

Better Buildings Residential Network Peer Exchange: Creative Financing Approaches for Residential Energy Efficiency Programs

Call Slides and Discussion Summary
June 25, 2015



Agenda

- Call Logistics and Introductions
- Residential Network and Peer Exchange Call Overview
- Participant Poll
- Featured Presenters
 - Chris Woolery, Residential Energy Specialist, How\$martKY™, Mountain Association for Community Economic Development (MACED) (Residential Network member)
 - Heather Braithwaite, Senior Associate, and Jeremy Epstein, Senior Associate, Harcourt Brown & Carey
 - Duanne Andrade, Chief Financial Officer, Solar and Energy Loan Fund (SELF), Florida (Residential Network member)

Discussion

- What new or different financing approaches has your organization used to support home energy upgrades?
- What new or different approaches has your organization explored for program funding?
- What funding and financing approaches work well? What has not worked well?
- What is important to consider when evaluating new financing options?
- What are effective ways to approach potential new financial partners?

Closing Poll





Call Participants

- Arlington County, Virginia
- Aspen Community Office for Resource Efficiency
- Build It Green
- Center for Sustainable Energy
- City of Holland, MI
- Clean Energy Works
- Clinton Foundation
- Connecticut Green Bank
- Craft3
- Massachusetts Dept. of Energy Resources
- Economic Opportunity Studies, Inc.
- Elevate Energy
- Energy Efficiency Specialists
- Energy Futures Group

- Greater Cincinnati Energy Alliance
- Harcourt Brown & Carey
- Holland Board of Public Works
- ICAST
- Institute for Market Transformation
- MaGrann Associates
- Mountain Association for Community Economic Development (MACED)
- National Housing Trust
- Nexus Energy Center
- Opportunity Council
- Solar & Energy Loan Fund
- Sustainable Connections
- The Oberlin Project
- Windham & Windsor Housing Trust





Call Participant Locations







Better Buildings Residential Network

- Better Buildings Residential Network: Connects energy efficiency programs and partners to share best practices to increase the number of American homes that are energy efficient.
 - Membership: Open to organizations committed to accelerating the pace of existing residential upgrades. Commit to providing DOE with annual number of residential upgrades, and information about benefits associated with them.
 - Benefits:
 - Peer Exchange Calls
 - Tools, templates, & resources
 - Newsletter updates on trends
- Recognition: Media, materials
- Optional benchmarking
- Residential Solution Center

For more information & to join, email bbresidentialnetwork@ee.doe.gov.

- Better Buildings Residential Network Group on Home Energy Pros
 - Join to access:
 - Peer exchange call summaries and calendar
 - Discussion threads with energy efficiency programs and partners
 - Resources and documents for energy efficiency programs and partners

http://homeenergypros.lbl.gov/group/better-buildings-residential-network





Better Buildings Residential Network Group on Home Energy Pros Website







Peer Exchange Call Series

- Calls are held the 2nd and 4th Thursday of every month at 12:30 and 3:00 ET
- Calls cover a range of topics, including financing & revenue, data & evaluation, business partners, multifamily housing, and marketing & outreach for all stages of program development and implementation
- Upcoming calls:
 - August 13, 12:30 ET: Assessments: The Good, the Bad, and the Ugly
 - August 13, 3:00 ET: Tailored Marketing for Low-Income and Under-Represented Population Segments
 - August 20, 12:30 ET: Staged Upgrade Initiative Program Design
- Send call topic ideas to <u>peerexchange@rossstrategic.com</u>

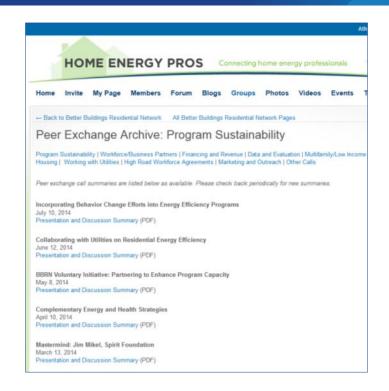




Peer Exchange Call Summaries

Discussion: Challenges and Solutions: Overcoming Challenges - Solutions: Access trusted, local messengers Engage your satisfied customers as champions to turn them into "lifetime customers" Invite people to make a pledge with a few simple EE activities they can take Connect with the right local partners (Connecticut conducted "community asset mapping") Directly involve the homeowner through DIY work or as energy efficiency demonstration homes to help them feel engaged (San Diego demonstration homes) Minimize paperwork to make it easier to participate

Poll Results Participant Poll: Which of the following best describes your program's experience with energy efficiency behavior change efforts? • Currently implementing: 31% • Planning to implement: 31% • Thinking about it: 19% • Haven't thought about it: 0% • Not applicable: 19%



How do you eat an elephant? One bite at a time. A slight shift in perspective goes a long way.

Understanding how EE can solve a financial, public relation, or customer service problem for the utility is the right place to start.





Residential Program Solution Center – We Want Your Input!

Web portal of residential EE upgrade program resources, & lessons learned to plan better, avoid reinventing the wheel.

- BB Neighborhood Program, Home Performance with ENERGY STAR Sponsors+
- Provides:
 - Step-by-step guidance
 - Examples
 - o Tools
 - Templates
 - Lessons learned
 - Best practices
 - Tips
- Continually add content to support residential EE upgrade programs member ideas wanted!



https://bbnp.pnnl.gov/





Opening Poll

- Which of the following best describes your organization's experience with financing approaches for EE programs?
 - Some experience/familiarity—50%
 - Very experienced/familiar—36%
 - Limited experience/familiarity—9%
 - Not applicable—5%
 - No experience/familiarity—0%





Program Experience
Chris Woolery
Residential Energy Specialist, How\$martKY™
Mountain Association for Community Economic
Development (MACED)







Key Decision Points to Consider When Creating an Utility On-Bill Program





What is How\$martKY™?

It is an on-bill financing program designed to use energy savings to pay for energy efficiency improvements to a customer's residence on the customer's electric bill over time.

It is an investment in the Electric Meter by the utility and is not a personal loan to the customer. It does not affect the participating customer's credit.







1.



Customer wants to save money on utility bill.

2.



Utility determines best upgrade package that can be financed out of projected savings.

3.



Utility oversees efficiency upgrades at no upfront cost to customer.

4.



As part of utility service, the meter is assigned a fixed monthly charge to pay off the upgrade.







Current Program Stats:

Completed Retrofits:	199
Jobs Now In Process:	17
Completed Assessments:	397

Average Projected Savings: 5122 kWh (\$48.57) / month	Average How\$martKY Charge: \$35.90 / month			
Average Job Costs: \$7939	Average Financed Amount: \$5198			
Percentage of jobs for Low-Moderate income clients:				
59%				







Example 1

Double Wide Mobile Home with Elec. Furnace Replacing with a Heat Pump

```
$7,350 Cost of Improvements $5380

-1,970 Rebates & Incentives + 5% Project Fee's

$5,380 $5649 @ 3% over 15 yrs

= $39/m0
```

Projected 6061 kwh/yr savings→ \$51/m0 Avg reduction

-\$39/m0 Fixed charge

\$12/m0 Immediate savings





Example 2

Single-story with Improperly sized Heat Pump Additional insulation and air sealing

```
$12,067 Cost of Improvements $10,067

-2,000 Rebates § Incentives + 5%

$10,067 $10,570 @ 3% over 15 yrs

= $73/m0
```

Projected 7979 kwh/yr savings→ \$103/mo Avg reduction

-\$\frac{473}{mo}\$ Fixed charge

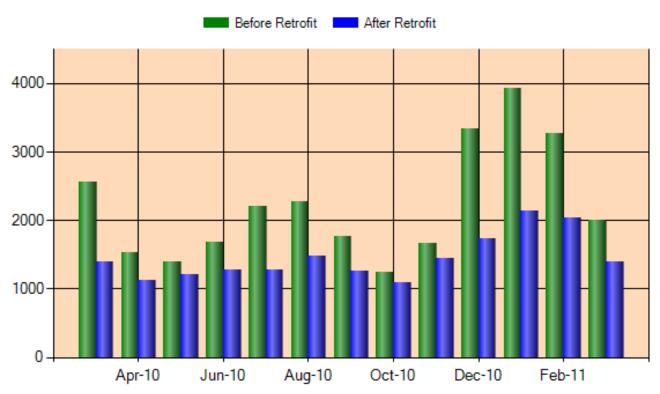
\$30/mo Immediate savings





Comparing Results: Single Family Home

Comparison Before and After Retrofit



Estimated Savings of: \$44

Average Monthly Savings: \$52 their on-bill financing charge: \$22

Weather Normalized Savings of: 31%

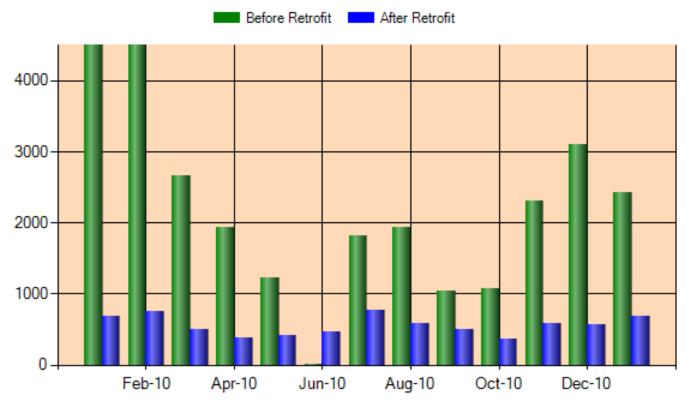






Comparing Results: Double-wide Home

Comparison Before and After Retrofit



Estimated Savings of: \$55

Average Monthly Savings: \$146 their on-bill financing charge: \$30

Weather Normalized Savings of : 69%







Program Design and Lessons Learned:

- MACED wanted to design a program that allowed as many people as possible to access financing for energy efficiency, but learned some hard lessons during the pilot program.
- Problem: We didn't require proof of ownership of the property, and loaned to one family that were living in a home owned by a family member. When they got divorced, the deed holder denied knowledge of the contract and we took a loss.
- Problem: We didn't require proof of homeowner's insurance, and financed a job on a home that later burned down. In this case, we didn't take a loss but that was just pure luck.
- Problem: Finally, we did a job for a gentleman that was dealing with a foreclosure, and may potentially lose our investment because the bank took back the property.
- Lesson: If you are not going to pull credit or place a lien on a property, make sure that you cover all of your other bases to ensure that your utility minimizes defaults.









Chris Woolery
Residential Energy Specialist

Questions?

Program Experience: How\$martKY

Advantages of On-bill Financing:

- Uses money that residents are already spending on high utility bills to finance energy efficiency improvements
- Does not require a personal loan or impact credit

Program Design:

- Can't use more than 90% of the estimated modeled savings when determining the monthly payment
 - The program also tracks actual savings and normalizes for weather
 - Only four jobs did not meet the energy savings estimation
- Word of mouth and high energy bill complaints drive requests for the program
- Combines incentives with financing to lower the difference between the job cost and the financed amount. As a result, most customers pay back less over the life of the loan than the original cost of the improvements.
- If the house sells, potential buyers are notified of the on-bill program
- How\$martKY recently completed 200 retrofits, 400 home evaluations, and has 17 jobs in process





Program Experience: How\$martKY (cont.)

- The financing program receives capital from several sources:
 - Financing of up to 15 years at 3% interest
 - Grant funding for incentive programs; work with Kentucky
 Home Performance with Energy Star to provide rebates
 - CDFI grants to provide low-income loans—the money paid back goes directly back into the loan pool
- If your program is interested in designing an on-bill financing program, research regulations for your local utility
 - How\$martKY program was required to create revenue-neutral program
- Rural areas present a unique challenge
 - The program has to convince the utility that installation of new meters and energy upgrades is an investment in grid demand and peak load reduction, as the cost of installation isn't always paid back through energy use and utility bills





California and Colorado Residential Finance Programs

Heather Braithwaite, Senior Associate Harcourt Brown & Carey

Jeremy Epstein, Senior Associate Harcourt Brown & Carey





California Residential Finance Programs REEL & EFLIC

Harcourt Brown & Carey

HBC Energy Capital

- Connects clean energy projects to appropriate financing.
- Provides customers access to capital leases, operating leases, PACE and service agreements.
- Provides a one-stop financing shop connecting investors to projects.

Harcourt Brown and Carey: Energy and Finance

- The HB&C Team offers clean energy program design assistance.
- We design clean energy finance programs for states, local governments, and utilities. We bring programs from design to final launch.
- We work with clients to identify specific financing partners and products.





Background

The California Public Utility Commission (CPUC) issued a decision on September 20, 2013, creating a series of new energy efficiency financing pilots with the following goals:

- Increase the flow of private capital to energy efficiency
- Kick start a new wave of financing
- Deploy approximately \$66 Million for credit enhancements, direct marketing and collateral, program administration and contractor training





The Pilots

Sector	Pilot Type	Credit Enhancements	On-Bill Repayment	Disconnection
Residential	Single Family	\$21 million Loan Loss Reserve	Optional in PG&E territory	No
	Master Metered Multifamily	\$2 million Loan Loss Reserve, Debt Service Reserve	Yes	No
Non-Residential	Small Business Loan/Lease	\$10 million Loan/Lease Loss Reserve	Loans – Yes Leases – Optional	Loans Yes OBR Leases Yes Off-Bill Leases No
	Non-Residential On-Bill Repayment	None	Yes	Yes





What Is the CHEEF?

California HUB for Energy Efficiency Financing

- A <u>public-private partnership</u> among state agencies, utilities, lenders, contractors, and borrowers.
- A <u>streamlined</u>, <u>statewide platform</u> for lenders and contractors to participate in the uptake of energy efficiency projects through increased access to financing.
 - \$10 million for marketing, education, outreach and training for contractors and lenders.
 - Uniform program requirements throughout the state to leverage existing infrastructure and allow flexibility for development of new and innovative financial products.
 - A centralized network of participating contractors; project quality assurance and quality control requirements; minimum underwriting criteria for financial product development; credit enhancement structures.
- <u>A data repository</u> for energy use, project, and financial data to inform future investment in energy efficiency projects.





Key Program Design Elements

The CHEEF is utilizing two finance mechanisms meant to encourage lending and reduce the risk for making loans and leases for residential and non-residential energy efficiency improvements:

- Credit enhancements (CE): Minimize risk of capital losses for third-party lenders, thereby resulting in increased consumer access to enhanced financing terms.
- On-bill repayment (OBR): Test the hypothesis that payment on the utility bill will increase debt service performance across market sectors.





CAEATFA

California Alternative Energy and Advanced Transportation Financing Authority

Overseeing the CHEEF, CAEATFA will:

- Develop program regulations including lender requirements, project eligibility criteria, and credit enhancement design
- Coordinate with stakeholders, including the CPUC, IOUs, financial institutions, lease providers, contractors, and endusers
- Establish and manage contracts with:
 - trustee bank
 - master servicer
 - contractor manager
 - data manager





REEL

Residential Energy Efficiency Loan Assistance Program

- Goal: help customers access lower-cost financing for energy efficiency projects by reducing risk to participating lenders
- Available to lenders such as banks, credit unions, CDFIs, and other finance companies
- Provides a loan loss reserve to cover loans for residential (1-4 units) energy efficiency projects such as:
 - Simple appliance or HVAC replacements
 - Comprehensive home energy improvements
- Customers are not required to participate in a IOU efficiency rebate or incentive program





EFLIC

Energy Finance Line Item Charge

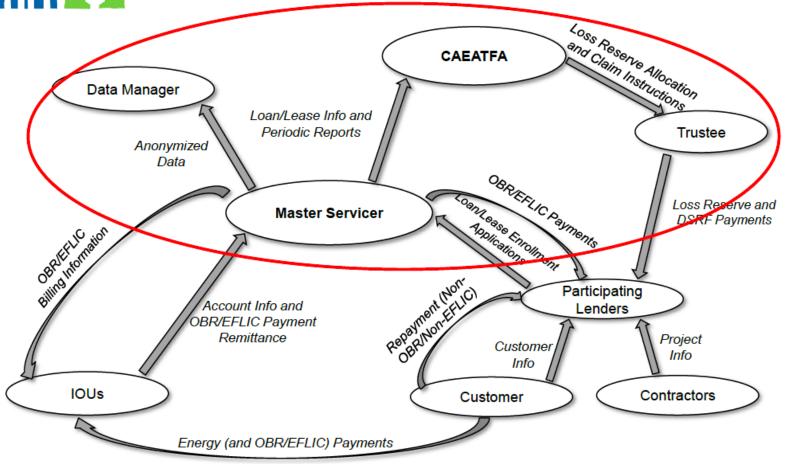
- Currently for PG&E customers only
- Facilitates repayment of loans from Participating Lenders to Customers through the Customer's Energy Statement (Bill).
- No disconnection
- EFLIC is available for loans funded and closed by the lender through the REEL Pilot







CALIFORNIA HUB FOR ENERGY **EFFICIENCY FINANCING**







Colorado Residential EE Finance Programs





History of Elevations Energy Loan





Boulder and Denver Counties received \$25M from the Department of Energy



•\$8million set aside to create a finance program

- Energy Efficiency
- •Renewable Energy



RFP Awarded to Elevations Credit Union.

•Elevations Devotes \$35 million in financing for Energy Loans!

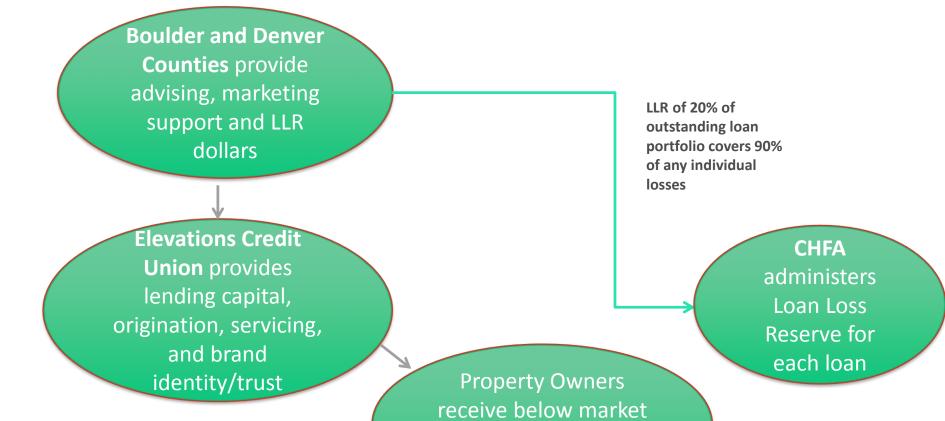


Through stimulus funds from the American Recovery and Reinvestment Act. (2009)





Basic Structure



financing for qualified

projects





Product Basics

- Residential Rates **2.75**% (3 years) to **7.125**% (10 years)
 - Rates increase depending on terms, credit history and FICO score
- Terms- 36, 60, 84, or 120 month terms
- Loan Amounts
 - Residential \$500- \$25,000 larger loans possible
- Minimum FICO score: 580
- Over 40 eligible measures





Today

- Almost \$3 million in projects have been financed
- Promoted by Xcel Energy, (the public utility)
- Credit Union gains membership and promotes their community development/reinvestment goals





Public vs. Private Capital: Leveraging the Best Characteristics of Each

Public Capital

- May Not Require Returns
 - Has goals other than profit
- Happy to exist purely as credit enhancements to...
 - Broaden access to capital
 - Lower rates
 - Protects private capital from losses

Private Capital

- Can be fast and efficient
- Creates "products" vs. "programs"
- Less restricted
- Looking for profit (and thus deal-flow)





Pending Innovations

- Contractors and IOU looking for similar product outside of Elevations' territory
 - Market transformation!
- In discussions with national originator/servicer to bring statewide product to Colorado
- Colorado Energy Office may be able to provide some credit enhancements here
 - (pending expected RFP)
- Left over ARRA LLR money going to support commercial retrofits in Boulder County and potentially Denver County





Questions?

California Residential Financing Programs: Heather Braithwaite

Colorado Residential Financing Programs:

Jeremy Epstein





Program Highlights: Harcourt Brown & Carey California

- Programs in CA aim to provide lower-cost financing to customers by lowering the risk to lenders. Strategies include:
 - Credit enhancements
 - On-bill financing
 - Loan loss reserves
- There are advantages to a statewide program:
 - Uniform program requirements
 - Centralized contractor network
 - Quality assurance
 - Access to data
- Energy Finance Line Item Charge (EFLIC)
 - Only available in PG&E territories currently. Other utilities may sign on at a later date; especially if current analyses of on-bill financing prove effective.
 - EFLIC clients do not risk disconnection for unpaid energy bills. While this can increase program risk, the decision was made based on comment—nobody wants to see an elderly woman in the program losing her lights because she didn't pay her bill.





Program Highlights: Harcourt Brown & Carey Colorado

- The Colorado program found advantages with using a local credit union to provide the lending capital
 - In Boulder and Denver counties, customers recognized
 Elevations Credit Union as a trusted brand, which helped uptake
 when pitching the financing program
- The program leverages a mix of private and public capital
 - Private capital tends to create products vs. programs; products are delivered to the market more quickly
- Without a statewide program, contractors are driving the push to bring the lending product to other regions beyond Denver and Boulder counties





Program Experience
Duanne Andrade
Chief Financial Officer
Solar and Energy Loan Fund (SELF)







Creative Approaches for Residential Energy Efficiency Programs

SELF



- The Solar and Energy Loan Fund (SELF) is a non-profit certified Community Development Financial Institution (CDFI) headquartered in St. Lucie County, Florida.
- SELF provides low cost, accessible loans to help homeowners make sustainable home improvements that include:
 - 1. Energy efficiency retrofits (e.g., insulation and high-efficiency air conditioners);
 - 2. Renewable energy alternatives (e.g., solar water heaters);
 - 3. Wind Hazard Mitigation products (e.g., impact windows and roofs); and
 - 4. Water conservation measures.







CAPITAL



Non-Traditional Funding Sources

- Socially Responsible Investors (e.g. Faith Based Organizations)
- Impact Investments (e.g. Monarch Investments via Calvert Foundation)
- Crowdfunding (e.g. Kiva)

Traditional Funding Sources

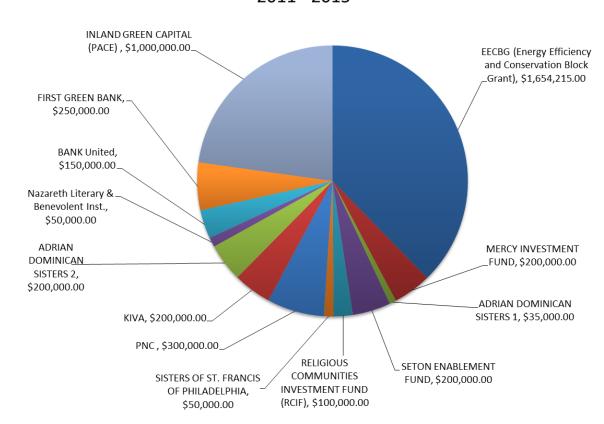
- Banks (CRA Investments)
- Local Government Investments
- Family Foundations and Private Foundations
- PRI Investments

SELF'S FINANCING POOL

Types of Capital Providers:

- Socially Responsible Investors (SRI's)
- Crowdfunding (KIVA.org)
- CRA Bank Investments
- Private Investment groups

SELF Loan Capital Providers 2011 - 2015



Total Funding Sources: 12

1. Faith Based: 7

2. Crowdfunding: 1

3. CRA Investors: 3

4. Private Investors: 1

KEYS TO UNLOCKING FINANCING FOR SUSTAINABILITY



- Start with an Angel Investor or Seed Grant to set up and run an organization for the first 3 years.
- Apply prudent financial and risk management practices
- Use accounting best practices
- Invest in Management of Information systems
- Establish efficient processes
- Build internal organizational capacity
- Have regular financial reporting practices
- Measure and Track Results and Impacts



Questions?

Duanne Andrade
Chief Financial Officer, SELF

www.solarenergyloanfund.org

Program Experience: SELF, Florida

- SELF has seen success with socially responsible investors (SRI), primarily composed of faith-based organizations
 - SRI investing has grown nationally to \$1 out of every \$9—there's a huge pool of capital available for investing
- Partnerships are key: SELF partners with Kiva.org, the largest micro-lending platform in the world. SELF raised over \$150K in the past three months and have increased their line of credit from \$50K to \$200K. The platform attracts funders from all over the world to make micro-loans for energy efficiency upgrades.
 - For more information about how crowdfunding for energy efficiency financing, find the call summary from an October 23, 2014 call, "Crowdfunding Enabling Small Investors to Help Fund Business Loans for Energy Efficiency Upgrades" here
- **Track results:** SELF reports "triple-bottom line impacts." Capturing these results helps to attract additional financing mechanisms for the program.





Discussion Questions

- What new or different financing approaches has your organization used to support home energy upgrades?
- What new or different approaches has your organization explored for program funding?
- What funding and financing approaches work well? What has not worked well?
- What is important to consider when evaluating new financing options?
- What are effective ways to approach potential new financial partners?
- Other questions related to creative financing approaches?





Summary of Financing Options

On-Bill Financing

 Advantage: Reinvests money being used on high energy bills into energy efficiency improvements

Public-Private Partnerships

 Advantage: There are advantages to using both public and private funding; public funding often has a mission other than profit, but private funding is often more flexible

Loan Loss Reserves

 Advantage: Decreases the risk of lenders to increase access to capital for borrowers

Socially Responsible Investing

 Advantage: Growing opportunity for energy efficiency programs to access capital

Crowdfunding

Advantage: Opportunity to attract lenders from all over the world.





Closing Poll

- After today's call, what will you do?
 - Seek out additional information on one or more of the ideas —77%
 - Consider implementing one or more of the ideas discussed—8%
 - Make no changes to your current approach—8%
 - Other (please explain)—8%

Please send any follow-up questions or future call topic ideas to:

peerexchange@rossstrategic.com



