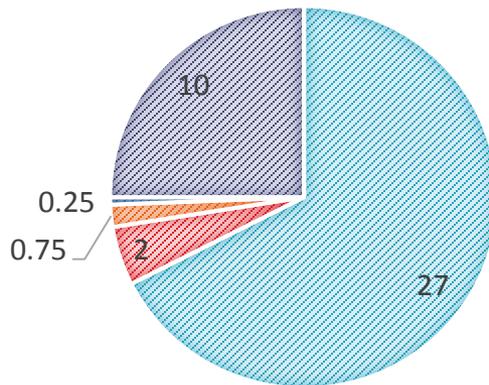
1. Establish a **quasi-public** corporation combining state EE funds to permit private investment in the bank
  - ▶ Examples are CT Green Bank, Hawaii to come (established legislation to create the Clean Economy Bank)
2. **Repurpose** portions of existing **state financing authorities** to deliver EE/RE financing as a state entity. Partner to combine public and private funds.
  - ▶ More than 20 states have Clean Energy Funds
3. Attach a clean energy finance fund to an **existing infrastructure lender**
  - ▶ California Infrastructure and Economic Development Bank

# 1. QUASI PUBLIC



## CEFIA OPERATING REVENUES (2012, M\$)

- Ratepayer surcharge on utility bills (0.1c/kWh)
- RGGI auction returns
- Interest on solar lease notes and short term investments
- Other sources
- State grant revenue from DOE programs



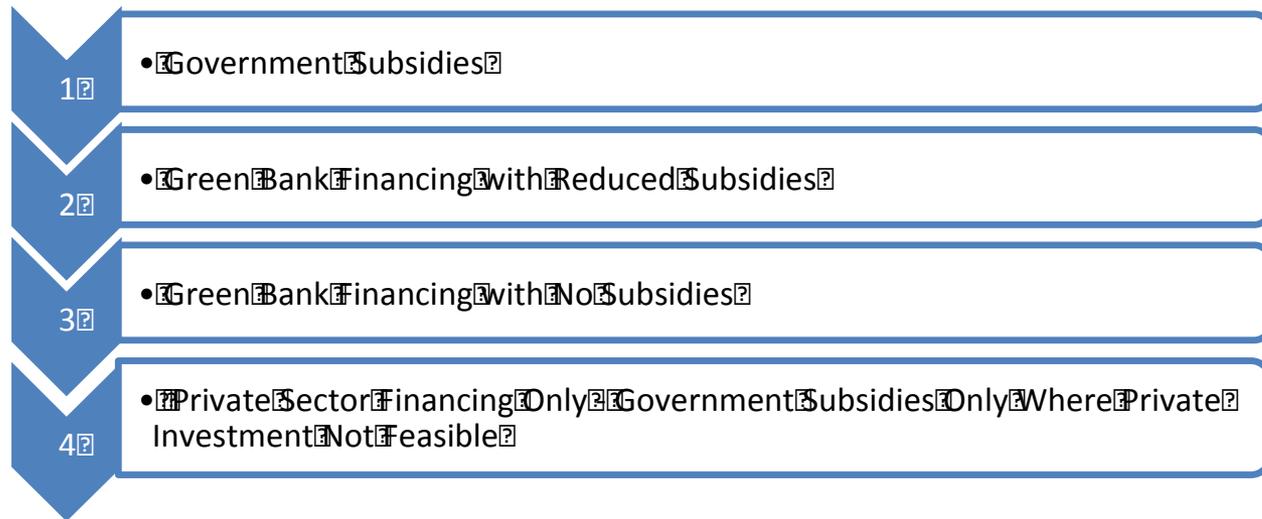
- Before CT GB, Connecticut had CEIF
- Utilities reap the project savings
- Legislation:
  - ▶ CEFIA qualified as a CDFI under the state legislation
  - ▶ Authorized to own budget outside of that of the state
  - ▶ Authorized to accept federal funds
  - ▶ Could issue special tax advantaged bonds as long as they are not secured by state capital
  - ▶ Cap on returns to keep CEFIA from pursuing risky projects with state funds
  - ▶ Transparency and reporting requirements



## ■ The Connecticut Green Bank's purposes are:

- ▶ Developing financing programs
- ▶ Supporting financing or other expenditures that promote investment in clean energy sources
- ▶ Stimulating demand for clean energy

Figure 1.1 Purpose of Green Bank Financing Towards Sustainable Clean Energy Marketplace



?

# CT GB TARGETS: 10B IN 5-10 YEARS



- \$1.5B: Energy efficiency improvements in 15% of single family homes
- \$1.5B: Households and businesses to convert from oil to natural gas for at least 200,000 households and 80,000 businesses
- \$4.0B: 150,000 households to install solar photovoltaic (PV)
- \$500M Reduce energy use in State government buildings by at least 20% from 2010 levels by January 1, 2018,
- \$3.0B: Energy efficiency in the commercial sector

# CT GB PROGRAMS



CLEAN ENERGY  
FINANCE AND INVESTMENT AUTHORITY



Residential solar PV investment program to develop at least 30 megawatts of new solar PV by 2022 through Energize Connecticut

- CT Solar Lease and Loan
- Smart E-Loan (using a local lender)



Long-term power purchase agreements for 150 megawatts of in-state grid-connected clean energy generation

- 15 MW fuel cell park (world's 2nd largest) funded by 5.8M\$ from CEFA leveraging 125M\$ from Dominion



On-site anaerobic digester program using organic farm waste to generate electricity and heat through Energize Connecticut



Combined heat and power (CHP) loan program to develop up to 50 megawatts of new CHP projects through Energize Connecticut



C-PACE

- 72 municipalities have signed up
- 26 approved projects totaling 20M\$ in 2013



## ■ Extended Paybacks

- ▶ CT allows 10-12 yr pay backs on smart E-Loan and 15 yrs on Solar Loan
- ▶ A 1 year extension in the residential loan program term is the equivalent bill impact of a 5% interest rate buy down
- ▶ With C-PACE industrial properties can extend paybacks to 20yrs

## ■ To get deeper savings

- ▶ CT E-loan: 90% of homes are eligible (640 FICO), average loan size is \$15K, for up to 10-12 years (4.5 – 7% interest rate), 20% can be used for healthy home measures (NEB)
- ▶ Applies ARRA funds for LLR and Interest buy-down
- ▶ Smart E-Loan uses OBR to go further

# CT GREEN BANK STRATEGIES



- To Attract 3<sup>rd</sup> party capital
  - ▶ LLR
  - ▶ Structured bonds: A, B, D class
  - ▶ Subordinate debt – e.g. small business first 1.5% loss to originator, GB takes the next 7.5%
  
- Leveraging
  - ▶ Solar Lease: 5:1 leverage ratio, \$10M Rate payer to \$50M Private Capital in Tax equity and debt investment
  - ▶ Energize CT loan 11:1 ratio – (\$2.5M to 28M) long term low interest loans from CU and community banks
  
- **CT GB costs are 5%-10% of EE/RE measure costs on average, compared to 25%-30% in the incentive programs**

**State** NY

**Launch** April 9, 2014. First projects approved on October 22, 2014

**Status** Part of public benefit corporation (NYSERDA) and part of the NY Clean Energy Fund

**Source of funds** \$800M initial capitalization from RGGI funds and utility surcharges

**Sectors** Residential, Multi-Family, Commercial and Industrial EE/RE, Natural Gas fired CHP, Electric vehicle infrastructure, Offshore wind, Agricultural biogas

**Loan** Up to 100% of project costs

**Authorized practices** Credit enhancement (CE), loan loss reserves, loan aggregation

## ■ NY Green Bank Initial Transactions

- ▶ Ameresco invests in C&I clean energy projects in new markets in partnership with third party project lenders and **NYGB capital**
- ▶ **Co-investment** between BofA and NYGB to broaden BofA current suite of EE products
- ▶ NYGB acts as a **senior debt-facility** for Deutsche Bank ESA-based projects
- ▶ Renewable Funding and Citi bring the WHEEL residential EE program to NY. NYGB provides **CE and aggregation**
- ▶ NYGB is a **Senior Lender** to GreenCity Power, a CHP ESCO for the large commercial sector
- ▶ NYGB provides **guarantees** to lenders for the construction of a 4 MW solar PV project

# 2. REPURPOSE FINANCING AUTHORITIES



- Establish a state not-for-profit by converting an existing public authority with a similar purpose
- Leverage of private funds would be done on a per-project basis (co-investment)
- Quick to set up
- Unable to access private capital autonomously but could have access to state bond funding
- Varying financing expertise within the authority

# 3. INFRASTRUCTURE FUND



- Target an existing state infrastructure development bank or link to existing Fund to take on the EE/RE financing role
- Would necessitate a subdivision between energy and infrastructure branches
  - ▶ Different project type: Develop additional technical expertise for EE/RE
  - ▶ Different loan type: Would have to accept more and smaller projects

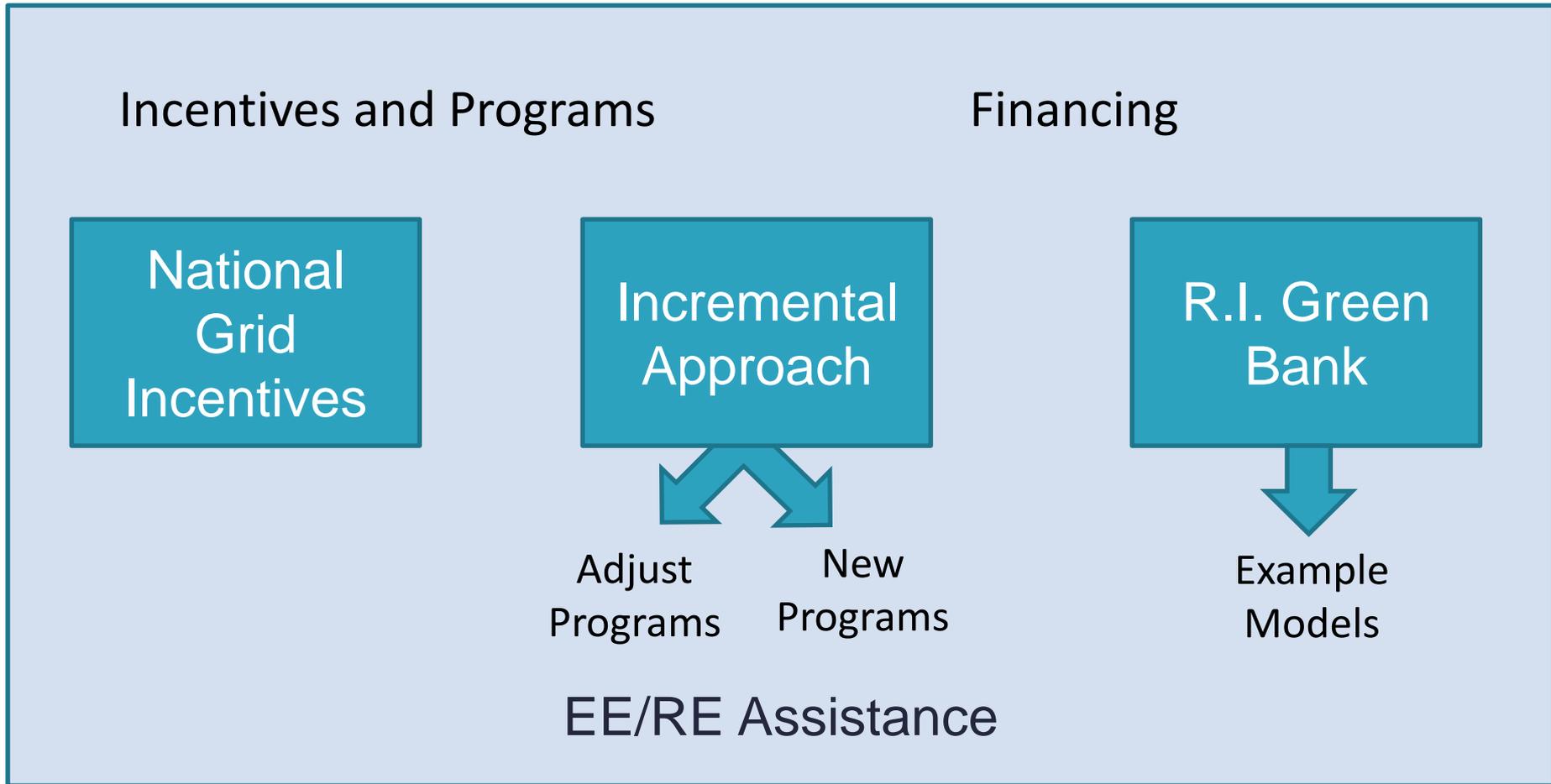
## 4. FINANCING OPTIONS FIT WITH RHODE ISLAND'S NEEDS

# PROPOSED GREEN BANK FOR RI



- Mandate is to encourage:
  - ▶ Large-scale adoption of clean energy
  - ▶ Create a dependable and accessible source of funding
  - ▶ Combine government funds with private capital
  
- Objectives:
  - ▶ Educate Rhode Islanders
  - ▶ Maintain sources of funding
  - ▶ One-stop shop, provide 100% loans
  - ▶ Ensure Municipalities have resources
  
- Model: Quasi-public, budget outside of State budget
  - ▶ Consolidate funding under one roof: RGGI, SBC, Bonds, REF
  - ▶ Issue bonds and other obligations

# WHERE CAN A GREEN BANK FIT?



# LEVERAGING PRIVATE LENDERS



## ■ Residential

- ▶ Already highly leveraged
- ▶ Doing more incentives = leveraging more private capital
- ▶ Setting up financial products can help

## ■ Commercial

- ▶ Not well leveraged (70% incentives)
- ▶ Provide financing too at a high cost
- ▶ Need to offer longer term financing and scale back incentive levels to get to lower cost, higher leveraging
- ▶ Requires better underwriting procedures and access to private financing
- ▶ Mixed messages from NG as to whether they can or want to go down this road
  - *Developing longer term (60mo) financing for large commercial*
  - *Do not want to become a bank*



# PRIVATE LENDERS INTEREST FOR EE FINANCING



## ■ Mission-driven lenders

- ▶ Credit Unions and CDFIs that can align EE financing with their existing products or customer base
- ▶ Municipalities and counties who have established GHG reduction targets
- ▶ Financial institutions with well-established Corporate Social Responsibility policies

## ■ Lenders benefiting from Publicly funded programs

- ▶ HUD/FHA insured loans
- ▶ Interest rate buy-downs

## ■ Lenders who benefit from an advantageous risk/return profile

- ▶ Highly secure repayment mechanisms such as those employed by PACE and OBR or loan loss reserves covering potential losses
- ▶ Specialized lenders/vendors that have an in depth understanding of the financed improvements and associated performance risk (Equipment Leases)

# 5. NEXT STEPS: ANALYSIS OF THE RETAINED OPTIONS



## BACK END

Structures, Partnerships,  
Distribution of Funds

How to structure the players  
to create new financing  
opportunities?

### EXAMPLES

- Green Bank/Fund
- Roles for Private Capital
- Uses of SBC – LLR, OBR etc.

## FRONT END

Filling the Gaps,  
Adjusting Programs

What are the specific and  
promising financing  
programs for RI?

### EXAMPLPES

- Sector by Sector
- Detailing other examples
- Identify specific players and roles



## ■ Task 6: Costs and Benefits of Financing

- ▶ Cost per kWh
- ▶ Ability to attract customers
- ▶ Costs relative to incentives
- ▶ Impacts on TRC

## ■ Task 7: Expanded Use of Financing

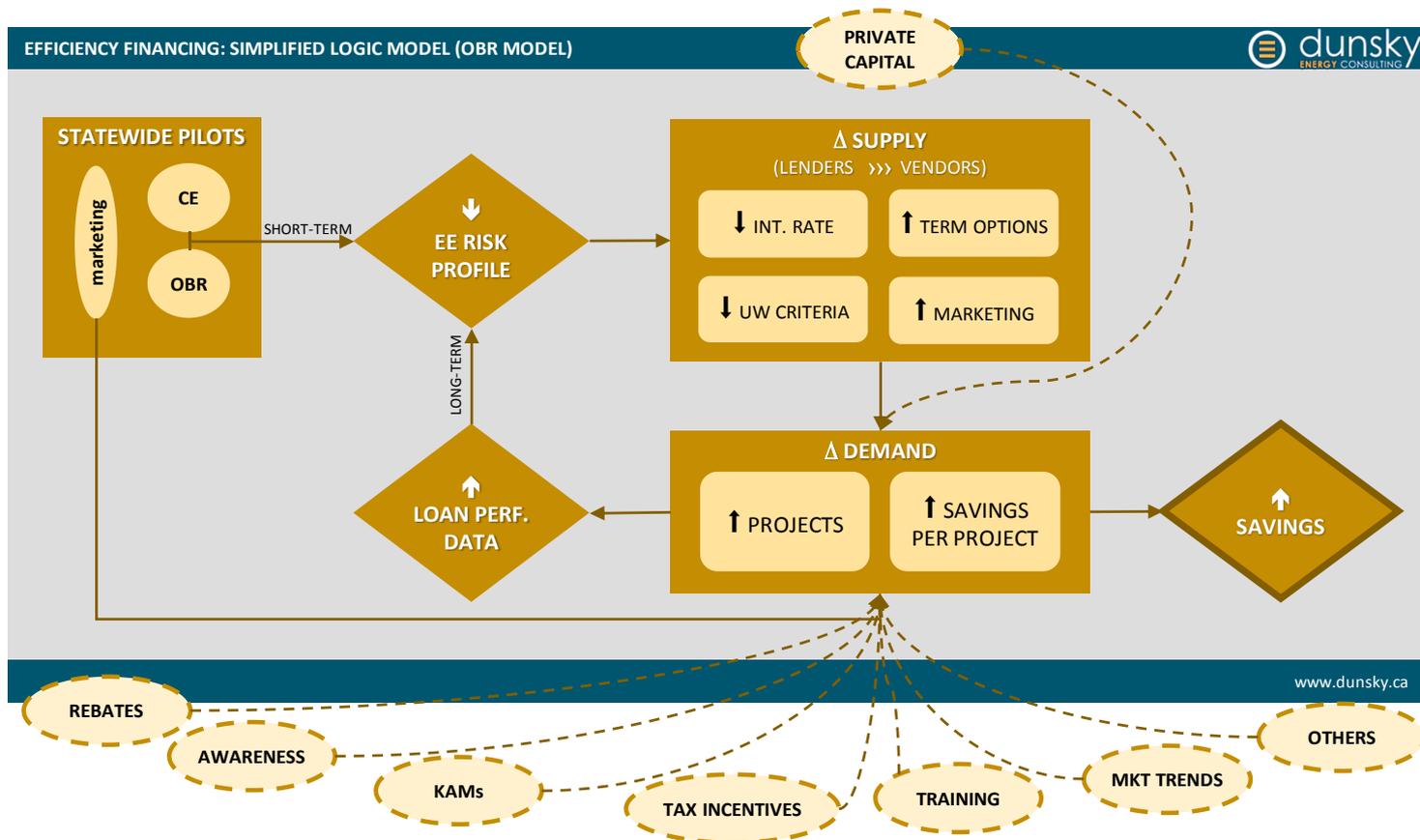
- ▶ How well do existing programs cover the market
- ▶ Identify gaps and propose IF solutions to fill those gaps
- ▶ Expand, drop, or add new programs

# OPPORTUNITIES ANALYSIS

## Costs and benefits of EE financing



- Cost effectiveness testing: NEBs, GHG Reduction, Avoided Costs, Demand Reduction



# EXPANDED USE OF FINANCING RECOMMENDATIONS



- Explore options and impacts of
  - ▶ On-bill financing (Commercial and Residential)
  - ▶ Longer term financing (PACE or OBR)
  - ▶ Credit Enhancements (LLR, DSRF, Subordinate Debt, Bonds)
  - ▶ Repurpose C&I revolving fund for Credit Enhancement
  
- Innovative delivery tools
  
- Attracting 3<sup>rd</sup> party lenders for:
  - ▶ Capacity
  - ▶ Capital
  
- Process evaluation on programs to determine specific program improvements

# QUESTIONS ?

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