

Bank of America Energy Efficiency Finance Program

ACEEE Finance Forum Presentation

May 13, 2014

Bank of America Energy Efficiency Finance Program

The Bank of America Energy Efficiency Finance Program is an internal joint venture between:

1. Bank of America CDFI Lending & Investing
2. Bank of America Global Environmental Group
3. Bank of America Charitable Foundation

Community Development Financial Institutions

Community Development Financial Institutions (CDFIs) are financial institutions which provide credit and financial services to underserved markets and populations.

- CDFIs finance affordable housing, small businesses, community facilities, and economic development projects.
- While CDFIs are typically nonprofit loan funds, CDFIs may also be community development banks or community development credit unions.
- Bank of America is the leading provider of capital to CDFIs, other than the United States Department of Treasury. Bank of America has a portfolio in an amount greater than \$1 billion to approximately 240 CDFIs in all 50 states, Washington DC and Puerto Rico.

Bank of America Environmental Strategy

Our Purpose

To lead the creation of business opportunities that positively impact the environment and to model sustainable business practices in the operation of our enterprise.

Transformational Finance



- ✓ First bank to make significant environmental business commitment
- ✓ Completed \$20B goal four years ahead of schedule & launched new \$50B goal on Jan. 1, 2013
- ✓ Combined \$70B – largest commitment in financial services sector
- ✓ Deals range from utility scale wind and solar to carbon credit projects to serve world's poorest populations

Operations



- ✓ Comprehensive and aggressive targets for greenhouse gas (GHG) emissions, water, waste, paper and LEED
- ✓ GHG emissions reduced by 18% from 2004-09; exceeding 9% goal
- ✓ GHG emissions down 19%, water usage down 19%, and paper usage down 25% 2010-2013
- ✓ 18% of work space LEED certified at end of 2013

Employee Programs



- ✓ 1,350 My Environment Ambassadors and 14,500 Friends worldwide
- ✓ More than 218,000 hours volunteered since 2008
- ✓ \$14 MM in philanthropic investments in 2013
- ✓ 7,200+ employees have participated in hybrid program, more than 2.5X US average
- ✓ New solar discount program launched in 2014

Governance & Policies



- ✓ Global Environmental Program Chair provides oversight
- ✓ Dynamic policies balance risk and business development
- ✓ Focus on transparency through annual reporting

Bank of America Charitable Foundation

Bank of America is working to connect communities to better economic futures, and the Bank of America Charitable Foundation is taking a comprehensive approach to respond to needs related to housing, hunger and jobs. These areas encompass community development, workforce development and education, and basic human services. The Bank of America Charitable Foundation also supports broader corporate social responsibility initiatives such as environmental causes.

In 2014, the Bank of America Charitable Foundation will issue three requests for proposals (RFPs):

Jobs: Workforce Development and Education (Application period: January 21—February 14)

Connecting individuals to employment opportunities is a key component contributing to each community's economic growth. We support workforce development and educational opportunities that help the unemployed and underserved obtain the training and education that translate into post-secondary completion and employment.

Housing: Community Development (Application period: April 21—May 9)

Housing remains a pressing issue in communities across the country. In response, we fund programs focused on foreclosure counseling and mitigation, real-estate owned disposition and affordable housing. In conjunction, we support financial education and coaching as well as other financial empowerment programs that help individuals become more financially capable and that lead to long-term neighborhood stability. Recognizing that large organizations, such as arts institutions and hospitals, act as economic catalysts in communities, we fund programs that help advance overall community revitalization.

Hunger: Basic Human Services (Application period: July 21—August 8)

Individuals continue to struggle to provide basic necessities for their families. Our philanthropic support is focused on helping these individuals at their point of need, from immediate human needs such as food and shelter, to addressing financial wellness and stability issues facing low-income communities such as access to benefits and resources.

The Need for an Energy Efficiency Finance Program

Energy efficiency improvements to a property should save energy and money:

- Cost savings/greater affordability to building owner and residents
- Reduction of carbon footprint and greenhouse gas emissions,
- Healthier homes (or workplaces), and
- Creation of jobs (especially in construction industry)

Challenges include:

- Existing mortgages that cannot be prepaid without penalty and do not allow second mortgages
- Properties already carrying high levels of debt - high LTV ratios that prevent any additional debt
- Lenders/Appraisers that are unable to underwrite all of the projected energy savings (data issue)
- Split Incentives - owner pays for cost of improvements, tenants benefit from savings
- Energy Service Companies (ESCOs) do not typically want to work on small transactions
- Property owner must believe energy savings will be achieved to justify cost of improvements (data issue)

Bank of America Energy Efficiency Finance Program

Program Objective

To provide catalytic resources to CDFIs that are working on innovative financing programs for energy efficient retrofits in low- and moderate-income communities. The four components of the Bank of America Energy Efficiency Finance Program are:

- Grants:** \$5 million in total. Grants of \$500,000 per program participant, paid over two years (2011 and 2012).
- Loans:** \$55 million in total. Loans to program participants range from \$5 million to \$8 million. Loans at 1% interest rate and for terms as long as ten years.
- Data:** CDFIs are working with EnergyScoreCards to collect utility data and monitor post-retrofit energy and water consumption against pre-retrofit performance.
- Knowledge:** Bank of America is sharing knowledge and experiences of this program via webinars and at national conferences. Program results will be published.

Models under the Bank of America Energy Efficiency Finance Program

Boston Community Loan Fund

Multifamily housing retrofit loans originated and then sold to secondary market after the energy savings have been demonstrated

Community Investment Corporation

One-stop program for energy assessments, financing, and construction oversight of energy efficiency retrofits for multifamily housing

CRAFT3

Loans for energy efficiency improvements for single-family homes with repayment via home-owners' utility bills

Enterprise Community Loan Fund

Unsecured loans for energy efficiency retrofits made to owners with full recourse, avoiding debt and lien issues at property level

National Development Council/ Grow America Fund

One-stop program for energy audits and low-cost loans to small businesses for energy efficiency improvements or equipment

IFF

Low-interest energy efficiency loans to a wide range of nonprofit community facilities, including charter schools and health centers

Low Income Investment Fund

Loans for privately-owned, HUD-subsidized, multifamily housing. Working with HUD to re-align incentives and with an ESCO

Opportunity Finance Network

OFN was selected to provide capacity-building to CDFIs and to lend to CDFIs that were not selected under this program

Self-Help

Low cost capital for energy efficiency improvements integrated into New Markets Tax Credits and other financing structures

The Reinvestment Fund

Flexible capital for energy efficiency improvements - often blended with US DOE Better Buildings funding

EnergyScoreCards – Data Collection Consultant for Program




Project Summary: Multifamily Building, Chicago, IL

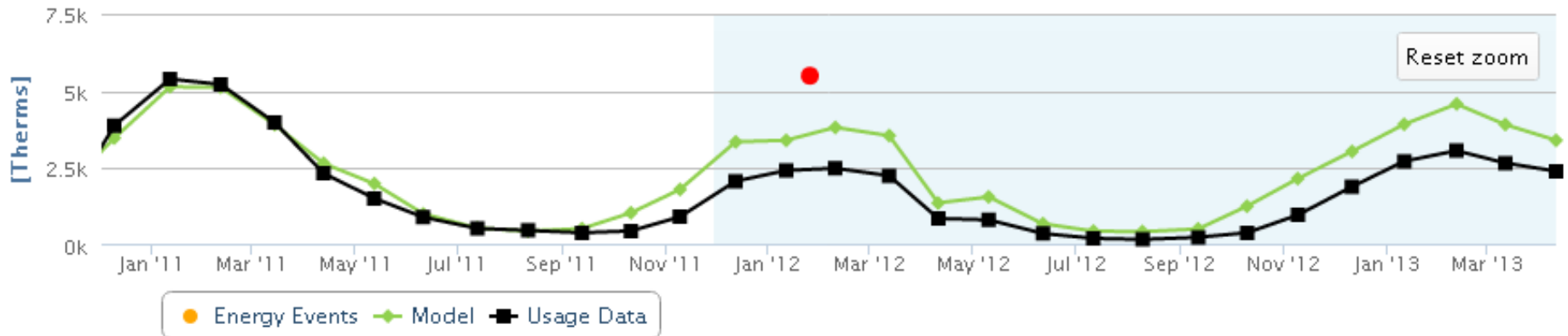
City, State:	Chicago, IL
Zip Code:	60649
Property Type:	Multi-Family
Occupancy:	Family
# Buildings :	1
Building Type :	Low-Rise (up to 4 stories with hallways)
Year Built:	1925
Total Multi-Family ft ² :	36,750
Non-Res Multi-Family ft ² :	5,512
Units:	23
Bedrooms:	64
Fuel Code:	EGG
Payment Code:	(T) TOO

Implemented Energy Conservation Measures

Energy Events				
Measure Type	Measure	Implemented On	Cost	Projected Annual Savings
[Building Enclosure] Roof/Attic- Insulate	Air seal and insulate roof cavity with blown-in cellulose R-49	01/25/2012	\$15,910	\$5,550
[Heating] Pipes/Ducts- Insulate	Insulate accessible steam and DHW pipes to R-4.5	01/25/2012	\$10,975	\$1,910
[Building Enclosure] Wall- Insulate	Insulate garden unit walls to R13	01/25/2012	\$1,620	\$400
[Water] Low-Flow Faucets/Showerheads- Install	Install low flow faucets (1.5 gpm); low-flow showerheads and faucet aerators			\$590
[Heating] Boiler/Furnace- Install/Upgrade	Replace steam boiler (currently broken sections) and balance with venting	01/25/2012	\$31,995	\$2,430
[Domestic Hot Water] Water Heater- Install/Upgrade	Replace current <80% AFUE DHW heater with high efficiency >90% AFUE DHW heater	01/25/2012	\$18,500	\$870
[Lighting] Building Lighting- Upgrade	Replace all incandescent light bulbs with CLFs			\$1,890
[Appliances] Refrigerators- Install/Upgrade	refrigeration replacement	01/25/2012	\$10,580	
[Heating] Boiler Controls- Upgrade		01/25/2012	\$4,505	
[Building Enclosure] Building- Air Seal/Weatherstrip		01/25/2012	\$1,495	
			Total:	\$95,580
				\$13,640

Pre- vs. Post-Retrofit Energy Usage Comparison

Usage By Fuel		Pre-Retrofit - Owner	Post-Retrofit - Owner	Difference		Units
	Usage	2,734	1,728	↓ -37%	-1,006	mmBTU
	Electric Usage	12,284	8,888	↓ -28%	-3,396	kWh
	Gas Usage	26,920	16,981	↓ -37%	-9,939	Therms

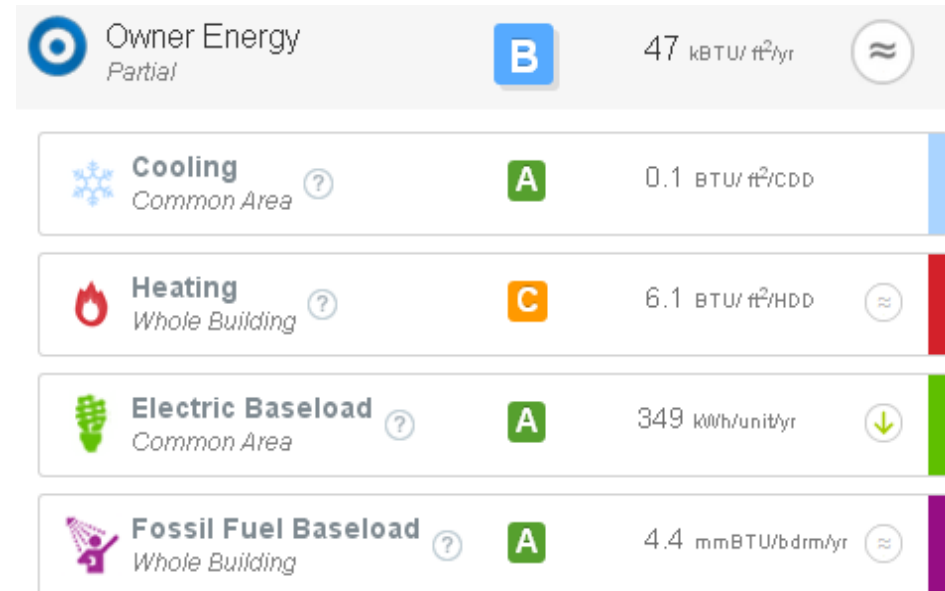


EnergyScoreCards.com

EnergyScoreCards Comparison






Pre-Retrofit Period

Post-Retrofit Period



Pre- and Post-Retrofit Comparison

Spend By Fuel		Pre-Retrofit - Owner		Post-Retrofit - Owner		Difference	
	Spend	\$22,770		\$15,680		↓ -31%	(\$7,090)
	Electric Spend	\$1,474		\$1,067		↓ -28%	(\$407)
	Gas Spend	\$21,296		\$14,614		↓ -31%	(\$6,682)

Carbon		Pre-Retrofit - Owner		Post-Retrofit - Owner		Difference		Units
	Carbon	334,729	D	212,910	B	↓ -36%	-121,819	lbs CO ₂
	Cooling	1,517	A	188	A	↓ -88%	-1,329	lbs CO ₂
	Heating	255,918	D	167,343	C	↓ -35%	-88,575	lbs CO ₂
	Electric Baseload	10,756	A	12,412	A	↑ 15%	1,656	lbs CO ₂
	Fossil Fuel Baseload	66,538	B	32,966	A	↓ -50%	-33,572	lbs CO ₂

Thank you!

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