

Economic Opportunity Studies

**Building Energy Efficiency Partnerships
for Affordable Multifamily Housing:
2015 and Beyond**
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Contents

Introduction.....	1
I. Building Owners' Essential Role	2
Connecting Owners to Energy-Related Resources.....	3
New Connections.....	4
II. Government Policy and Owners' Energy Retrofit Resources.....	5
Attracting Financing with a Better Revenue Projection.....	5
Better Data for Determining HUD Utility Allowances	7
Other federal and state government initiatives.....	7
III. Utility Efficiency Programs	8
National Housing Trust [NHT] Utility Policy Campaign	10
IV. New Private and Philanthropic Financing: Foundations	11
V. Mission-Based Lenders.....	13
VI. Emerging Funders and Innovative Financing Mechanisms.....	15
Green Banking	15
Socially Conscious/ Responsible Investment Pools.....	16
Energy Services Companies (ESCO) – A New Look.....	16
EB5—Loan pool	17
VII. Policy Developments	17
Conclusion	19

Building Energy Efficiency Partnerships for Affordable Multifamily Housing: 2015 and Beyond

Introduction

This paper offers a snapshot of the resources devoted to promoting low-income multifamily housing energy efficiency retrofits; it describes many of the policies, public-private resources and partnerships influencing and funding the field in late 2014.¹

This material is intended to introduce interested energy services providers, especially low-income Weatherization Assistance providers, to emerging opportunities for working with owners of multi-family affordable housing using funding the owners secure from non-government funders including their established financial partners or foundations, mission-based lenders and utilities. This document explains the motivations and strategies of the owners and investors as well as the types of activities they fund. Leaders of federal low-income Weatherization Assistance programs and local and state programs have a continuing interest in finding more private resources to expand their current programs and maintain a skilled workforce and cadre of trained private contractors. Weatherizers will soon adopt a new set of Department of Energy-sponsored analytic and technical tools to guide their work practices in larger multifamily buildings.² However, the federal WAP regulations make it difficult to perform whole - [multifamily] building retrofits; they favor installation of apartment-level measures which have less energy impact and the system of federal reimbursement is poorly matched to projects that take a long time to complete.

Weatherization organizations can use the information here not only to persuade owners to add energy upgrades to their general rehabilitation and preservation investments but also to market their own unique DOE-developed tools and their proven skills so they become part of the contractor teams beginning at the early stage of the development process. The outcome could be projects that are

¹ While housing stock type for multifamily housing varies considerably in the US, for the purposes of this paper we are discussing multifamily buildings of 5 or more units. We are also defining low-income as 80% or below of area median income.

² [Link to DOE/WAP multi-family tools](#)

funded entirely by owners with the exception of the utility or state-financed rebates or grants that can be coordinated by skilled delivery teams. Weatherization Assistance organizations can then contract or subcontract for such projects run independently of their DOE-WAP program work.

A separate guide for Weatherization leaders, entitled “Weatherizers’ Action Guide to the EOS Multifamily Partnerships Report” is presented as Appendix A to this document.

This report is organized according to the major sources of non-governmental funding for multifamily buildings: owners, government programs, utilities, foundations and mission-based lenders; it concludes with an overview of emerging, but untested, policies and funding sources.

I. Building Owners’ Essential Role

While the government and public-private funders of affordable housing play influential roles in funding and shaping the building performance market sector, substantial funding for energy upgrades in existing buildings will continue to come from building owners. New partnerships and funding for new projects will depend on strong working arrangements with owners and managers of low-income multifamily properties. There is tremendous potential for energy savings within the multifamily housing stock. Approximately 85% of multifamily buildings were built before 1990, and they generally have more inefficient heating, cooling, plumbing, and lighting systems than single-family housing.³ However, owners need confidence that efficiency investments will reduce their operating expenses enough to support the lower rents that make their units affordable.⁴ Owners and managers are concerned about:

- Their vulnerability to fluctuating energy prices;
- Energy inefficiencies and waste within certain buildings or throughout their entire portfolio;
- Predicting the total cost of new projects;

³ <http://www.huduser.org/portal/periodicals/em/summer11/highlight1.html>.

⁴ Bell, Casey, et al., *Engaging Small to Mid-Size Lenders in the Market for Energy Efficiency Investment: Lessons Learned from the ACEEE Small Lender Energy Efficiency Convening* (American Council for an Energy-Efficient Economy, 2014), <http://www.aceee.org/sites/default/files/publications/researchreports/f1401.pdf>. Also at <http://www.elevateenergy.org/prod/httpdocs/wp/wp-content/uploads/Valuing-Financial-Benefits-of-Energy-Efficiency-in-Multifamily-Sector.pdf>

- Not only stabilizing costs in the short run, but also increasing property values;⁵ and
- Financing options for their existing portfolio as well as for future projects.

Many owners seize the opportunity to rehabilitate their property during recapitalization which occurs when properties reach the end of the compliance period during which they must keep units affordable.⁶ Today, there is a growing number of these ‘expiring use’ properties; their owners have new options, among them recapitalizing and rehabilitating their units or converting these properties to alternatives uses. Therefore, opportunities for energy efficiency improvement work as part of rehabilitation projects are increasing. EOS has set up a database of HUD and USDA assisted housing projects where the public can look up buildings by address and learn when they may be recapitalized.⁷

However, owners and managers vary widely in their comfort level with energy savings and property valuation projections as well as their knowledge of structuring energy efficiency deals.

Connecting Owners to Energy-Related Resources

One of the challenges in this sector is changing the credit markets that serve owners of multifamily properties, especially affordable multifamily properties. At present, philanthropic funders and affordable housing intermediary organizations are testing roles that private lenders and industry associations could assume in the future. If the outcomes meet expectations, the programs and resources described here will lead to a “market transformation.” That means owners, investors and lenders will value energy and water-efficient buildings, demand affordable well-designed loans to promote inclusion of energy and water upgrades, and have a choice of both financing sources and reliable building performance professionals.

⁵ ENERGY STAR estimates that a 15 percent reduction in energy costs in a 250 unit, master metered building can increase asset value by over \$1 million. http://www.energystar.gov/ia/business/multifam_housing/Multifamily_FactSheet.pdf?06ca-ff7b3; <https://cms.bancvue.com/custom/fi/self-help/fb/disclosure/Multifamily-Issue-Paper.pdf>.

⁶ **Recapitalization** is the act of exchanging existing financing with new financing. In some cases it includes bringing in new equity and/or debt. It can also involve restructuring current obligations with new terms. Recapitalization is typically considered at specific junctures in the life cycle of a property, such as the end of a 15 year LIHTC compliance period. Generally recapitalization is a good time to access debt and/or equity sources to undertake needed capital improvements, including energy and water efficiency measures.

⁷ [EOS table: lookup expiring use properties near you](#)

New Connections

While enticing financing sources for energy retrofits appear important to drawing owner attention, three non-financial factors are proving essential in persuading owners to invest: energy information tools, professional exchanges, and a labor market of skilled technical personnel. Several educational initiatives from national and regional institutions that are respected in the affordable housing markets are reaching owners of affordable rental properties and giving them such tools. Weatherization organizations can help fill this knowledge gap, too.

For example:

- National Housing Trust (NHT) convenes a quarterly meeting known as the National Utility Working Group (NUWG) with other owners of affordable multifamily properties and industry stakeholders.
- National Housing and Rehabilitation Association (NH&RA), with funding from MacArthur Foundation, sponsored a Housing Preservation through the Energy Efficiency Initiative, which offers a clearinghouse of information and exchange with experts.

Yet information and financing, while necessary, are not sufficient conditions for many owners to move a specific project forward. The conclusion of research conducted by the American Council on an Energy Efficient Economy (ACEEE) is that it is beneficial to have experts present owners an array of building-specific options which offer choice and flexibility.

*"...An integrated program approach i.e., a program that offers energy audits and energy efficiency solutions for a specific building type with prearranged financing and retrofit options. While the lender itself need not vertically integrate to provide all services in the energy efficiency value chain, the integrated approach means that from a customer perspective, the program offers easy options for each step in the process. Multiple stakeholders (e.g., government, utility, lender, non-profit) may have to work together to provide the solution, but the result is a one-stop shop for the customer."*⁸

The key to garnering owner commitment to invest in energy improvements is to give owners an understanding of current usage, to present a flexible financial package with a clear explanation of the savings and payback period, and to offer sustained guidance throughout the lending and retrofit processes.

⁸ <http://www.aceee.org/sites/default/files/publications/researchreports/f1401.pdf>, p 11.

Success in Chicago!

In Chicago, IL, Elevate Energy's (Elevate) one-stop-shop model is appealing to owners because they receive building assessments and expert advice, financial guidance, construction oversight, training, and follow-up through annual savings reports from a single source. Owners are also given choices regarding staging the investments and improvements over time, and Elevate reports that a staged project option is often utilized. The resources offered include access to utility-funded rebates and to a variety of energy-related grant sources. Most important, Elevate can offer attractive financing to owners who participate in its process because of a loan program, Energy Savers, run in partnership with Chicago Investment Corporation (CIC), a non-profit mortgage lender. Two-thirds of the owners that Elevate works with use operating reserves to pay for energy upgrades.

Energy Savers has already demonstrated many successes since its inception in 2008 when foundation funding expanded CIC's lending pool by \$14.5 million and helped attract additional local government loan funds. A HUD-financed June 2014 evaluation confirmed the success and cost-effectiveness of the Energy Savers approach; Energy Savers celebrated the retrofit of 19,000 rentals in the Chicago metro area in 2014.⁹

II. Government Policy and Owners' Energy Retrofit Resources

The federal Department of Housing and Urban Development (HUD) has great influence with owners of assisted housing. As of FY 2012, 545 million occupied units received HUD assistance.¹⁰ Utility costs account for around 22 percent of public housing operating budgets and a similar share in the assisted private housing sector.¹¹ HUD spends an estimated \$6.4 billion annually on utilities (both water and energy) in the form of allowances for tenant-paid utilities, direct operating grants for public housing, and housing assistance payments for privately owned assisted housing.¹² One of HUD's core 'green and healthy home strategies' is to overcome barriers owners face in leveraging capital for energy retrofits by expanding the pool of private and governmental financing partners.

Attracting Financing with a Better Revenue Projection

Current HUD policy initiatives include a large-scale test of policy changes to get more private financing for upgrades and housing preservation including efficiency.

⁹ EOS interview with McKibbon, Anne, Elevate Energy (April 2014). See more at www.elevateenergy.org.

¹⁰ <http://portal.hud.gov/hudportal/documents/huddoc?id=hud-12apr-14app.pdf>, pg32.

¹¹ <http://portal.hud.gov/hudportal/documents/huddoc?id=hudstrategicplan2014-2018.pdf>, pg. 31.

¹² U.S. Department of Housing and Urban Development, *Progress Report and Energy Plan: Report to Congress*, Section 154, Energy Policy Act of 2005 (HUD, 2012) <http://portal.hud.gov/hudportal/documents/huddoc?id=hudenergyrptcongress.pdf>. Executive Summary I.

The Rental Assistance Demonstration (RAD) program helps public housing agencies (PHAs) and owners of other HUD-assisted properties to recapitalize. Through RAD, HUD is testing a way to make capital more available in a cost-neutral way, one that does not increase the HUD budget. The RAD allows these owners with certain HUD contracts to convert units into long-term, renewable Section 8 contracts. Because they will generate a stable income, owners should find it easier to get financing to conduct badly-needed rehabilitation projects, including energy efficiency, to lower operating costs and make rentals more affordable. Program requirements include a capital needs assessment with baseline energy use data and an energy audit.

Nearly 200,000 projects are participating now, mostly buildings owned by public housing authorities. Without RAD, many of the owners would be unable to access the financing necessary for major capital improvements. More than 1 million units in the public housing program are managed by approximately 3,300 public housing agencies; there is a documented capital needs backlog of \$26 billion.¹³

Chart 1

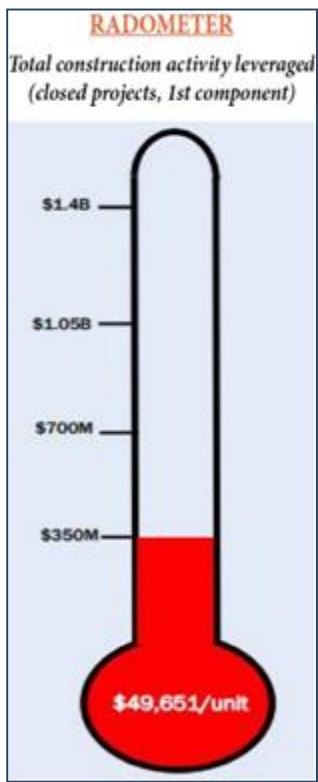


Chart 1 shows the scale and success of all completed RAD financing arrangements in late 2014; participants leveraged 9 times as much lending as the public funds invested. Per-unit investment planned is just under \$50,000. HUD has announced its intention to continue with additional cohorts of projects.

Considering the scale and national distribution of the demand for RAD-related re-investment in preserving affordable rental units, it is fair to expect growing demand for contractors skilled in designing and delivering energy upgrades over the coming years.

The RAD Capital Marketplace is a website designed to encourage information sharing among PHAs and multifamily owners considering RAD conversions and the contractors and consultants offering services

¹³ http://portal.hud.gov/hudportal/documents/huddoc?id=RAD_Newsltr_Nov2014.pdf, pg1.

that PHAs and owners may wish to use in preparing their RAD application and financing plan. (<http://radcapitalmarketplace.com>) The approved and waitlist projects are posted.¹⁴

Better Data for Determining HUD Utility Allowances

HUD also has been working within the confines of its current authority to refashion other policies and to help affordable housing multifamily owners overcome barriers. For instance, HUD is helping owners to overcome utility data gaps. HUD provides utility allowances to properties receiving subsidy assistance where tenants pay a portion of or all utility bills. In 2011, 3.3 million households received utility allowances from HUD totaling \$4.4 billion. These utility allowances are adjusted each year, and they all are derived by an owner's analysis of the property's utility costs and consumption data, including the bills tenants pay themselves to the energy provider. Better consumption data is critical in helping owners analyze costs, get appropriate allowances, and decide whether it is financially prudent to finance efficiency measures.

HUD Secretary Julian Castro wrote an [open letter](#) to utility companies and regulators in November 2014 requesting that they develop better procedures allowing building owners to access tenant and other utility usage and expense information. The Secretary wrote, "As the steward of these important affordable housing resources, HUD has an obligation to support actions that result in accurate utility data collection and reporting from multifamily property owners and tenants who reside in HUD-assisted housing." In the letter, Secretary Castro requested that utility companies work with HUD to secure access to aggregated whole-building utility data in a standardized electronic format. He also requested that unit specific information be made available to an owner if there is clear tenant consent. HUD is following-up with utilities and other stakeholder working groups.

Other federal and state government initiatives are building the number of affordable housing owners who will be motivated to invest in efficiency. The U.S. Department of Energy's Better Building Challenge (BBC) has recruited over 80 multifamily housing owners, both for-profit and non-profit, who

¹⁴ http://portal.hud.gov/hudportal/documents/huddoc?id=radreservations_103114.pdf.

(See more about RAD on HUD's website and in the summary report by Econometrica, the evaluation contractor. http://www.huduser.org/portal/publications/pdf/RAD_Evaluation.pdf)

have voluntarily signed on to cut portfolio-wide energy use by 20% by 2020 and to share energy data and strategies for others to replicate¹⁵. The BBC offers technical assistance and information sharing.

State Housing Finance Agencies may adopt ‘green’ criteria for financing. Enterprise Community Partners, a major intermediary investing in affordable housing and community development activities, will revise and release an updated version of its Green Communities certification criteria in 2015.¹⁶ Agencies such as the Minnesota Housing Finance Agency and the Washington, DC Department of Housing and Community Development already require the Green Communities Criteria for residential projects. Since its inception in 2004, Green Communities has become a prominent green building standard for designing, creating and preserving affordable housing.

III. Utility Efficiency Programs

Utilities invest in energy efficiency programs to achieve mandated energy savings requirements, and most offer low-income consumers free services. Ratepayer investments in efficiency more than doubled from 2008 to 2013, when they were about \$8.6 billion. Electric utilities accounted for 85% of the investments.¹⁷ Residential programs, not including low-income programs, were only about a quarter of electric utility expenditures, but totaled about 40% of the [much smaller] gas utility programs. Low-income programs account for another 7% of electric and 20% of gas utility efficiency programs.

Most utility-funded multifamily energy efficiency resources are simply undifferentiated parts of the residential programs offered in 39 states. Most make tenants or owners eligible for the standard residential or low-income program benefits. Few provide significant incentives for whole-building analysis and re-commissioning. While the commercial and industrial sector incentives might be helpful in the case of re-commissioning some large, mixed-use rental projects, the residential programs could

¹⁵ <https://www4.eere.energy.gov/challenge/partners>.

HUD has also established a pilot for BBC Multifamily Partners to realize saving resulting from energy and water improvement at Project Rental Assistance (PRAC) properties. The PRAC Shared Savings incentive pilot only applies to those BBC Multifamily Partners with PRAC projects either master metered for all utilities or where the owner/ agent pays a portion of the utilities.

¹⁶ <http://www.enterprisecommunity.com/solutions-and-innovation/enterprise-green-communities/criteria>

¹⁷ All these industry data are from the annual report of the Consortium for Energy Efficiency, 2013 State of the Efficiency Program Industry, Boston, MA. March 2014. <http://www.cee1.org/annual-industry-reports>.

reasonably be a source of incentives and financing for multifamily building owners. In fact, they are not. The U.S. gas industry programs reported their 2012 investments in multifamily projects were 3% of their expenditures and reported that 5% of portfolio savings came from that initiative. The electric utilities provided no breakdown.

Of the approximately \$620 million available for low-income utility programs nationwide in 2012 about half, over \$315 million, funded measures delivered by the local community agencies were also delivering the retrofits funded by the federal Weatherization Assistance Program.¹⁸ [Most of the balance that was not coordinated with WAP services came from California programs.]

Economic Opportunity Studies (EOS) has extracted a list of 2014 multifamily utility incentives organized into rebates, grants and loans from the Department of Energy database of utility incentives with special attention to loans and grants available to affordable multifamily buildings. [It is Appendix C.] The most common are rebates and subsidized energy audits or energy bill evaluations; an owner or tenant invests the majority of a project's cost. The exception is the low-income program portfolio which typically pays the entire cost of selected measures. Clearly, there is great potential for—and energy benefit from re-commissioning multifamily properties; such comprehensive approaches could be housed in the general residential program or become a separate sector of the utility efficiency portfolio.

Utilities are highly desirable partners in any energy project requiring expertise and in any market which is still too disaggregated to offer steady demand for energy project financing. They can attract and aggregate building owners, and can organize and market attractive financing without using their own capital or servicing the loans. Utilities have proven they are advantageous marketing partners to the home performance industry and its suppliers because of their direct customer relationships and influence on energy efficiency purchasing decisions.

¹⁸ Meg Power, Economic Opportunity Studies, Washington, DC. Presentation, September 2012 NASCSP available at <http://www.nascsp.org/Archived-Conference-Materials/903/2012-NASCSP-Annual-Conference.aspx?iHt=72>.

At present, new loan programs are emerging in which the utility matches a borrower to a financing partner and services the loan by collecting loan re-payments as part of monthly utility bill payments. Such ‘on-bill repayment’ arrangements may be highly suitable for credit-worthy owners of large buildings; they pose significant risks to individual borrowers who are tenants. No results of pilot programs with building owners are yet available. {For a discussion of such loan initiatives and their consumer risks and benefits, please see our analysis: [On-Bill Repayment for Home Energy Efficiency: The Benefits and Risks.](#)}

National Housing Trust [NHT] Utility Policy Campaign

In December 2010, National Housing Trust (NHT) began outreach efforts to utilities and other stakeholders to advocate for rate-payer financed multifamily energy efficiency programs as part of projected growth in utilities’ efficiency investments.¹⁹

With funding from foundations like JPB Foundation, NHT has joined National Resource Defense Council, Elevate Energy, and the Energy Foundation to form Energy Efficiency for All ([EEFA](#)). Their collective goal is to increase the scale of utility rate payer programs for affordable multifamily housing by \$80 million in select states across the country.

“Learning to work with your local utility is as important as working with your housing finance agency.”

Michael Bodaken, Executive Director, NHT

April 3, 2014, Philadelphia, PA

NHT has also published guidelines for advancing utility engagement which outline helpful lessons learned in developing partnerships between affordable housing and other utility stakeholders.²⁰ Its recent work has included intervening in utility proceedings, submitting comments in utility mergers, and forming low-income housing and energy coalitions that testify at regulatory commission proceedings.

¹⁹ Michael Bodaken and Todd Nedwick, “Utilities and Community Developers Partner to Improve the Energy Efficiency of Affordable Rental Housing Nationwide” [Community Development Investment Review](#) Volume 10, Issue 1, 2014. Pg.43.

²⁰ Nedwick, Todd, *Partnering for Success: An Action Guide for Advancing Utility Energy Efficiency Funding for Multifamily Rental Housing*, (NHT, 2013), available at <http://www.nhtinc.org/downloads/partnering-for-success-action-guide.pdf>.

IV. New Private and Philanthropic Financing: Foundations

Foundations have played a significant role in funding energy efficiency at all levels of the affordable housing market both locally and nationally. From audit tools to retrofitting projects, foundations have collectively funded the development of industry norms, tools and best practices.

In 2010 and 2011, Innovation Network for Communities (INC) was funded by Kresge and Rockefeller Foundations to capture actionable information about the Building Retrofit Industry and Market (BRIM) and issue reports on key issues and data.²¹ The BRIM report segmented the Building Retrofit Industry Market, designated multifamily housing as one sector and recommended goals and principles for foundations interested in funding energy efficiency endeavors. This report includes detailed strategic maps for developing owner demand, funding and the expertise the new market will need. These now inform philanthropic investment within the foundation community.

In addition to the development of partnerships that incentivize lenders to invest, the report recommends investments in the following activities for multifamily energy efficient sector-buildings, some of which are reflected in recent foundation grant-making:

- Create structures and procedures to facilitate and incentivize data-sharing among private and public portfolio managers;
- Encourage collaborative retrofitting projects among regional public housing authorities to reduced costs; and
- Attach energy efficiency goals and incentives to existing public housing programs modeled after municipalities' sustainability commitments.

From the BRIM report

EOS reviewed multifamily energy efficiency grants and investments by foundations from 2009 through early 2014 of \$50,000 or more. Table 1 shows the 10 foundations with major investments in the multifamily energy efficiency field, many of them consistent with the BRIM report recommendations. Foundations are investing in efficiency activities that include knowledge

²¹ Reports from each of three study phases are posted at: <http://in4c.net/Search/BRIM>. The BRIM project team included: John Cleveland and Pete Plastrik from the Innovation Network for Communities (INC), Joel Rogers from COWS (Center on Wisconsin Strategy) and Chinwe Onyeagoro, from O-H Community Partners. The BRIM reports include a useful [organization profile](#) of groups working in energy efficiency at all levels of the spectrum.

creation and exchange, technical innovation, financing mechanisms, marketing tools, standards, enduring policies, best practices and lasting institutional structures.²²

Table 1. 10 Foundations' Funding for Multifamily Energy Efficiency 2009 - 2014
by total number and award level

Foundations	Awards	# of Grants to 9/05/2014
Bank of America	\$55,000,000	1 grant
Deutsche Bank Americas Foundation	\$300,000	2 grants
Doris Duke Foundation	\$7,238,269	6 grants
Energy Foundation	\$2,140,000	16 grants
JPB Foundation (w/ others)	\$531,250	1 grant*
Kresge Foundation	\$7,488,600	23 grants
MacArthur Foundation	\$17,670,000	31 grants
Robin Hood Foundation	\$200,000	2 grants
Rockefeller Foundation	\$3,601,290	7 grants
Surdna Foundation	\$895,000	7 grants
Total	\$95,064,409	96 Grants

*Also, the San Francisco Foundation and McKnight Foundation each made just one grant, \$50,000 & \$70,000 respectively

Table 2 illustrates the broad spectrum of the foundation-funded activities.

Table 2. Examples of Foundations' Funding for Six Categories of Multifamily Energy Efficiency Activities, 2009 - 2014

Types of Energy Efficiency Activity Funded (Awards of \$50,000+)	Number of Grants	Total Funded
Advocacy/ Policy/ Stakeholder Engagement/ Relationship Building	16	\$5,088,000
Energy Audits/ Labeling/ Rating/ Decision Making Tools/ Performance Monitoring	4	\$1,081,250
Financing Projects/ Development of Financing Products	9	\$66,825,000
Implement Work Plan and Measures/ Construction Oversight	2	\$700,000
Program Design, Protocols and Administration	43	\$14,946,290
Research/ Creating Tools and Models/ Best Practices/ Peer Exchange/ Technical Assistance/	22	\$6,423,869
Total	96	\$95,064,409

²² ibid.

See Appendix B for a list of the multifamily energy efficiency projects funded from 2009 to 2014. Fund recipients range from think tanks to retrofit service providers.

While a large portion of the foundation funding was in the form of grants, Program-Related Investments (PRIs), which are low-cost loans and equity investments from the foundations' own portfolios at below-market rates, were significant contributors to the financing pools in some projects [like the successful CIC-Elevate initiative described above].

With a PRI, some return on equity or repayment must be provided within a given time frame and must usually provide a modest rate of return through interest or appreciation.²³ Similar to a foundation's grants, PRIs must support organizations, projects, or commercial ventures that fulfill an IRS-recognized charitable purpose. Among the biggest issuers of PRIs are Ford Foundation and MacArthur Foundation.²⁴ They have provided funding to energy finance projects, primarily Community Development Financial Institutions (CDFIs), which then used this funding to leverage other forms of financing for energy loan offerings.

V. Mission-Based Lenders

Mission-based lenders provide financing to under-served markets including the low-income multifamily efficiency sector and accept greater levels of credit risk. Conventional lending institutions can establish mission-based affiliates, just as the Bank of America has three affiliates that made the largest grants and loans in the chart above: Bank of America CDFI Lending, the Global Environmental Group, and the Bank of America Charitable Foundation.

These lenders access capital from the market at favorable terms to provide low-cost financing, including from institutions that are obligated by the Community Reinvestment Act to provide some mission-based lending, but also from others. Examples of Community Development Financial Institutions (CDFI) include: Community Investment Corporation (CIC), National Housing Trust (NHT

²³ See also [MacArthur Foundation description of PRI](#).

²⁴ <http://aceee.org/files/pdf/white-paper/Energy%20Efficiency%20Finance%20Overview.pdf>.

CDFI), and Low Income Investment Fund (LIIF). Mission-based lenders often create innovative financing products that become mainstream over time.²⁵

Table 3. Innovative Energy Efficiency Loans by Mission-Based Lenders			
Mission-Based Lenders	Source of Capital	Loan Products	Multifamily Projects Receiving Mission-Based Loans
Community Investment Corporation (CIC)	Bank of America/ CDFI \$5 million from the John D. and Catherine T. MacArthur Foundation.	CIC Loan Program- 1% interest rate over 10 year term. Grants help support green capacity building including free energy audits, staffing, training, reserves and marketing for smaller CDFIs.	Elevate Energy: Energy Savers Projects
Low Income Investment Fund (LIIF)	Bank of America/ CDFI \$5.5 million	Grant: LIIF Loan Program - 1% interest rate over 10 year term	SAHF roll out some \$8 million in retrofits (\$5.5 million coming from the Bank of America (CDFI) program through Low Income Investment Fund).
National Housing Trust	NHT CDFI	Green Predevelopment and Interim Development Loans: Predevelopment loans finance initial feasibility analysis, appraisals, market studies, environmental studies, due diligence and design studies, etc. Interim development loans bridge the funding gap in acquisitions until more permanent sources of financing can be obtained. Loan Amount: \$50,000-\$500,000; Term: 12-16 months; Rate: 4-5.5% Green Retrofit Loans Green retrofit loans help fund the hard and soft costs related to energy retrofits of existing multifamily affordable housing. Loan Amount: \$50,000-\$500,000; Term: 5 Years with full or partial amortization; Rate: Determined by Loan Committee on case by case basis http://www.nhtinc.org/green_loan_fund.php .	AEON Aeon received the first loan National Housing Trust Community Development Fund's (NHTCDF) Green Loan Fund. To find out more, please listen to NHT's presentation August 2014. Click here for slides and recording.

While they are motivated by the community benefit of their energy efficiency investments as much as by financial returns due to their mission of economic and community development, they screen borrowers closely to avoid risk of poor performance. Table 3 above shows some mission-based lenders' recent innovative energy-related loan products and their sources of their capital.

Whether these sources of capital can design risk-mitigation tools and incentives adequate to attract private lenders and smaller specialized lenders, like credit unions, community development banks and venture capital to this market remains a question.

One of the biggest concerns for lenders is low demand. Lenders will shy away from the energy efficiency market if they remain unconvinced that there is sufficient demand to justify their

²⁵ <http://www.aceee.org/sites/default/files/publications/researchreports/f1401.pdf>, page 7. Also <https://cms.bancvue.com/custom/fi/self-help/fb/disclosure/Multifamily-Issue-Paper.pdf>.

management investment in designing and servicing the energy product. The ACEEE report entitled “Engaging Small to Mid-Size Lenders in the Market for Energy Efficiency Investment” states:

“Lenders should not seek to sell loans for energy efficiency but instead to finance services that consumers already want. Connecting lenders with active participants in the community, including energy audit firms and contractors, could catalyze additional market activity.”²⁶

VI. Emerging Funders and Innovative Financing Mechanisms

Many of the trends and opportunities listed below have future potential to become useful financing mechanisms for energy efficiency when owners and investors become more comfortable with the financing structures and risks of energy efficiency finance.²⁷ We see a general trend of state and utility residential lending programs moving towards a public/private capital model where credit support or interest rate buy-downs support private capital sources.

Green Banking

Four states have established ‘green banks’ that connect state funds to private funds through risk-reducing products or subsidizing interest rates. While state green banks could vary in size and scope, the general concept is that they would leverage both public resources and private sector funds to invest in attractive clean energy and energy efficiency projects.

Connecticut has the first state-wide green bank, a quasi-public corporation combining existing state clean energy, energy efficiency funds and private investment in the bank. A 2012 Brookings Institution-Rockefeller Foundation report²⁸ analyzed the Connecticut model and proposed additions including changing some state housing or energy financing authorities from a grantmaking to a lending model and combining their funds with private funds and adjusting the mission and loan portfolio of an infrastructure bank so as to connect clean energy lending with lending to traditional infrastructure projects.

²⁶ <http://www.aceee.org/sites/default/files/publications/researchreports/f1401.pdf>.

²⁷ Ibid.

²⁸ Ken Berlin, Reed Hundt, Mark Muro, and Devashree Saha, State Clean Energy Finance Banks: New Investment Facilities for Clean Energy Deployment, Brookings Paper, The Brookings Institution, Washington, DC. September 2012.

http://www.coalitionforgreencapital.com/uploads/2/5/3/6/2536821/bookings_paper.pdf.

Socially Conscious/ Responsible Investment Pools

Housing Partnership Equity Trust (HPET) is a social purpose real estate investment trust (REIT) created by the Housing Partnership Network and 12 non-profit housing developers to preserve affordable rental homes for persons of low- to moderate- income. Launched in 2013, the REIT received an initial investment capital pool from Prudential Financial, Inc., Citi, Morgan Stanley, MacArthur Foundation, the Ford Foundation, HPN, and the non-profit members. Crowdfunding has also been picking up steam in part because of the easy access via the internet. Online investment platforms are helpful gathering places for individual investors who want to have a small contribution make a large social impact. These investments are entering the housing market and potentially multifamily housing.²⁹

Energy Services Companies (ESCO) – A New Look

For the past decade, “ESCOs” or private energy services companies have financed some or all of the initial costs of energy retrofits the install in commercial and industrial projects. They are repaid by the owner of the project in amounts that are less than, or no more than equal to, the value of the usage reduction, thereby reducing the owner’s borrowing and risk of poor results. The ESCO becomes the borrower in the financial markets and assumes the obligation. Few of these entities have been interested in serving the residential market, even large multifamily properties, because of the uncertainties in residential customer behavior, the issues involved with facing many tenants as well as the owner and the smaller savings expected.

Recently, a few organizations have developed mission-oriented ESCOs whose motivation is not profit, but rather a sustainable business serving affordable housing and also public and charitable sector property owners. One is involved in a Minnesota project—listed in Table 3— another untested venture is Commons Energy. Based in Vermont, this company is launching its first dozen projects with support from MacArthur Foundation in the form of a long-term multimillion dollar loan made as a PRI.

“Pay for Success”

A related initiative is the HUD [Pay for Success](#) demonstration; it would allow the agency to enter into multi-year agreements to repay private investors who provide upfront funding for energy efficiency

²⁹ <http://www.forbes.com/sites/rodebrahimi/2013/12/12/how-crowdfunding-will-impact-real-estate-investing-an-interview-with-realtyshares/>. Other Examples of real estate crowdfunding platforms include [Kickstarter](#).

retrofits of HUD-assisted housing from the avoided energy or water bills. This is a promising public private partnership concept where government invests in what has demonstrated to work. It is performance based contracting where government pays for proven measured outcomes.

EB5—Loan pool

The [EB-5 program](#) is a federally-authorized visa category created by Congress in 1990. The primary concept is to encourage foreign investment in U.S. economic development projects or companies in return for a U.S. green card. These projects or companies must create or save 10 full-time jobs in the states with a minimum investment of \$1M. This investment can be reduced to \$500K if the investment is made in a high unemployment or rural area. Financing economic development projects requires a careful structuring of several sources, often including bonds, tax credits, loan funds, and other sources. As EB-5 becomes a more prevalent real estate financing source, owners are learning how this investment can work in recapitalization.

VII. Policy Developments

In an environment where housing code changes and government funding awards favor energy efficiency, the case can be made that Weatherization improvements help owners stay ahead of future government regulations.³⁰ Weatherizers should keep an eye on policy changes that could heighten the activity in energy efficiency sector, and have implications for future multifamily employment.

Appraisal Community/ Green MLA

In 2010, the National Association of Realtors launched a “Green MLS Tool Kit,” which oversees the inclusion of energy efficiency and renewable energy improvements in the regional Multiple Listing Service (MLS) databases. In June 2011 the Appraisal Foundation, a key source of national appraisal standards, and the U.S. Department of Energy’s Office of Energy Efficiency and Renewable Energy announced a Memorandum of Understanding (MOU) to work together to create guidelines under the Uniform Standards of Professional Appraisal Practice for green appraisals and energy performance³¹. ENERGY STAR estimates that a 15 percent reduction in energy costs in a 250 unit, master metered

³⁰ <https://cms.bancvue.com/custom/fi/self-help/fb/disclosure/Multifamily-Issue-Paper.pdf>.

³¹ http://www.wsgr.com/publications/PDFsearch/WSGR-EE-Finance-White-Paper_13.pdf.

building can increase asset value by over \$1 million if properly appraised. Property owners would be more willing to make improvements if they lead to an increase in the value of their property.³²

Energy-Savings Insurance

Another emerging product is the use of energy savings insurance. With the government less inclined to make guarantees, this product mitigates the owner's concerns about savings and potentially leads to more work opportunities for WAP agencies. For example, Energi Inc. now offers an "Energy Savings Warranty" intended to backstop savings guarantees provided by ESCOs or other energy efficiency contractors. This product shows promise and could be useful in marketing energy efficiency.

Local Responsible Banking Ordinances

A campaign by [National Community Reinvestment Coalition \(NCRC\)](#) is aimed at getting municipalities to put guidelines on the ways their money is lent out by the financial institutions that hold their money. Local responsible banking ordinances seek to leverage responsible loans, investments, and services from financial institutions receiving municipal deposits and other city business. The ordinances require financial institutions to demonstrate a commitment to serving modest income and minority neighborhoods. Ordinances in places like Cleveland, Philadelphia, Pittsburgh, and New York require banks seeking their deposits to indicate their reinvestment goals and plans for the upcoming year or a multi-year time period. The goals should respond to community needs by setting targets for the loans, investments, and services available in minority and low- and moderate-income neighborhoods. As it stands now, these goals have not extended to multifamily energy efficiency.

Benchmarking and Disclosure Movement

Benchmarking and disclosure regulations require property owners to annually record their building's energy performance and make building energy data available to tenants and the public.

The practice could drive owners to make energy saving upgrades to buildings that lower energy costs for both owners and tenants. A growing number of jurisdictions are adopting some form of benchmarking and information sharing policy.³³ The Institute for Market Transformation calculates

³² <http://www.nrel.gov/docs/fy12osti/54329.pdf> Also http://www.imt.org/uploads/general/Multifamily_Market_Media_Backgrounder.pdf.

³³ [Map of building benchmarking and disclosure as of 3/2014. http://www.imt.org/uploads/resources/files/US_Benchmarking_Map_March_2014.pdf](http://www.imt.org/uploads/resources/files/US_Benchmarking_Map_March_2014.pdf).

that between 2012 and 2035 over 20,000 jobs will be created in the multifamily energy efficiency sector due to benchmarking and disclosure.³⁴

Green Leasing

Green leasing is the practice of incorporating energy efficiency and conservation and information-sharing provisions into a lease. Owners are exploring adding lease provisions to obtain energy use data in individually-metered buildings. LINC Housing Corporation (Long Beach, CA) has lease provision in rental agreements with tenants where residents consent to release their utility bills from utility companies. By monitoring, owners can track savings after an upgrade and also identify where inefficiencies exist.³⁵

Community Reinvestment Act (CRA) Credits for “Green” Investments

In fall of 2013, an article entitled, “How ‘Green’ Investments May Qualify for CRA Consideration” which was posted on the Office of the Comptroller of the Currency (OCC) website stated:

“Loans and investments financing “green” buildings, energy-efficiency improvements, wind farms, solar panels, or other renewable energy systems do not in and of themselves qualify for positive consideration under the Community Reinvestment Act (CRA). Neither the CRA nor its implementing regulations specifically address these types of activities. If a loan or investment (activity) has a primary purpose of community development, as defined in the CRA regulation, however, the activity could receive positive CRA consideration, as long as the national bank’s or federal savings association’s (bank) geographic requirements also are met. An activity is considered to possess the requisite primary purpose of community development if a majority of the dollars or beneficiaries of the loan or investment meet one or more of the enumerated community development purposes.”³⁶

Conclusion

The initiatives summarized in this report indicate that owners of affordable multifamily buildings, whether non-profit organizations, private corporations or government agencies, have growing access to energy upgrade information they can use. Many will soon have access to reduced-cost financing for energy efficiency investments.

One resource that has not been fully integrated into their models, nor into financing nor most residential energy retrofit contracting is the Weatherization Assistance network workforce; neither the

³⁴ http://www.imt.org/uploads/resources/files/Analysis_Job_Creation.pdf.

³⁵ See the [green lease library](http://www.greenleaselibRARY.com/) maintained by the Institute for Market Transformation for more information <http://www.greenleaselibRARY.com/>

³⁶ <http://www.occ.gov/publications/publications-by-type/other-publications-reports/cdi-newsletter/wind-energy-fall-2013/wind-energy-ezine-article-5-green-investment-cra.html>

local delivery agencies nor their contractors have been identified as high-value partners by advocates of multifamily retrofit strategies. Conversely, few Weatherization providers are contacting their local non-profit housing developers or public housing authorities to offer education and their participation as a contractor or subcontractor in a retrofit and rehabilitation project.

Building owners' need for knowledgeable technical teams with the shared mission of improving and preserving low- and moderate-income housing could not be more urgent. The convergence of knowledge, skills and interest developed in the Weatherization Assistance Program and the additional capacity the program's agency network added from 2010 to 2013 can be the synergistic basis for excellent projects that leverage the value of federal investments in service of preserving efficient, safe and healthy affordable homes.

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APPENDIX A

Weatherizers' Action Guide to the EOS Multifamily Partnerships Report

This companion to “Building Energy Efficiency Partnerships for Affordable Multifamily Housing: 2015 and Beyond” is an action guide for Weatherization Assistance Program [WAP] leaders; it summarizes how each section of the report can be used as a tool to build retrofit partnerships and projects with owners of and investors in low- and moderate-income multifamily buildings.

Introduction – DOE/WAP Practice v. New Approaches to Low- and Moderate– Income Multifamily Buildings

The Weatherization programs’ conventional model for delivering services to multifamily buildings is to work in individual units and deliver the measures funded by WAP, perhaps with added measures funded by utility or state programs. Only a minority of WAP multifamily projects include significant upgrades to the building shell or central systems. Although some landlord contribution is generally required, only a few WAP projects attract truly significant owner funding. Further, few WAP projects are undertaken as part of a building’s full rehab job as opposed to being scheduled as stand-alone energy upgrade projects.

One under-examined option is for WAP agencies to work as independent contractors or subcontractors and install efficiency and health/safety measures financed entirely by the owners of affordable multifamily buildings. A number of WAP organizations have demonstrated the feasibility of offering their services as contractors without forming a separate corporation. Of course, some multifamily buildings may qualify as excellent WAP projects depending on the technology and fuels they use. Many will need work beyond that allowed by WAP restrictions.

Many WAP agencies can ‘piggyback’ utility or state LIHEAP funding with owners’ investments instead of, or in addition to, piggybacking with WAP.

The report introduces several events and trends that are creating significant financing for upgrading and preserving affordable housing projects that are steering owners in the direction of energy efficiency investments. This Appendix suggests uses for the information.

The Important ‘Take-Aways’ In:

Section I. Building Owners’ Essential Role

The section describes the rapid evolution of owner interest in energy efficiency and of sophisticated educational materials available to them and to you from the housing advocacy community. As noted on pages 4-5, research shows it is important for multifamily building owners to have information they can understand and rely on about the buildings’ energy saving

options. A working knowledge of other useable resources, from utility rebates and state technical assistance to tax benefits, are an important addition to the information you provide potential partners. Building analysis, communication and high-quality service delivery are familiar Weatherization roles. USE THIS to develop a package of the materials that meet their information, energy analysis and job planning needs before you reach out to market your team.

Several factors are creating a much larger market of affordable housing owners demanding upgrades, including energy upgrades. On pages 3-4 we explain that a growing number of buildings have expiring¹ affordability contracts, creating a market for rehab and retrofit projects and workers. USE THE LINK to our data base with every property listed by address to find those near you and their owners. [We recommend the short instructional video we created to save you time finding your potential partners.]

Section II. Government Policy and Owners' Energy Retrofit Resources

Some important public policy changes should make more low cost financing available for retrofits.

A HUD initiative is providing different financing options to owners of over 200,000 affordable units, primarily, but not exclusively, in Public Housing. USE THIS information on pages 7-8 to learn how that financing works and then link to the list of selected owners and projects to find the ones near you that may need energy experts and a workforce that knows what it is doing.

[Not well-connected to the Public Housing Authority? Dubious?

Many weatherization experts think weatherization agencies are missing an ongoing opportunity to serving their areas' public housing authorities. Most projects' buildings are low rise and have technical requirements very familiar to all WAP providers. Further, all public housing agencies must undertake 'capital needs assessments' as a requirement of their HUD contracts.

Numerous Weatherizers have found that the technical requirements of both the retrofit jobs and the capital needs assessment are well matched to WAP teams' skills. Most WAP agencies are CAAs or housing organizations and have local officials on their board of directors who are likely to be able to facilitate at least a conversation with your public housing authority. Reconsider reaching out.]

Pages 8-9 describe some smaller initiatives that may affect your region and also some future policy changes under consideration by national and state agencies that will force more investment in sustainable buildings, including energy efficiency. USE THIS to locate more potential partners with funding OR to get involved in encouraging policy changes that will put financing behind multifamily weatherization.

¹ **Expiring Use Properties-** Contractual obligations stipulating restrictions on rent levels, tenant eligibility, and overall operations of a property lasting only for a specified period of time. Many of these contracts have a renewal option.

In sum - the efficiency financing landscape is changing so quickly that it is unfamiliar to many experienced multifamily building owners and managers. You can help them.

Section III. Utility Efficiency Programs

Weatherizers are very familiar with today's utility low-income efficiency programs.² However, there are very few that support whole-[multifamily] building investments. USE THIS MATERIAL to compare your utilities' offerings to the few robust programs in place and to advocate for better support for the multifamily sector.

This section of the report also describes a new campaign at the state level led by National Housing Trust with local affordable housing groups and their funders to win new utility commitments to fund low- and moderate- income multifamily properties. USE THIS INFORMATION to find these advocates in your state and design mutually compatible utility programs that result in more funding going to all kinds of low- and moderate- income housing, not in a competition between low-income programs.

Section IV. New Private and Philanthropic Financing: Foundations and

Section V. Mission-Based Lenders

The foundation funding tables we provide [Table #1 and #2 and Appendix B] are intended to de-mystify the conversation about philanthropic grants to energy efficiency projects. There are a few large funders heavily invested in the field which are testing ways to make borrowing less costly and less risky for owners of affordable housing and their lenders. The key point is that the philanthropic community is providing significant support to the affordable multifamily energy efficiency sector in hopes of demonstrating arrangements that private lenders can emulate. A few large housing groups are engaged in the tests. Most of the grants and program-related investments have been fully allocated. USE THIS ANALYSIS TO a) identify housing organizations with access to the financing near you, if any, and other winning projects and find out what skills your organization can help them with, b) as results are published later, to make proposals to your local and regional foundations that replicate successes and c) as a reality check on rumors about the size and availability of grant funding.

The information on mission-based lenders' initiatives and Table 3 point out how financial institutions your organization may regularly deal with are being introduced to energy efficiency lending. USE THIS INFORMATION to find out if a credit union, CDFI or the foundation of a major commercial bank you engage with now might enter the field; if so, can you offer loan officers your team's technical energy expertise about good projects? Can you find and bring them owners in need of financing who will become your project partner?

² EOS maintains a collection of information on how WAP-utility partnerships are developing and performing and we are adding new material on multifamily projects. Visit our website www.weatherizationplus.org or, better, [email us](#) to help pinpoint useful material.

Section VI. Emerging Funders and Innovative Financing Mechanisms and

Section VII. Policy Developments

The first of these sections defines a number of limited but promising initiatives that, if successful, could create large loan pools for credit-worthy building owners. USE THIS INFORMATION to gain perspective on the promise and timing of several experiments that are widely discussed in efficiency professionals' circles.

The policy developments listed either could create or already have created more demand for retrofits and more capital for owners to use. Among the changes listed, the last four on pp. 19-20 may give you ideas for 1) your engagement in a campaign for change - such as winning local bank lending ordinances and/or 2) using new ways to access Community Reinvestment Act funds for energy measures and/or 3) providing technical help to building owners who must, or want to, track and report usage. USE THIS AS A MENU to help you look for today's policy campaigns you want to join or for approaches to lenders who may finance retrofit projects or to owners who may need your technical skills to implement a new policy.

Conclusion:

Weatherizing units only in large buildings is unlikely to have the energy impact Weatherization produce in single and small multifamily buildings. Apartments in 5+ unit buildings use less than half as much energy as single family detached homes in the same region. [See our comparison in each region [here](#).]

Most of the resources identified in our paper could be delivered in coordination with WAP services, but the limitations on administrative costs for non-WAP measures, eligibility issues affecting the core building measures and owner preferences for certain techniques or measures may make a combined package unattractive or even impossible for some owners.

As WAP-trained and experienced specialists, your team is attractive as a technical and delivery partner. Knowledge of the developments described in this report could add to your value as a financing consultant and project developer. Adding your reputation and policy skills to campaigns that matter to owners, such as advocacy for utility programs, also adds to the value of their partnership with your team.

Appendix B - Foundation Energy Efficiency Multifamily Funding

Link to these online tables:

TABLE 1: Funding Organized by Recipient

<http://www.opportunitystudies.org/Foundation/index.html>

TABLE 2: Funding Organized by Funder

<http://www.opportunitystudies.org/Foundation/funder.html>

TABLE 3: Funding Organized by Activity (Advocacy)

<http://www.opportunitystudies.org/Foundation/advocacy.html>

TABLE 4: Funding Organized by Activity (Decision Tools)

<http://www.opportunitystudies.org/Foundation/decision-tools.html>

TABLE 5: Funding Organized by Activity (Financing)

<http://www.opportunitystudies.org/Foundation/financing.html>

TABLE 6: Funding Organized by Activity (Implementing Work)

<http://www.opportunitystudies.org/Foundation/implementing-work.html>

TABLE 7: Funding Organized by Activity (Program Design)

<http://www.opportunitystudies.org/Foundation/program-design.html>

TABLE 8: Funding Organized by Activity (Research)

<http://www.opportunitystudies.org/Foundation/research.html>

Appendix C – 2014 Utility Financial Incentives for Multifamily Housing

Link to these online tables:

TABLE 1: Grants

<http://www.opportunitystudies.org/leveraging/fee-for-service/>

TABLE 2: Loans

<http://www.opportunitystudies.org/2014/10/08/utility-financial-incentives-for-multifamily/>

TABLE 3: Rebates

<http://www.opportunitystudies.org/2014/10/06/utility-state-financial-incentives-for-multifamily-building-retrofits/>