

Financing Energy Efficiency Retrofits of Affordable Multifamily Buildings

Jack Markowski

Community Investment Corporation

Anne Evens

Elevate Energy

Matt Schwartz

California Housing Partnership Corporation

Apartment buildings are home to more than 17 million households nationwide, yet they remain a significant and mostly untapped opportunity for energy efficiency gains. Energy efficiency upgrades in multifamily buildings could save building owners and residents up to \$3.4 billion annually.¹ Many cities and states that have embraced energy retrofitting as a job creator and boon to both the environment and economy have yet to address potential savings in multifamily properties, primarily because of obstacles not faced by single-family and commercial properties. The need for multifamily energy retrofits is clear, but two barriers—a lack of information and financing—stand in the way.

Before a retrofit program can be effectively marketed, financed, and implemented, there is an information gap to close. First, it is necessary to determine how much retrofit measures cost, how much they save, and whether they are cost-effective. Accurate estimates on the payback period also inform loan underwriting. To ensure that the retrofits result in predicted savings, programs must identify qualified contractors, monitor construction quality and costs, and confirm savings.

Even if a program addresses the information gap, financing energy efficiency improvements in the multifamily market remains a challenge. Stakeholders, including both subsidized and unsubsidized building owners, lack access to capital for retrofits. When financing programs are available, most lenders will not consider future energy savings in loan underwriting, thereby limiting the size and sometimes the availability of a loan. Challenges are exacerbated in the subsidized multifamily housing market, as properties face very long refinancing and rehabilitation cycles and complicated, multilayered financing structures.

Improving the energy efficiency financing options for a wide range of affordable multifamily buildings will require a multipronged approach to address information and financing barriers. One tool that can help, especially in the subsidized multifamily market, is on-bill

1 Anne McKibben et al., “Engaging as Partners in Energy Efficiency: Multifamily Housing and Utilities” ACEEE report no. 122. (Chicago: CNT Energy and American Council for an Energy Efficient Economy, January 2012). Available at http://www.elevateenergy.org/wp-content/uploads/2014/01/Engaging_as_Partners_in_Energy_Efficiency_Multifamily_Housing_and_Utilities.pdf

repayment, in which building owners repay loans for eligible energy efficiency improvements through monthly utility bills. Partnering with local utilities to implement on-bill repayment allows stakeholders to capitalize on existing billing systems as a repayment mechanism. Although working with utility companies is not the only path to efficiency in the multifamily market, on-bill repayment can complement existing private programs by capturing savings not otherwise available and providing alternative financing options.

This paper reviews the challenges facing the multifamily housing energy efficiency market and the opportunity that tools such as on-bill repayment provide to finance energy efficiency retrofits for the subsidized affordable multifamily market.

The Multifamily Market is Difficult to Serve

The first challenge to overcome in financing energy efficiency improvements in the multifamily market is an information gap. Before financing a retrofit, it is vital to have accurate information about what retrofit measures the building needs, the cost of a retrofit, and the savings that will result. A qualified contractor must properly install the retrofit measures, and someone should verify savings are achieved after the retrofit is complete.

Complete and accurate data about retrofits also help to overcome resistance from building owners. Some owners, especially owners of small to mid-sized buildings, may not have a strong grasp of their retrofit needs and may not believe a retrofit will result in significant savings. Even for owners who complete a retrofit, building engineers may not always operate the new equipment at optimal levels, and buildings do not maximize their energy savings.

Even when multifamily owners do understand the importance of retrofits—especially owners of subsidized properties where rents, cash flow, and reserves are restricted—many lack the capital to cover the cost of a whole building retrofit. Although the per-unit cost of a retrofit can be small (typically between \$2,500 and \$5,000), the total cost can quickly add up to several hundred thousand dollars. Whether the building is subsidized or part of the private market, the cost of a comprehensive retrofit often exceeds the amount of cash an owner has on hand.

Lacking their own capital, multifamily building owners need access to financing. Many owners plan building improvements to coincide with a larger refinance, so that the cost of rehab can be incorporated into the new loan. Yet, a vast majority of lenders do not underwrite the post-retrofit energy savings into projections of operating costs, which may prevent an owner from investing in a retrofit. Without underwriting to the post-retrofit savings, some buildings cannot support the additional debt from the retrofit. Moreover, although many private building owners refinance every 7 to 10 years, the period between major property renovations is generally longer for government-assisted housing, and can be as long as 20 to 30 years. To avoid waiting decades to make energy efficiency improvements, owners need access to loans between refinancing cycles.

Although financing for multifamily energy improvements may be available between refinancing cycles, some properties may not be able to access it. Programs that provide financing for multifamily retrofits typically secure a retrofit loan by recording a lien against the property. If other liens are already in place, the retrofit lien will take a subordinate position. This poses a challenge for some market-rate buildings and most subsidized buildings. For buildings that already have liens, owners must seek permission from senior lenders to add a subordinate lien against the property. Buildings with loans backed by Fannie Mae, Freddie Mac, and FHA generally prohibit subordinate liens as a matter of policy. Many subsidized buildings fall into this category. Even subsidized buildings that do not have loans backed by these institutions face the daunting challenge of seeking approval from multiple lienholders, as assisted buildings typically have many layers of financing.

Looking to a subordinate lien for security also presents a problem for would-be lenders in retrofit loan programs. By definition, a subordinate lien means it will get paid after the more senior liens. As a result, most private lenders do not consider a subordinate lien a secure investment, and typically do not finance smaller retrofit loans outside larger transactions. Similarly, most lenders will not invest in a pool or program for smaller retrofit loans, absent significant loan loss reserves and “soft” investments from government or philanthropy. Although multifamily retrofit programs have proved successful in some markets in achieving significant energy savings and low default rates on loans, the track record on multifamily retrofit financing is too short to assure most lenders of the security of this type of loan. This constrains the availability of private capital for smaller retrofit loans.

Another reason the multifamily market is difficult to serve is because of the split incentive barrier. When utility payments are divided between the building owner and the tenants, the benefits of energy savings are also split. When gas and/or electricity are individually metered, residents benefit from the savings that result from energy efficiency investments that the owner paid for with capital improvements. Thus, the owner’s incentive to invest is reduced.

Overcoming Barriers to Retrofit Multifamily Buildings

Despite the challenges facing the multifamily retrofit sector, some energy efficiency programs find success. A case in point is Energy Savers, a Chicago based energy efficiency program for owners of multifamily buildings, run in partnership by Elevate Energy (formerly CNT Energy) and Community Investment Corporation.

Energy Savers features an innovative one-stop shop. Program staff guide a building owner through every step of the retrofit process, starting with a building assessment. Elevate Energy identifies cost-effective improvements, which can include air sealing and insulation, and HVAC systems replacement and optimization. The building owner receives a report indicating the cost and payback schedule of each measure. As part of the turnkey program, Elevate Energy connects building owners with available utility rebates and incentives, and even completes the rebate applications on behalf of the owner. The Community Invest-

ment Corporation offers financing and incorporates projected energy savings into the underwriting. Elevate Energy connects owners with prequalified contractors, oversees construction, and verifies the savings after the retrofit is complete.

Since the program launched in 2008, owners have retrofitted more than 17,500 apartments. Building owners who implement all or most of the recommended energy efficiency measures through Energy Savers commonly see a 30 percent savings on natural gas use. The retrofits help preserve affordable housing, create local jobs, and reduce greenhouse gas emissions.

As part of the program, Community Investment Corporation provides low-cost financing to building owners, underwriting the projected energy savings and structuring the loan to allow for quick payback from the savings generated by the retrofit. Although nearly two-thirds of property owners have financed retrofits using their own resources, based on information provided in the energy assessment, the Energy Savers Loan Fund has provided loans and grants to buildings with nearly 7,000 units totaling more than \$14 million. None of the Community Investment Corporation loans are in default. Energy Savers loans are secured by a second mortgage, and most are small, with a low interest rate of 3 percent, which is attractive to property owners.

The interest rates are low because of strong loan loss reserves and strong investments from both government and philanthropic sources. The Energy Savers Loan Fund was originally funded with a \$1 million program-related investment from the John D. and Catherine T. MacArthur Foundation, a \$1 million grant from the Grand Victoria Foundation, and \$1.25 million from Community Investment Corporation. Building on the program's success, the Community Investment Corporation expanded program resources with an additional \$5 million program-related investment from the MacArthur Foundation, \$8 million from Bank of America, and \$3.5 million in loan loss reserves from local and federal government sources.

Of the identified challenges facing multifamily retrofits, Energy Savers helps bridge the information gap, addresses access to capital, and incorporates energy savings into loan underwriting. However, the program could reach an even broader, untapped market if it were to address additional barriers.

The primary challenges facing the Energy Savers program are:

1. Inability to finance retrofits for buildings whose senior lenders or investors will not grant permission for subordinate liens. This includes loans backed by Fannie Mae, Freddie Mac, or FHA, and also includes subsidized properties with multiple layers of financing. Owners of these types of buildings are generally unwilling to accept personal recourse for loans made to their buildings.
2. Identifying future sources of capital for the Energy Savers Loan Fund. To date, socially motivated investors have provided the capital for the loan fund. To truly reach scale, market rate capital is needed.

On-Bill Repayment: A Promising Tool to Unlock Private Capital

A relatively new tool, on-bill repayment, has the potential to overcome many of the barriers to unlocking private capital. On-bill repayment provides convenient access to capital, reduces the cost of financing, and uses an existing billing relationship between consumers and utilities.

The major structural advantage of on-bill repayment is that it eliminates the need to secure a loan on the property, which in the case of multifamily buildings has generally already been claimed as security by lenders and sometimes other parties. Because payments on the utility bill can be limited to the estimated amount of savings, properties can use the energy savings to finance retrofit work without increasing monthly payments, thus leaving intact covenants and other promises made by the owner regarding cash flow. Since on-bill repayment is technically a utility charge, it does not require a lien on the property, thus saving owners the significant time and hassle of seeking approval of senior lienholders before proceeding with the energy retrofit. A structural advantage of on-bill repayment over its close cousin, on-bill financing, is that it deploys private capital, thus stretching rate-payer and state funding to help scale up retrofit programs. On-bill financing, in contrast, requires utility companies to use their own closely regulated capital.

The simplicity of securing repayment on a utility bill has the potential to attract both new interest among multifamily owners and new sources of capital. When loan payments are attached to the utility bill and sized to be no greater than the projected cost savings, they can be assumed to reflect the track record of the owner's utility bill payments. Given the extremely low rates of default on utility payments among multifamily owners, these loans have the potential to attain a greater level of security than a retrofit loan secured only by a subordinate mortgage. When utility companies also provide a guarantee or loan-loss reserve for a retrofit financing program, the security is even greater, potentially allowing a lender to leverage even more, and less expensive, private capital.

The biggest potential advantage of on-bill repayment is that it can tap the savings from both owner and tenants' meters in the large number of multifamily buildings where tenants pay a share of the utility costs. In this way, on-bill repayment has the potential to solve the split incentive barrier. It is a best practice of on-bill repayment programs for repayments to be bill neutral, so that the payments are less than the savings from the retrofit, ensuring that tenants still save money on their utility bills. However, in most states, legislation is needed to authorize the use of on-bill repayment on tenant meters along with strong consumer protections to avoid tariffs exceeding annual savings. Without the protection of bill neutrality, tenant advocates would correctly raise the concern that owners claiming savings from tenant-paid utilities for on-bill repayment could be increasing net utility costs to tenants.

Piloting an On-Bill Repayment Solution in California

In developing new energy efficiency financing programs to meet the needs of the underserved low-income housing sector, the California Housing Partnership Corporation and national partner Stewards of Affordable Housing for the Future designed the Ratepayer Integrated On-Bill Payment Program (RIOPP). This innovative pilot offers a complete package of integrated energy efficiency financing tools tailored to the specific needs of low-income, multifamily rental properties for performance-based, whole-building energy retrofits.

Inspired in part by the success of the Energy Savers program, the RIOPP model depends on the implementation and integration of two key elements:

1. A single point of contact to access utility energy efficiency programs, and
2. An on-bill repayment mechanism.

Although utility incentive programs are vital to expanding energy efficiency retrofits into the affordable multifamily housing sector, they are generally administered independently of each other within each utility company, which greatly complicates the process of efficiently combining their benefits. RIOPP acts as a one-stop shop that helps building owners cut through the confusion of multiple utility programs and arranges for third-party on-bill repayment financing.

A Prototype for a One-Stop Shop Approach

The demonstration project at LINC Housing's City Gardens Apartments is a compelling example of how on-bill repayment can serve California's affordable multifamily market, which faces many of the barriers discussed above. To demonstrate the effectiveness of RIOPP's one-stop shop approach in California, the California Housing Partnership and Stewards of Affordable Housing for the Future worked with nonprofit building owner LINC Housing to facilitate a whole-building retrofit of the 274-unit City Gardens Apartments with the cooperation of key program managers from Southern California Gas and Southern California Edison.

Constructed in 1969, City Gardens is composed of 27 two-story buildings spread across nearly 12 acres in Santa Ana, California. The units are a mix of studio, one-, and two-bedroom apartments, master metered for gas and water. The last major renovation of this former Low Income Housing Tax Credit property was performed in 1996, although LINC replaced seven of the eight hot water boilers in the early 2000s, significantly reducing the potential for energy savings from the RIOPP demonstration retrofit in 2013.

Nonetheless, calculations using the energy audit report generated from the Fannie Mae Green Refinance Plus Green Physical Needs Assessment Protocols² show that using only

² The Fannie Mae Green Refinance Plus: Green Physical Needs Assessment Statement of Work and Contractor Qualifications. <https://www.fanniemae.com/multifamily/green-initiative-financing>.

savings generated from improvements to the owner-paid utilities, the whole-building retrofit is projected to reduce annual energy and water cost by 23 percent. The retrofits range from weather stripping to a solar domestic hot water system to irrigation improvements.³ Table 1 is a summary of the type and cost of each retrofit measure, as well as projected savings.

Table 1. Costs and Type of Retrofits in City Gardens Apartments

Energy Conservation Measures Installed at City Gardens	Value of Rebate and/or Direct Install Measures	Measure Costs After Rebates	Projected Annual Owner Savings Post-Retrofit	Projected Annual Tenant Savings Post-Retrofit
Electricity (lighting measures)	\$64,378	\$18,736	\$9,360	\$17,026
Gas and water (solar domestic hot water and ESAP measures in non-income-eligible units, low flow plumbing fixtures, irrigation, etc.)	\$332,597	\$199,283	\$47,911	\$0
Totals	\$396,975	\$218,019	\$57,271	\$17,026

Table 1 shows that after accessing all available utility incentives, LINC was left with a gap of \$218,019 to complete the retrofit. RIOPP staff was able to demonstrate to the California Public Utilities Commission that LINC could afford to finance the remaining retrofit cost through on-bill repayment.

The total amount to be financed was \$253,821, which included the \$218,019 total cost after rebates, a \$14,000 loan servicing fee, and a 10 percent overhead fee to LINC.

Table 2: Maximum Possible Loan Amount

Term	10 years
Interest rate	4.1%
Annual energy savings	\$57,271
Debt service coverage ratio	1.10
Amount available for annual debt service	\$52,065
Maximum loan amount	\$426,530
Per unit	\$1,557

³ A full picture of post-retrofit performance at City Gardens will not be available until May 2014. However, usage data to date suggests that City Gardens is on track to achieve higher-than-projected cost savings.

Table 2 shows that using only the savings from owner-paid utilities, there is more than enough savings to finance the measures not covered by utility incentives.

In September 2013, the Public Utilities Commission authorized the California Housing Partnership Corporation to proceed with a pilot offering on-bill repayment to up to 5,000 units of low-income multifamily rental housing, based in large part on the RIOPP demonstration at City Gardens.

On-Bill Repayment Is Not a One-Size-Fits-All Mechanism

There are several other examples of on-bill repayment programs that show promise for the future of financing energy efficiency improvements in the affordable multifamily housing market. But it is important to keep in mind that these mechanisms will vary significantly by state because of variations among utility systems, state regulations, utility products, and consumer lending.

Conclusion

Millions of people living in multifamily buildings nationwide could benefit from energy efficiency improvements. The need is clear, but two key barriers stand in the way: lack of information and financing. Some energy efficiency programs, like Energy Savers, have managed to overcome these retrofit barriers with impressive results. Yet even this successful program faces challenges related to security and capital. Not only can on-bill repayment help overcome these challenges, but it creates an opening for financial institutions and investors to potentially enter the underserved multifamily retrofit market. Leveraging on-bill repayment makes energy efficiency financing a more attractive investment, and it is a valuable tool that can be integrated into both new and existing retrofit programs that need financing options to reach scale.

Jack Markowski is the president of Community Investment Corporation, a nonprofit mortgage lender that provides financing to buy and rehab multifamily apartment buildings with five units or more in the six-county metropolitan Chicago area. As president, Markowski oversees the most important source of loans for the rehabilitation of multifamily residential buildings in the Chicago region.

Anne Evens is the CEO of Elevate Energy, a nonprofit organization whose mission is to provide smarter energy use for all. As CEO, Evens provides oversight for programs related to energy efficiency retrofits in multifamily buildings, energy performance of commercial and residential buildings, regional energy and climate planning, as well as smart grid and dynamic electricity pricing initiatives.

Matt Schwartz is president and CEO of the California Housing Partnership Corporation, a private nonprofit organization that assists nonprofit and government housing agencies to create and preserve housing affordable to lower-income households, while providing leadership on housing preservation policy and funding. As president, Schwartz assists local government and nonprofit organizations with the preservation and creation of affordable housing through policy advocacy, technical assistance and training.