

Utilities and Community Developers Partner to Improve the Energy Efficiency of Affordable Rental Housing Nationwide

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Improving the energy efficiency in homes is an important strategy for reducing poverty's impact on low-income families. Low-income individuals and families spend a disproportionate share of their income on utility bills, and energy costs are one of the highest operating expenses in residential housing.

Correspondingly, the benefits of efficiency investments in low-income housing include higher net discretionary income for poor households, a more stable affordable housing stock, and healthier living environments. These outcomes directly affect the quality of life of disadvantaged families as well as the physical and economic resilience of low-income communities.

The challenge before the community development field is how to finance efficiency improvements in affordable housing at a scale that maximizes the benefits for low-income families and communities. In this article, we analyze the role the nation's utilities can play in helping to finance efficiency improvements in multifamily affordable housing. Although public resources have been shrinking, the utility sector is playing a significant and increasing role in funding efficiency improvements in existing and new buildings. As utility energy efficiency resources grow, the community development field is faced with an important opportunity to ensure that funding is effectively targeted to multifamily affordable housing, where most low-income families reside. Seizing this opportunity requires developing new and creative cross-sector partnerships with utilities, their regulators, and influential energy efficiency allies. Bringing the affordable housing and energy efficiency sectors together can be a challenge, but, as the case studies in this article make clear, it can be achieved, with significant benefits for low-income communities.

Utilities' Role in Energy Efficiency

Utility customers in many areas of the United States have had access to financial incentives, such as rebates and loans, to improve energy efficiency for more than three decades. During the last 10 years, utility spending on energy efficiency nationwide has tripled (see Figure 1). It is estimated that utilities spent approximately \$7 billion on energy efficiency in 2011. According to the Department of Energy, this number could reach as high as \$16 billion annually by 2025.

Figure 1: Annual eElectric and Natural Gas Energy Efficiency Spending or Budgets

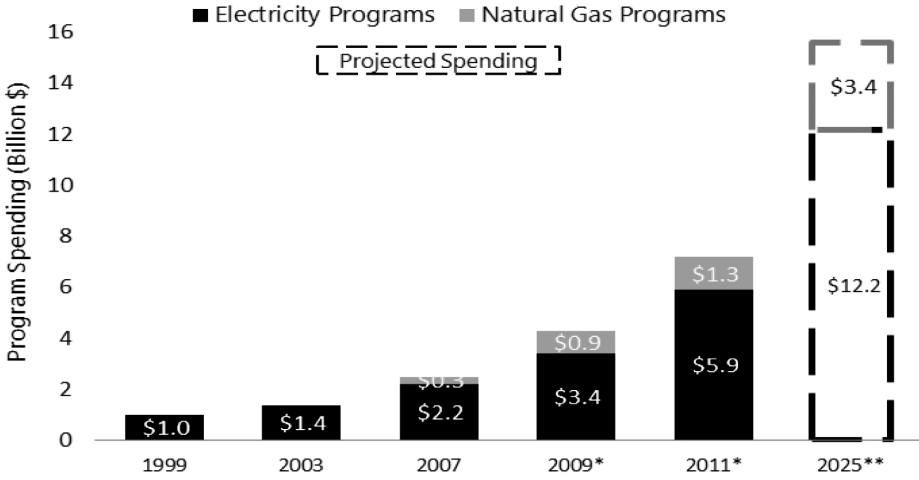


Figure 2: States with Energy Efficiency Resource Standards

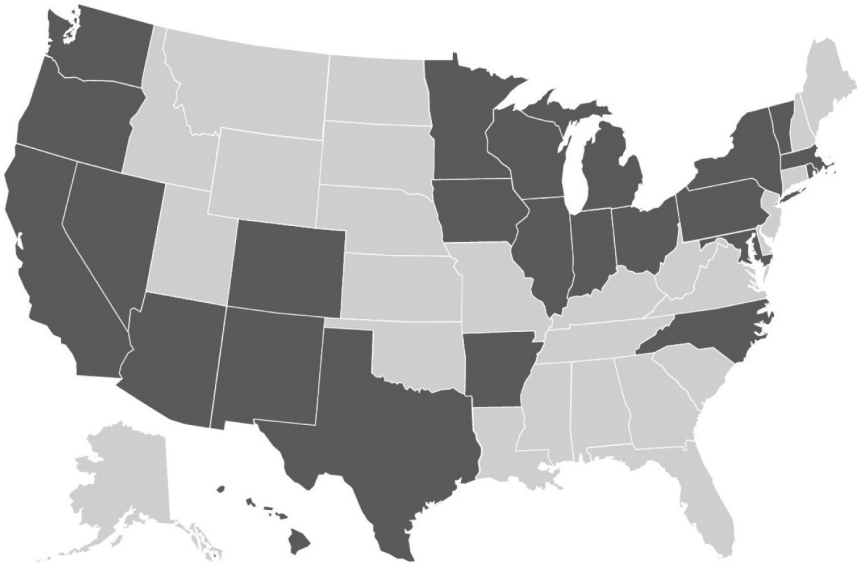
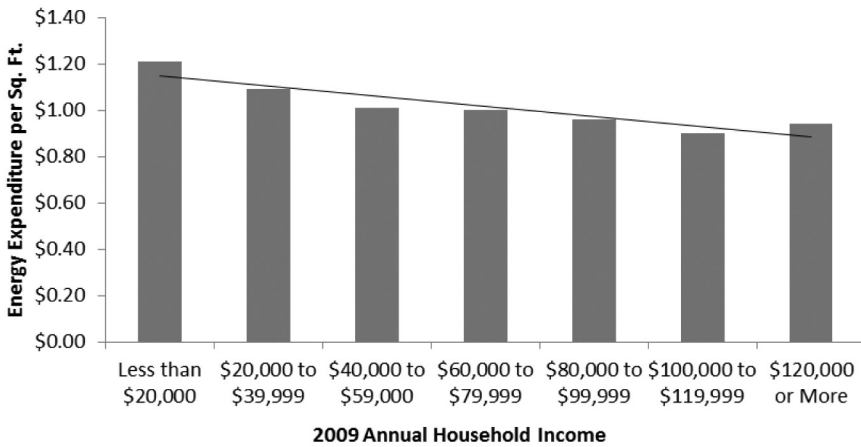


Figure 3: Household Energy Expenditures per Square Foot and Household Income Level



The common driver of this spending is the recognition among state legislators, regulators, and utilities that meeting the nation’s energy demand by saving energy through efficiency improvements is more cost-effective than investing in new sources. State legislatures in 24 states have enacted policies called Energy Efficiency Resource Standards (EERS) that establish high, specific energy savings targets through improved building efficiency (see Figure 2).¹ Many other states without such specific policies have greatly increased their commitments to energy efficiency programs in order to achieve the environmental and economic benefits that result from these investments.

Why Focus on Multifamily Rental Housing?

Spending on energy efficiency has not been focused on multifamily rental housing. On average, multifamily rental homes have fewer energy savings measures than any other type of housing.² With nearly one-half of all very low income renters residing in multifamily housing, the failure to reduce energy consumption adversely affects the families least able to afford high energy bills.³ As seen in Figure 3, energy expenditures per square foot of living space are correlated with household income level.⁴ Households with annual income less than \$20,000 spend proportionately more on energy per square foot than households with higher incomes.⁵

1 Foster, Ben, et al., *The 2012 State Energy Efficiency Scorecard* (Washington, DC: American Council for an Energy Efficient Economy, 2012).

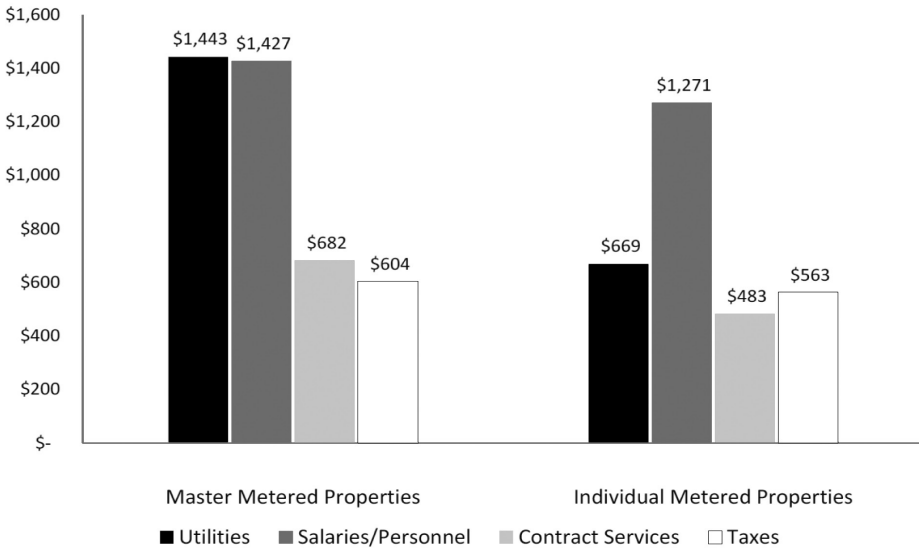
2 Gary Pivo, “Energy Efficiency and its Relationship to Household Income in Multifamily Rental Housing” (Washington, DC: Fannie Mae, 2011). Available at https://www.fanniemae.com/content/fact_sheet/energy-efficiency-rental-housing.pdf.

3 Ibid.

4 National Housing Trust analysis of the U.S. Energy Information Administration’s Residential Energy Consumption Survey “Table CE1.1 Summary Household Site Consumption and Expenditures in the U.S. - Totals and Intensities, 2009.”

5 Ibid.

Figure 4. Top Four Categories of Operating Expenses per Unit in Master and Individually Metered, Subsidized, Multifamily Housing



The lack of energy efficiency measures in multifamily rental housing has real consequences for the families and communities that rely on affordable housing. As seen in Figure 4, Utility costs are the largest operating expense in subsidized rental buildings that are master-metered and the second largest expense in individually metered, subsidized, multifamily buildings.⁶ Reducing operating expenses in low-income multifamily buildings frees up capital for the owner that can be used for maintenance repairs and other necessary improvements while keeping rents affordable.

Energy Retrofits Lead to Better Health for Residents, a Better Environment, and Jobs

When the National Housing Trust (NHT) began its engagement with utilities in various states, described in more detail below, it initially approached the work strictly from an affordable housing perspective. Over time, NHT came to realize that there were other, equally important benefits for residents and their communities that resulted from its work.

The benefits of energy efficient, affordable housing extend beyond lower utility costs. More efficient housing has been shown to improve health outcomes for residents. The retrofit of Viking Terrace in Worthington, Minnesota, for example, resulted in measurable

⁶ Lee, Christopher, 2012 Survey of Operating Income & Expenses in Rental Apartment Communities [Executive Summary] (Arlington, VA: National Apartment Association, 2012).

decreases in certain ailments for both young and old residents.⁷ A study by the National Center for Healthy Housing found that the incidence of specific medical conditions decreased, including:⁸

- Ear infections in children from 15 percent to 4 percent
- Adult chronic bronchitis from 10 percent to 0
- Asthma in adults from 12 percent to 4 percent and
- Respiratory allergies in children from 15 percent to 4 percent.

Moreover, improving the energy efficiency of affordable housing results in a significant reduction in carbon emissions that would otherwise negatively affect the community. According to the U.S. Department of Energy, weatherizing a low-income home reduces residential and power plant emissions of carbon dioxide by 2.65 metric tons per year.⁹ Accordingly, improving the efficiency of 100-unit apartment building reduces carbon emissions by 5,200 metric tons over a twenty year period, equivalent to annual greenhouse gas emissions from 1,100 passenger vehicles.¹⁰

Finally, energy efficiency is a job creator. According to the American Council for an Energy Efficient Economy (ACEEE), investing in energy efficiency creates more local jobs than a comparable investment in energy production and distribution.¹¹ Jobs created through efficiency investments include the installation or maintenance of equipment locally. In addition, consumer savings from lower energy bills is more often than not spent locally on products or services, which in turn affects local businesses and jobs.¹²

Breaking through Barriers by Engaging Key Stakeholders

During the last two years, NHT has been engaging with utilities and other stakeholders in eight targeted states (Colorado, Minnesota, Illinois, Michigan, Ohio, Pennsylvania, Rhode Island, and Maryland) to advance multifamily energy efficiency funding through utility efficiencies. The objectives are to:

- Explore barriers to cost-effective energy efficiency improvements;
- Demonstrate the potential for energy savings in the multifamily housing stock;

7 Enterprise Community Partners and the National Center for Healthy Housing (2010). "Case study: Creating green and healthy affordable Homes for families at Viking Terrace, Worthington, Minn." Available at: <http://www.enterprisecommunity.com/resources/ResourceDetails?ID=67397.pdf>.

8 Ibid.

9 U.S. Department of Energy, "Weatherization Assistance Program." Fact sheet. Available at www1.eere.energy.gov/library/pdfs/48098_weatherization_assisprog_fsr4.pdf.

10 Estimate of greenhouse gas emissions offsets were calculated using the Environmental Protection Agency's Greenhouse Gas Equivalencies Calculator which can be found online here: <http://www.epa.gov/cleanenergy/energy-resources/calculator.html>.

11 Eric Mackres, "Energy Efficiency and Economic Opportunity" (Washington, DC: American Council for an Energy Efficient Economy, 2012).

12 Ibid.

- Identify tools and approaches to finance energy efficiency improvements with utility-funded retrofits and simultaneously help utilities achieve their goals; and
- Demonstrate the value of new partnerships between utilities and housing stakeholders.

NHT's experience clearly demonstrates that obstacles preventing utility-sponsored investments in multifamily affordable housing can be overcome through collaboration between the housing and utility sectors. This engagement has contributed significantly to utilities committing nearly \$40 million in funding for energy efficiency improvements to multifamily affordable housing.

By engaging with affordable housing providers, utilities, and regulators, NHT has identified some of the key barriers to investing utility funds in multifamily affordable housing. The barriers can be classified as:

- ***Programmatic/Policy.*** A common programmatic barrier is the lack of utility energy efficiency programs tailored to the multifamily housing stock. Utilities provide commercial or residential incentives for which multifamily may be eligible, but utilities often fail to specifically target affordable rental housing. Typically, utility residential retrofit programs do not address common area efficiency needs such as upgrading a central heating system. Utility-funded commercial programs often do not provide incentives for reducing energy in residential living spaces. Programs tailored to multifamily housing provide owners easy access to incentives that address the whole building's efficiency needs.

A common policy barrier is that master-metered, low-income buildings are often ineligible for utility funding that is designated specifically for low-income populations. Most states do not allow funding designated for residential households to be used in buildings that pay commercial utility rates.

- ***Economic.*** A well-known economic barrier to multifamily energy efficiency is the "split incentive." The owner who owns the property and is responsible for capital investments and upkeep is not necessarily the same party responsible for paying all of the building's energy costs. The owner therefore lacks the motivation to make efficiency improvements.

Another barrier in low-income multifamily housing is the limited cash flow that the building generates. This makes it difficult for owners to take on new debt to pay for efficiency improvements.

Finally, the terms of existing debt on the property may make it impossible for the owner to add a new loan on the property's debt stack, even though that new energy efficiency loan might make perfect sense when combined with a utility funded grant for a portion of the energy efficiency measures.

- ***Capacity.*** Lack of capacity, both on the part of utility administrators and the building owner or manager, is another common barrier to multifamily energy efficiency. Prop-

erty owners may have limited staff resources and little experience or knowledge about pursuing energy efficiency improvements. Likewise, utility program administrators are often unfamiliar with the diversity of the multifamily housing stock, how properties are financed, and the most effective means for reaching multifamily decision makers and creating demand for utility programs.

Breaking through these barriers begins with active engagement and dialogue among a range of stakeholders from both sectors. Guidelines for successful engagement include the following:¹³

- ***Build the right relationships.*** Understanding who controls key decisions, both formally and informally, is a critical first step in advancing successful utility-funded retrofits.
- ***Define the value proposition for the utilities.*** Achieving cost-effective savings to fulfill mandated energy reduction goals is often required of utility energy efficiency programs. Therefore, it is important for affordable housing stakeholders to demonstrate significant, cost-effective energy savings potential in the multifamily housing stock.
- ***Convene stakeholders to discuss opportunities and challenges.*** Bringing stakeholders together for an open dialogue can catalyze change. NHT found that working with local energy efficiency organizations was an effective means to engage with utilities. Rather than overwhelm utilities with a large meeting attended by a significant number of housing organizations, a smaller meeting, facilitated by a local or state energy provider and an organization dedicated to consumer rights (e.g., the National Consumer Law Center), helps develop trust between parties.

Once engagement with housing developers commences, it is crucial that the facilitator instill a mutual understanding of the utilities' and housing developers' goals and how they overlap. The initial meeting must also include educating the parties about respective constraints and obstacles. Agreement by all parties on the main obstacles preventing multifamily affordable housing from receiving utility-funded services helps pave the way for discussion about appropriate solutions.

- ***Take advantage of strategic "entry points."*** Utilities and affordable housing stakeholders should be aware of key strategic entry points or milestones that provide an opportunity to advance utility-funded energy efficiency services for multifamily affordable housing. Examples include utility plan filing deadlines, utility stakeholder collaboratives, and regulator rulemaking proceedings.
- ***Advance both program and policy changes.*** Engagement should address both the program and policy changes needed to successfully implement utility-sponsored energy efficiency services for multifamily housing. An example of a programmatic change might be a utility implementing a one-stop shop for multifamily housing

13 These guidelines are an excerpt from a recent report published by NHT called Partnering for Success: An Action Guide for Advancing Utility Energy Efficiency Funding for Multifamily Rental Housing. The report can be found here: <http://www.nhtinc.org/downloads/partnering-for-success-action-guide.pdf>.

so owners can avoid applying to multiple programs to fully address the energy efficiency needs of the whole building. An example of a policy change might be a state regulator determining that multifamily buildings can be classified as either commercial or residential.

The Value of Partnerships between Utilities and Housing Finance Agencies

In several states, engagement between utilities and housing finance agencies (HFAs) has proved effective in overcoming obstacles to multifamily efficiency. HFAs can play a critical role in helping utilities design effective programs and gain access to a pipeline of properties. Utility funding can be used to leverage housing resources to help owners of properties financed by HFAs make efficiency improvements that they otherwise would not have the capital to implement. Engagement among utilities and HFAs in Pennsylvania, Maryland, and New Jersey demonstrate the value of these partnerships.

Pennsylvania: Barriers overcome through collaboration among utility and housing stakeholders

In Pennsylvania, NHT joined the Pennsylvania Utility Law Project, the National Consumer Law Center, and the Pennsylvania Housing Finance Agency (PHFA) to engage with utilities and housing stakeholders in creating dedicated utility funding for multifamily housing.¹⁴ In spring 2012, the Pennsylvania Public Utility Commission (PUC) began to develop rules that would govern a new phase of the utilities' energy efficiency program portfolios. Leading up to the PUC's consideration of that guidance, NHT, PHFA, the National Consumer Law Center, and the Pennsylvania Utility Law project convened utility staff and multifamily housing developers to identify the barriers to improving multifamily efficiency.

One of the key challenges was ensuring that utilities would receive the benefits of energy consumption savings if they implemented multifamily funding. Utilities needed to feel confident that such programs would help them satisfy their energy savings obligations as mandated by state law. Pennsylvania utilities are required to obtain a minimum of 10 percent of consumption reductions from government, education, and nonprofit sectors. NHT urged the commission to count energy savings achieved through investments in low-income multifamily properties in meeting mandates. The commission agreed and announced that any savings achieved from multifamily housing financed under federal or state housing programs could be applied to the utility obligation. Following the PUC's policy change, Pennsylvania's utilities announced that they would dedicate more than \$12 million for efficiency improvements in multifamily housing.

¹⁴ PHFA has successfully administered \$25 million in funding to make energy efficiency improvements to more than 8,300 affordable apartments and used this experience to demonstrate the significant energy savings potential from the multifamily housing stock.

Maryland utilities realize the value of collaboration

The Maryland Energy Administration (MEA) and Maryland Department of Housing and Community Development (DHCD) teamed up to create Multifamily Energy Efficiency and Housing Affordability (MEEHA). MEEHA provides funding for energy audits, energy efficiency retrofits, and renewable energy improvements. The average participating property receives approximately \$1,700 per unit to cover the cost of efficiency improvements. The average property is projected to save \$11,400 per apartment over the life of the measures as a result.¹⁵

In 2011 and 2012, the Maryland Public Service Commission directed utilities to set aside \$21 million in funding for the MEEHA program. Part of MEEHA's success can be attributed to DHCD's experience administering several other high-quality affordable housing programs. Affordable multifamily projects already being considered for other DHCD rental financing were targeted for MEEHA funding. Property owners could submit one application for all their financing requests from DHCD. Existing affordable rental projects seeking funding only for energy efficiency improvements were also eligible to participate. DHCD's experienced staff leveraged their existing relationships with affordable housing providers to recruit participation.

The Maryland Energy Administration provided critical technical expertise in energy improvement, best practices, and audit reviews as well as evaluation, monitoring, and verification of results. DHCD acknowledged the advantage the partnership provided, "MEEHA's unique blending of energy efficiency with housing affordability creates a whole that is greater than the sum of its parts."¹⁶

In one example of the program, National Housing Trust/Enterprise Preservation Corporation redeveloped Mountain View Towers, a senior affordable housing in Cumberland, Maryland. The retrofit of the property, which was built in 1977, will help maintain affordability for low-income households by lowering operating expenses. The pro forma below demonstrates how the MEEHA funding fit into the project's overall financing.

Sources of Funds		Uses of Funds	
Federal LIHTC Equity (DHCD) Tax	\$4,913,000	Acquisition	\$3,300,000
Credit Assistance Pgm. (DHCD)	\$3,000,000	Construction	\$5,330,526
MEEHA (DHCD)	\$258,935	Total Soft Costs	\$704,988
Other Sources	\$3,376,095	Other Costs	\$2,248,516
Total Sources	\$11,548,000	Total Dev. Costs	\$11,548,000

15 Maryland Department of Housing and Community Development, "2012-2014 EmPOWER Maryland Limited Income Energy Efficiency Program (LIEEP)" submitted to the Maryland Public Service Commission on August 31, 2011.

16 Ibid.

On-Bill program proves successful in New Jersey

New Jersey's largest utility, PSE&G, has overcome a number of the obstacles that prevented multifamily housing from being effectively served in previous utility energy efficiency programs. The Residential Multifamily Housing Program is an on-bill financing mechanism that aims to preserve affordable housing and reduce carbon emissions by providing upfront, interest-free financing and incentives to cover the cost of eligible energy efficiency improvements. It was designed collaboratively with the New Jersey Housing and Mortgage Finance Authority, the state's affordable housing mortgage lender. PSE&G committed \$39 million of its own capital to the program since it began in 2010.

The program is fully subscribed and has a waiting list of customers interested in participating. The program's success can be attributed to the overall program structure, which allows the owners to pay the costs of the retrofit over time rather than all upfront. The program allows owners to realize cost savings immediately and before repayment begins.

PSE&G worked closely with the Housing and Mortgage Finance Authority in designing the financing terms of the program to ensure that affordable multifamily owners were able to participate. Owners of affordable housing are permitted to repay the project costs over a 10-year term rather than a 5-year term for market rate properties. The longer repayment period results in higher cost savings for affordable multifamily properties.

Conclusion

The community development field has a widening window of opportunity to achieve significant energy savings and in turn help to sustain much-needed affordable housing for the nation's low-income families. Utility spending on energy efficiency programs is expected to increase substantially over the next decade. Effectively targeting these resources to multifamily affordable rental housing, helps utilities and state governments achieve their energy savings goals, increase housing affordability, improve health for low-income households, spur local economic growth, and significantly improve the air quality in low-income communities.

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Michael Bodaken is the executive director of the National Housing Trust. Under his leadership, NHT has helped preserve more than 25,000 affordable multifamily homes, requiring combined acquisition and rehabilitation financing of over \$1 billion.