



Partnering for Success:

An Action Guide for Advancing Utility Energy Efficiency Funding for Multifamily Rental Housing

A REPORT BY:



IN PARTNERSHIP WITH:



ABOUT THE NATIONAL HOUSING TRUST

The National Housing Trust protects and improves existing affordable rental homes so that low income individuals and families can live in quality neighborhoods with access to opportunities.

1101 30th Street, NW, Suite 400, Washington, D.C. 20007
(202) 333-8931 | www.nhtinc.org | twitter: @natlhsingtrust

March 2013

Principal funding for this project and report was provided by the:

Doris Duke Charitable Foundation

Additional support for this project was provided by:

Housing Partnership Network's Innovation in Neighborhood Stabilization Initiative

(funded by the Citi Foundation)

Energy Foundation

The Kresge Foundation

Morgan Stanley

Acknowledgements

The National Housing Trust would like to thank the many individuals who contributed to and reviewed this report.

The following individuals were primary contributors to this report:

Charlie Harak, National Consumer Law Center
Jillian McLaughlin, National Consumer Law Center
Todd Nedwick, National Housing Trust
Dan York, American Council for an Energy Efficient Economy

The following individuals reviewed this report and improved it by providing their insight and wisdom: Chris Cloutier and Jordan Kelso from D&R International; Kate Johnson from the American Council for an Energy Efficient Economy; Debby Warren from Debby Warren Consulting; Laura Silver from the Minnesota Department of Commerce - Division of Energy Resources; Dave Evans from the Pennsylvania Housing Finance Agency; Harry Geller from the Pennsylvania Utility Law Project; Tony A'Vault and Russell Johnson from Rhode Island Housing; Rick Goodeman from Southwest Minnesota Housing Partnership.

For additional information about this report, please contact Todd Nedwick at the National Housing Trust at 202-333-8931 x128 or tnedwick@nhtinc.org.

About the project partners:

American Council for an Energy Efficient Economy

The American Council for an Energy-Efficient Economy is a nonprofit, 501(c)(3) organization that acts as a catalyst to advance energy efficiency policies, programs, technologies, investments, and behaviors.

529 14th Street N.W., Suite 600, Washington, D.C. 20045-1000
(202) 507-4000 | www.aceee.org

D&R International


D&R International is an industry pioneer that works with government, businesses, and non-profit organizations to move residential and commercial consumers toward greater energy efficiency. For 27 years, D&R has designed and promoted market-based and economically viable energy efficiency solutions. We focus on products and practices that deliver long-term value to clients and partners.

1300 Spring Street, Suite 500, Silver Spring, MD 20910
(301) 588-9387 | www.drintl.com

National Consumer Law Center

Since 1969, the National Consumer Law Center® has used its expertise in consumer law and energy policy to work for consumer justice and economic security for low-income people. NCLC's expertise includes policy analysis and advocacy; consumer law and energy publications; and training and advice for advocates.

7 Winthrop Square, Boston, MA 02110-1245
(617) 542-8010 | www.nclc.org



Partnering for Success: An Action Guide for Advancing Utility Energy Efficiency Funding for Multifamily Rental Housing

Table of Contents

Executive Summary	5
Multifamily Affordable Housing and Utility Energy Efficiency Programs: An Overview .	11
Guidelines for Advancing Multifamily Energy Efficiency Programs through Advocacy and Engagement	16
Engagement in Action: State Case Studies.....	24
Conclusion	38

Executive Summary

In 2011, utilities in the United States spent \$7 billion on electric and natural gas energy efficiency programs- nearly a seven-fold increase since 2000. Although multifamily buildings represent about a quarter of the housing units in the U.S. and comprise 20 percent of energy consumed by all households, they have been significantly overlooked by utility energy efficiency programs. And yet the multifamily housing stock is well-positioned for energy efficiency improvements.¹ Approximately 85 percent of multifamily apartments were built before 1990. On average, multifamily housing has less efficient heating, cooling, plumbing, and lighting systems than single-family housing.²

In December 2010, the National Housing Trust (NHT) began engaging with utilities and other stakeholders in targeted states to advance multifamily energy efficiency programs. Key objectives of this engagement include:

- Exploring barriers to cost-effective energy efficiency improvements in multifamily affordable housing;
- Demonstrating to utilities the potential for energy savings in this housing stock;
- Identifying tools and approaches to finance energy efficiency improvements and help utilities achieve their goals; and
- Demonstrating the value of new partnerships between utilities and affordable housing stakeholders.

What are the Benefits of Energy Efficiency Improvements in Multifamily Affordable Housing?

Utilities benefit because the reduction in energy consumption helps them to meet mandated energy savings goals.

Low-Income Renters benefit through lower utility bills. Efficiency improvements also lower operating costs and allow owners to maintain affordable housing. Renters also benefit from a healthier living environment which may lower the incidence of illnesses such as asthma.³

All Utility Customers benefit because energy efficiency programs decrease their bills in the long run by reducing the need for utilities to invest in expensive new infrastructure which would otherwise be needed to meet higher demand.

Local Economies benefit because low-income families are more likely than the average family to spend money saved from lower energy bills on unmet needs.⁴

NHT is leading this engagement by organizing and convening stakeholders in each state to build the needed relationships and dialogue among the players – energy groups, affordable housing providers, the housing finance agency, and key utilities. NHT’s key partners in this effort include the American Council for an Energy Efficient Economy (ACEEE), the National Consumer Law Center (NCLC), and D&R International. They provide technical advice based on best practices in existing utility energy efficiency programs. In each state we’ve partnered with local energy efficiency practitioners with strong ties to utilities and regulators. These local organizations play a critical role in helping NHT facilitate discussions among the key players.

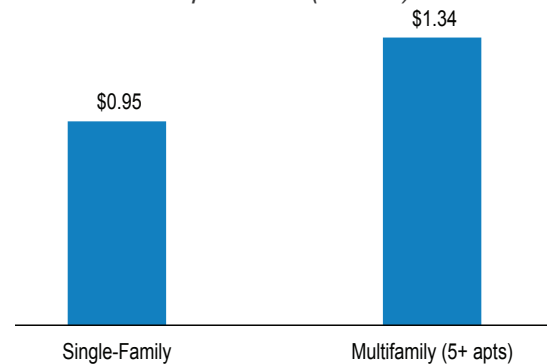
This Action Guide draws on the lessons learned from this engagement to help affordable housing and utility stakeholders work together to ensure that utility-funded energy efficiency programs appropriately serve the affordable multifamily housing sector.

Why multifamily housing?

There are a number of reasons why utilities and affordable housing stakeholders should work together to advance multifamily energy efficiency programs:

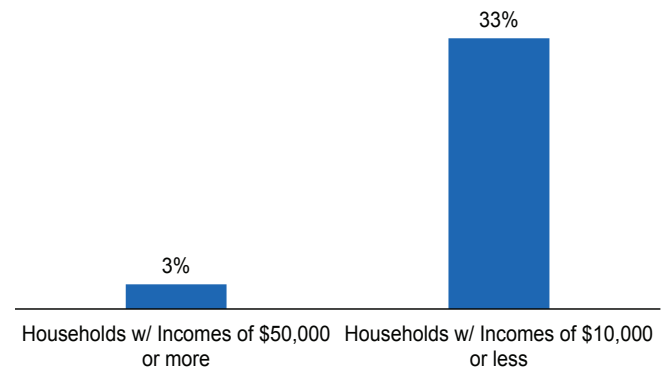
- **There is significant potential for energy savings in the multifamily housing stock.** Energy expenditures per square foot in rented multifamily apartments are 38% higher than in owner-occupied single-family detached homes (See Figure 1).⁵ Energy efficiency measures are far less likely to be found in multifamily rentals as compared to any other type of housing.⁶
- **A substantial portion of America’s low-income population lives in multifamily rental housing. Low-income households spend a significantly higher proportion of their income on energy expenses as compared to the average household.** Approximately 27 million low-income households live in rental housing.⁷ Multifamily housing makes up more than 40% of America’s rental housing stock.⁸ Households that earn \$50,000 or more spend just 3% of their income on residential energy expenditures on average while households that earn \$10,000 or less spend 33% of their income on energy expenses (See Figure 2).⁹

Figure 1. Average energy expenditures per square foot (Dollars)



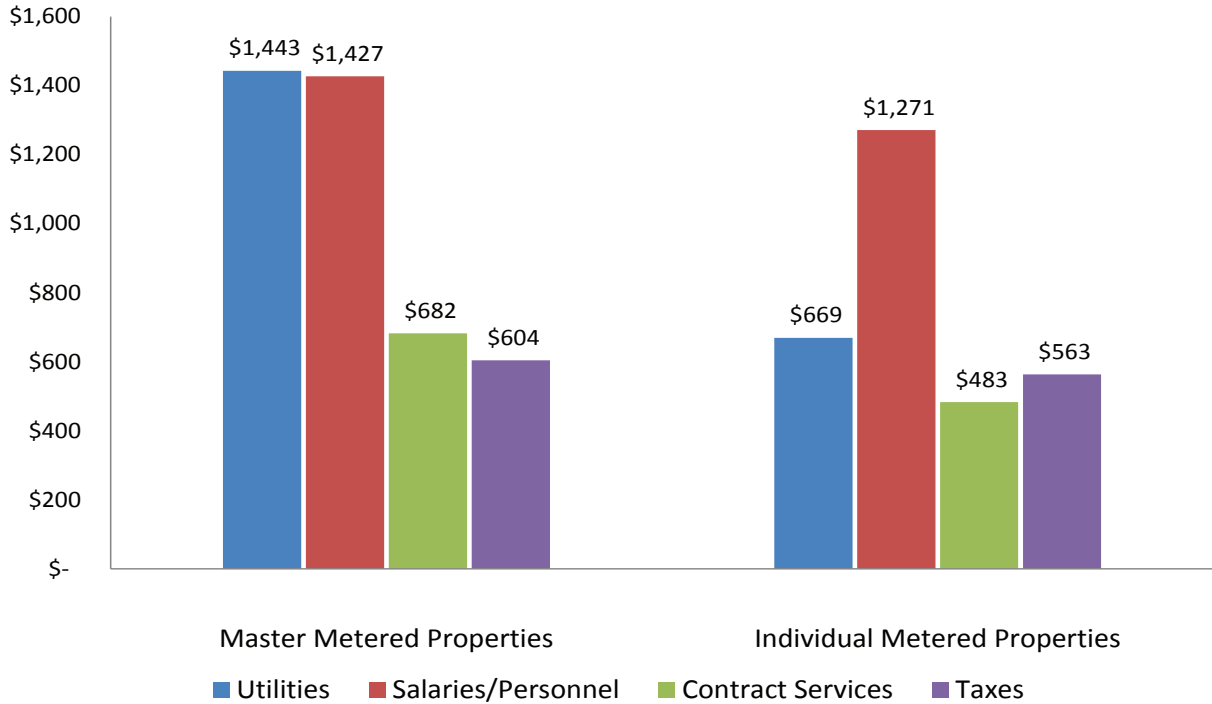
Source: 2009 Residential Energy Consumption Survey

Figure 2. Percent of income spent on energy expenditures



Source: Pivo, Gary, *Energy Efficiency and its Relationship to Household Income in Multifamily Rental Housing* (2012).

Figure 3. Top four categories of operating expenses per unit in master and individually metered subsidized multifamily housing



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

- **High energy costs in multifamily housing make it difficult to sustain affordable rental housing for low-income families.** Utility costs are the largest operating expense in subsidized master-metered multifamily rental buildings and the second largest operating expense in individually metered subsidized multifamily buildings (See Figure 3).¹⁰ Reducing operating expenses in multifamily buildings frees up capital that can be used to address maintenance repair needs or make other necessary improvements.¹¹
- **Multifamily rental housing has been generally underserved by existing utility-sponsored energy efficiency programs.** A minority of utilities have developed targeted multifamily energy efficiency programs. Programs that are targeted to multifamily housing are funded at rates far less than its share of the housing market.¹²

Key takeaways

Our experience clearly shows that obstacles preventing utility-sponsored investments in multifamily affordable housing can be overcome through collaboration between the housing and utility sectors. Engagement in the four states detailed in this report (Maryland, Minnesota, Pennsylvania, and Rhode Island) contributed significantly to utilities committing nearly \$40 million in funding for energy efficiency improvements to multifamily affordable housing.

Nevertheless, advancing effective utility-sponsored multifamily energy efficiency programs can be challenging. It requires active engagement and dialogue between a range of stakeholders from both sectors who operate in complex regulatory environments. While their goals may overlap, each sector faces unique constraints:

- Utilities, for example, must demonstrate to regulators that ratepayer funds are being used cost-effectively to achieve energy savings. This might limit the types of energy efficiency measures and incentive levels utilities can provide.
- Often utilities are required to attribute the costs of providing energy efficiency services to the customer sector that benefitted from the services, e.g. the costs of providing services to commercial customers are recovered through a surcharge on utility accounts paid by commercial customers. This requirement can make it difficult for utilities to create single programs that serve multifamily buildings with a mix of accounts (commercial and residential).
- Affordable housing stakeholders also face constraints when adopting energy efficiency improvements. Low-income multifamily buildings operate with limited cash flow and may be unable to take on new debt to finance improvements. Most low-income multifamily properties are operated by staff with very limited resources to pursue and apply for energy efficiency funding. Owners will be discouraged from seeking utility-funded efficiency services if they must go through the time-consuming process of applying to multiple programs to address all energy saving opportunities in the building.

These and other challenges are further described in this Guide, along with suggestions for successful engagement. Employing both informal and formal engagement strategies may be necessary to advance successful multifamily programs. Guidelines for successful engagement include the following:

- **Build the right relationships.** Understanding who controls key decisions, both formally and informally, is a critical first step in advancing successful programs.
- **Define the value proposition for the utilities.** A primary objective of utility energy efficiency programs in many states is that such programs achieve high, cost-effective savings in order to fulfill state mandated energy reduction goals. Therefore, it is important for affordable housing stakeholders to demonstrate that there is significant, cost-effective energy savings potential in the multifamily housing stock.
- **Convene stakeholders to discuss opportunities and challenges.** Simply bringing stakeholders together and facilitating an open dialogue can catalyze change. Engagement between utilities and affordable housing stakeholders should begin by developing a mutual understanding of each others' goals and how they overlap. The initial meeting must also include building awareness about respective constraints and obstacles. Agreement by all parties on the main obstacles preventing multifamily affordable housing from receiving utility-funded services will help 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 so owners don’t have to apply 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.

Examples of informal and formal engagement strategies for advancing multifamily utility energy efficiency programs

Informal Strategies	Formal Strategies
<ul style="list-style-type: none"> • Develop partnerships with utility energy efficiency staff. • Convene utility and housing agency staff to discuss opportunities for collaboration. • Share best practices from successful multifamily programs. • Demonstrate the potential for energy savings in multifamily housing. 	<ul style="list-style-type: none"> • Provide comments on proposed utility energy efficiency plans during proceedings before the public utility commission and intervene in other proceedings when a company’s energy efficiency plans can be revised. • Seek policy changes from the public utility commission to better align utility incentives with multifamily housing needs. • Pursue and demonstrate support from a coalition of organizations that share your goals.

About this Action Guide

This Action Guide is intended to serve as a practical tool for those seeking better partnerships among utility companies, affordable housing stakeholders, and energy efficiency advocates – towards the goal of making sure that utility-funded energy efficiency programs appropriately serve the affordable multifamily housing sector. It draws on the experience and knowledge gained by the authors as they engaged utilities to advance improved policies and increased energy efficiency resources for affordable multifamily housing.

The remainder of this report is organized into the following sections:

- [Multifamily Affordable Housing and Utility Energy Efficiency Programs: An Overview](#) provides background on utility-sector energy efficiency programs and why the utility and affordable housing sectors should work together;
 - [Guidelines for Advancing Multifamily Energy Efficiency Programs through Advocacy and Engagement](#) describes key lessons learned from engaging utility and affordable housing sector stakeholders;
 - [Engagement in Action: State Case studies](#) documents the challenges and opportunities encountered while advancing utility-sector multifamily energy efficiency programs in four specific states: Maryland, Minnesota, Pennsylvania, and Rhode Island.
-
- » Our experience clearly shows that obstacles preventing utility-sponsored investments in multifamily affordable housing can be overcome through collaboration between the housing and utility sectors. Engagement in the four states detailed in this report contributed significantly to utilities committing nearly \$40 million in funding for energy efficiency improvements to multifamily affordable housing.
-

This Action Guide is intended to complement previous reports aimed at advancing multifamily utility energy efficiency programs. Recently released resources on this topic include, but are not limited to, the following:

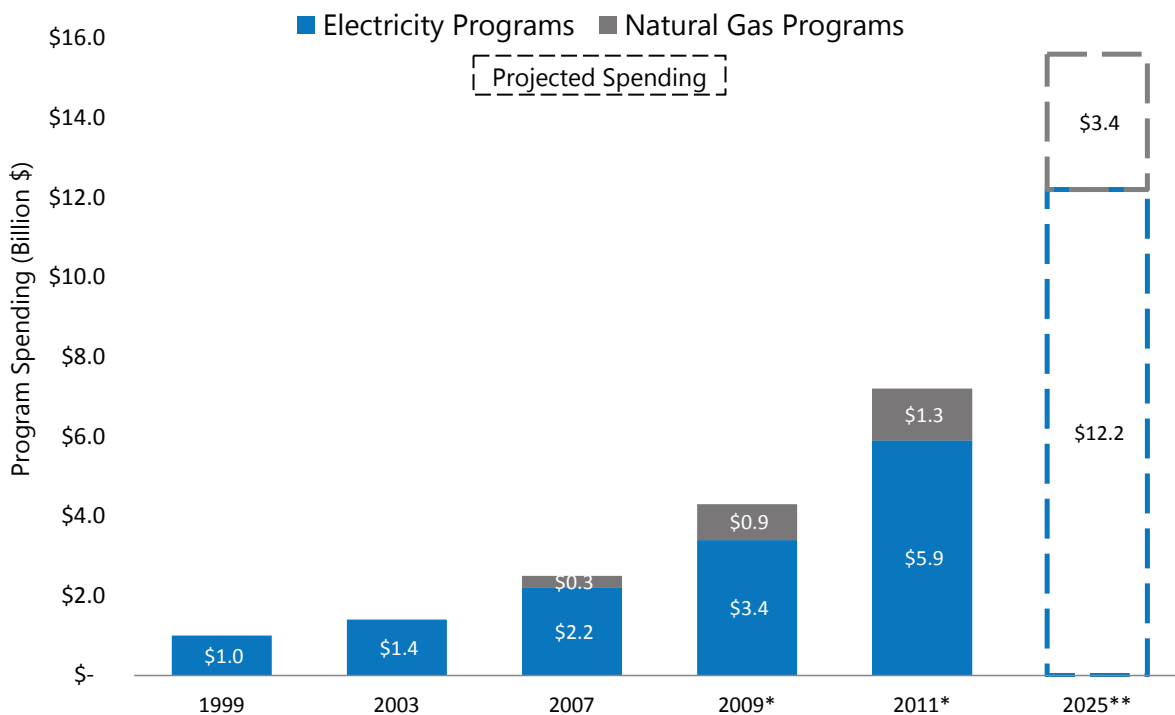
- *Scaling up Multifamily Energy Efficiency Programs: A Metropolitan Area Assessment* by the American Council for an Energy Efficient Economy (2013)
- *Engaging as Partners in Energy Efficiency: Multifamily Housing and Utilities* by CNT Energy and American Council for an Energy Efficient Economy (2012)
- *Up the Chimney: How HUD's Inaction Costs Taxpayers Millions and Drives Up Utility Bills for Low-Income Families* by the National Consumer Law Center (2010)
- *US Multifamily Energy Efficiency Potential by 2020* by The Benningfield Group (2009)

Multifamily Affordable Housing and Utility Energy Efficiency Programs: An Overview

Serving the Common Good through Affordable Housing and Utility-Sector Energy Efficiency Programs

Energy efficiency programs for utility customers have been in place for over three decades in many areas of the United States.¹³ Such programs have clear records of successfully helping electric and natural gas customers lower their energy costs through increased energy efficiency of homes, businesses, institutions, and factories. Such programs yield energy savings that comprise significant energy resources for meeting customer needs and system demands. Saving energy through improved customer efficiency is by far the cheapest energy resource available. Customer programs achieve energy savings at about one-third the cost of new generation resources for electricity. These programs also deliver significant environmental benefits by reducing emissions from fossil fuel generation. They also provide positive economic benefits by boosting economic development and jobs.

Figure 4. Annual electric and natural gas energy efficiency program spending or budgets



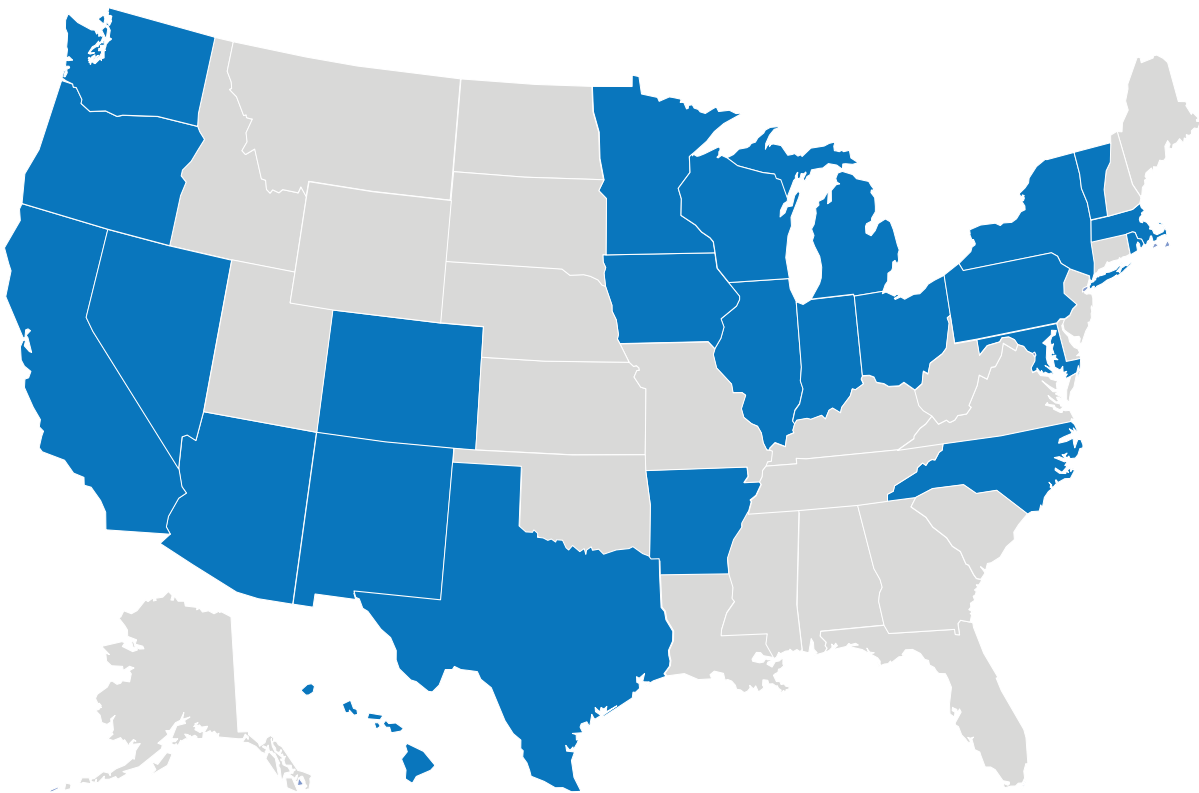
* From 1999-2007, values represent actual program spending (including customer funded programs); from 2009 on, they represent program budgets. Natural gas spending is not available for the years 1999-2003. Source: Foster, Ben, et al., *The 2012 State Energy Efficiency Scorecard* (Washington, DC: American Council for an Energy Efficient Economy, 2012).

** High case scenario. Source: Barbose, G.L. et al., *The future of utility customer-funded energy efficiency programs in the USA: projected spending and savings to 2025* (Berkeley, CA: Lawrence Berkeley National Laboratory, 2013).

Utility-sector energy efficiency programs have experienced rapid, large growth since 2000 (See Figure 4). Funding for such programs, both electric and natural gas, was about \$7 billion in 2011—nearly a seven-fold increase since 2000.¹⁴ This growth is in significant part attributable to enactment of policies called energy efficiency resource standards (EERS) that establish high, specific energy savings targets to be achieved through utility and related non-utility energy efficiency programs. EERS policies are now in place in 24 states (See Figure 5). Indeed, many other states without such specific policies also have greatly increased their commitments to energy efficiency programs.¹⁵ The common driver of this rapid growth is the objective of achieving high levels of cost-effective energy efficiency and thereby reaping the substantial economic and environmental benefits that result.

Energy efficiency programs available to utility customers typically include financial incentives such as rebates and loans, technical services such as audits and retrofits, and education on the benefits of energy efficiency improvements. While utilities are the primary administrators of programs in most states, there are a number of non-utility administered programs serving utility customers. By way of example, third-party administered programs have been established in states such as New York, Oregon, Vermont, and Wisconsin, as the result of the utility restructuring.

Figure 5. States with Energy Efficiency Resource Standards (EERS)



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

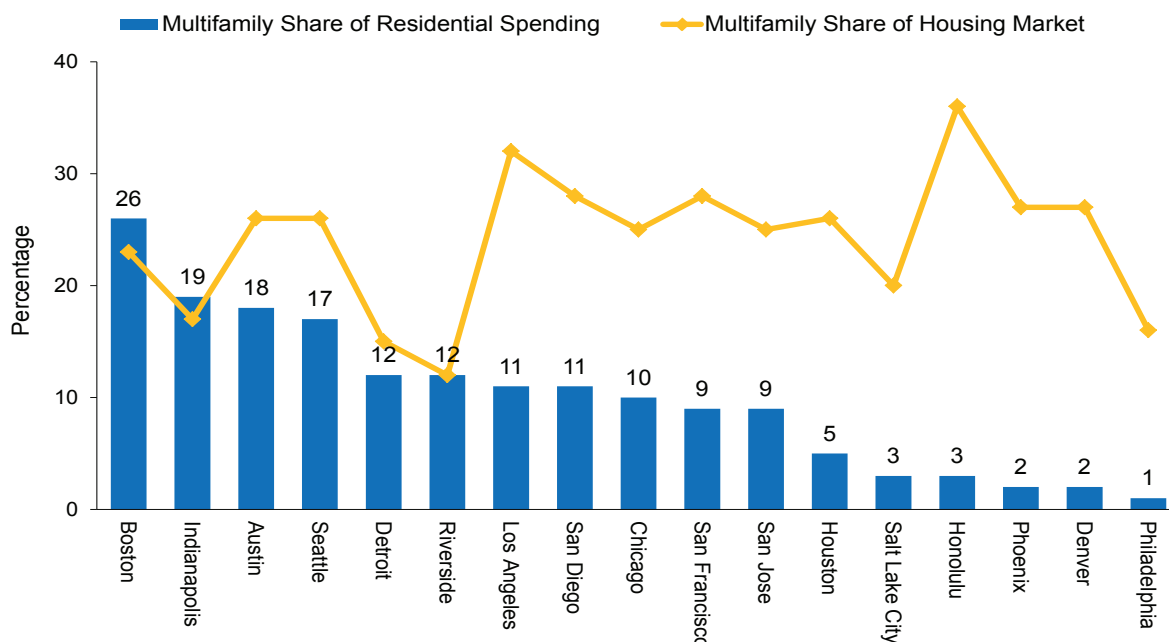
The Challenges of and Opportunities for Improving Energy Efficiency in Multifamily Housing

Multifamily buildings represent about a quarter of the housing units in the U.S. and comprise 20% of energy consumed by all housing units, yet have been greatly overlooked when it comes to implementing energy efficiency programs.¹⁶ It is often difficult to quantify exactly the extent to which multifamily housing is underserved by utility energy efficiency programs because utilities rarely report the number of multifamily buildings that receive services. However, studies have clearly noted that multifamily housing has received a disproportionately small share of available electric and natural gas utility energy efficiency funding in many states.¹⁷

An appropriate indicator of a state's commitment of utility-sector energy efficiency resources to multifamily housing is the presence and funding level of targeted programs that are designed for and marketed to multifamily owners and tenants. While multifamily housing may be eligible for services through a utility's commercial and residential programs, these programs are typically not established to address the unique challenges of reaching this housing sector.

A recent analysis completed by ACEEE analyzed the 50 metropolitan areas with the largest multifamily housing stock to determine which areas had targeted multifamily programs offered by one or more utilities.¹⁸ ACEEE found that 20 of the 50 metropolitan areas have no utility programs targeted to multifamily housing.¹⁹ Furthermore, ACEEE's analysis determined that spending on targeted multifamily programs varied widely. In the vast majority of metropolitan areas for which spending data was available, the share of residential spending on multifamily targeted programs was less than the multifamily share of households (See Figure 6; Note that Figure 6 does not include metro areas with targeted multifamily programs for which spending information was not available at the program level or by building type).²⁰

Figure 6. Comparison of 2011 spending on targeted multifamily programs to the multifamily share of the housing market.



Source: Johnson, Kate and Erik Mackres, *Scaling up Multifamily Energy Efficiency Programs: A Metropolitan Area Assessment* (Washington, DC: American Council for an Energy Efficient Economy, 2013)

Specific reasons multifamily housing is underserved by utility programs include, but are not limited to, the following:

- There's been a failure to create programs designed for and targeted to multifamily buildings (5+ units). Tailored programs are necessary to ensure that a multifamily building receives comprehensive energy efficiency measures. Residential utility programs do not address common area efficiency needs such as upgrading a boiler system. Commercial utility programs do not provide incentives for reducing energy consumption in resident living spaces. Programs designed for multifamily housing overcome this hurdle by providing owners easy access to a package of incentives that address both common area and tenant living spaces.
- There is a landlord/tenant "split-incentive" market barrier in multifamily rental housing. That is, the landlord who owns the property and is responsible for capital investments and upkeep is not necessarily the same party responsible for paying all of a multifamily building's energy costs. The landlord therefore lacks the motivation to make efficiency improvements in areas where the resident is responsible for the utility bill.
- Multifamily buildings benefit the most from energy efficiency services designed to reduce both electric and natural gas consumption. Therefore, utility companies should offer a comprehensive package of measures for both types of energy use. This might require coordination among separate utility companies, i.e. an electric service provider and a natural gas provider. This type of integrated approach might be difficult to achieve.
- Multifamily owners and operators are also discouraged from pursuing energy efficiency services because they lack the expertise to navigate through the retrofit process which includes securing energy audit services, soliciting contractor bids, and assembling financing.

Despite these and other challenges, there are several promising multifamily energy efficiency programs in the U.S. Such programs have addressed these challenges through innovative program designs and collaborations among key stakeholders that serve these markets.

Due to the different approaches by which states regulate utility energy efficiency policies, multifamily



Mountain View Tower in Cumberland, Maryland has been a haven for low-income seniors since 1977. While it had endured as quality affordable housing for more than 30 years, the property was not originally constructed to modern energy codes.

In 2009, the National Housing Trust/Enterprise Preservation Corporation redeveloped the property and made significant energy efficiency upgrades. Funding for the upgrades came from the Maryland Department of Housing and Community Development's Multifamily Energy Efficiency and Housing Affordability program (MEEHA). Originally capitalized through the State Energy Program, MEEHA is now funded by investor-owned utilities.

The energy efficiency improvements will help maintain affordability for low income seniors by lowering operating expenses. See the Maryland case study of this report for more information about the MEEHA program.

building owners must engage utilities or other program administrators based on each utility's energy efficiency regulatory circumstances and the building owners' needs. The most effective multifamily energy efficiency programs are jointly funded by building owners and utility-sector programs and install multiple, long-lasting natural gas and electricity-saving measures.

The potential energy and cost savings from improving the energy efficiency of multifamily buildings are large. The Benningfield Group (2009) estimated that the achievable potential by the year 2020 was over 51,000 gigawatt-hours of electricity and over 2,800 million therms of natural gas. These potential savings would have a value of nearly \$9 billion annually to property owners and tenants, compared to current energy costs of \$31 billion, a savings of nearly 30%.²¹

As utilities and program administrators push to achieve and sustain the high energy savings required by state EERS, they cannot ignore or underserve multifamily housing markets. The savings potential from multifamily upgrades are large and can contribute significantly to overall program savings and help meet aggressive energy savings targets mandated by state governments. Program administrators are recognizing the important role that multifamily programs can play in meeting their savings goals and are responding by introducing or expanding these types of programs. They also recognize that a large share of customers served by such programs are low-income households for whom reducing energy costs and keeping such costs affordable meet critical needs with very clear, direct benefits for their well-being.

Utility Industry Takes Note of Multifamily

Increasingly public utility commissions, utilities, and program administrators are taking action to ensure the fair expenditure of energy efficiency funds in the multifamily housing sector. Recently the National Association of Regulatory Utility Commissioners (NARUC) and the National Association of State Utility Consumer Advocates (NASUCA) adopted resolutions supporting this goal.²² NARUC's resolution, adopted July 20, 2011, noted that "Energy efficiency programs for owners of, or tenants living in, multifamily affordable

housing have in the past not always been well-designed for easy access."

The NARUC Board of Directors further resolved:

"That public utility commissions, in proceedings in which utility expenditures on energy efficiency are being raised, should use their discretion when appropriate to investigate the extent to which the company's energy efficiency programs are fairly serving all customer sectors, including but not limited to the affordable multifamily sector."

Guidelines for Advancing Multifamily Energy Efficiency Programs through Advocacy and Engagement

Advancing effective utility-sponsored multifamily energy efficiency programs requires active engagement and dialogue among a range of stakeholders from both sectors. While there is no single correct approach or set of tactics that can be used to overcome long-existing barriers to providing high-quality, utility-funded programs for affordable housing, the guidelines listed below will help you to understand the context in which successful engagement can occur.

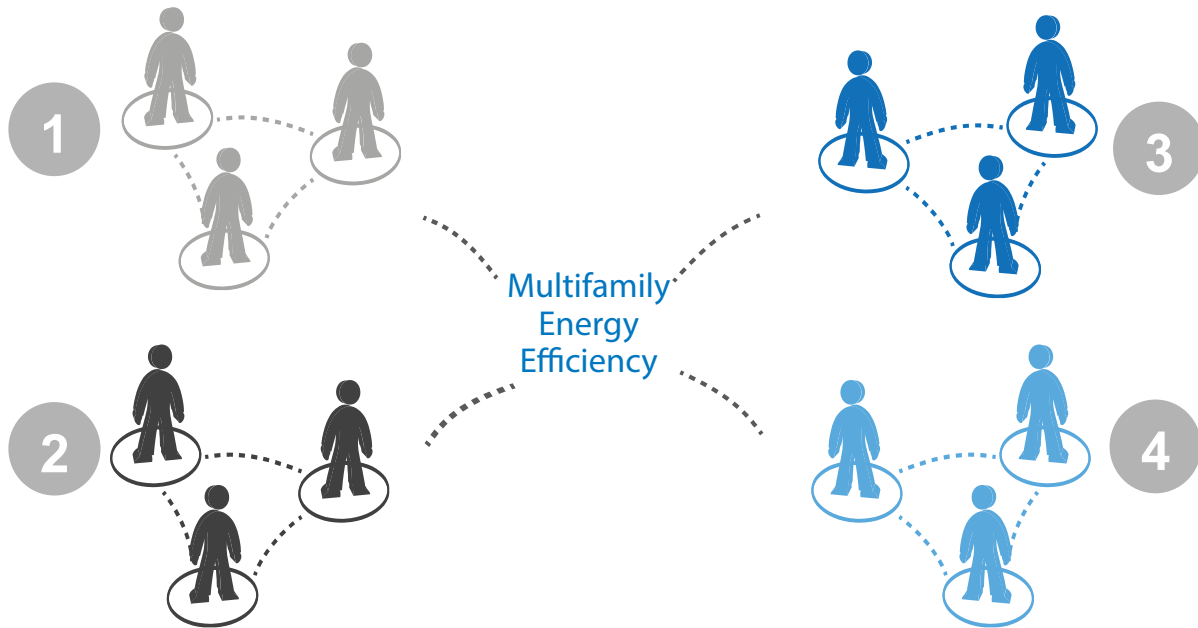
Build the right relationships.

There are a number of interested and involved parties who are likely to play a role in the planning and implementation of successful utility-funded energy efficiency services to affordable housing properties. Understanding who they are can be a challenge, but is a critical first step in advancing successful programs (See Figure 7). Key decision-makers should be involved early on in the engagement process, as they will have considerable sway over the final outcome. These individuals are likely to include, but may not be limited to, the following:

- Utility staff involved with planning and administering commercial, residential and low-income energy efficiency programs;
- Program implementers designated by the utilities to deliver energy efficiency services;
- Key staff from the state agency responsible for regulating the utilities (e.g. the public utility commission, etc.);
- Key staff from the state office of consumer advocate;
- State/local energy efficiency advocates and legal aid/consumer rights' advocates;
- Key staff from the state housing finance agency or state department of housing and community development; and
- Multifamily developers and/or asset managers.

Begin with energy efficiency advocates. Affordable housing stakeholders that are interested in engaging with utilities for the first time should begin by building relationships with influential energy efficiency advocates in the state. These advocates will themselves have working relationships with the utilities and other key stakeholders and can serve as trusted facilitators of any convenings. To help facilitate conversations in our target states, NHT retained the services of local energy efficiency advocates and experts including Minnesota Green Communities, CNT Energy, and the Pennsylvania Utility Law Project.

Figure 7. Key Stakeholders to involve when advancing utility-funded multifamily programs.



- 1 Utility energy efficiency program staff and administrators**
Designs and manages energy efficiency offerings. Prepares program plans for regulator approval. Responsible for ensuring that energy efficiency goals are met. Responsible for ensuring program participation.
- 2 Utility regulators (e.g. public utility commission, etc.) and other interested state agencies**
Utility regulators implement state laws governing energy efficiency requirements of utilities. Regulators review and approve utility energy efficiency plans. Other interested state agencies might include the state Office of Consumer Advocate (OCA). OCAs advocate on behalf of consumers for reliable utility service at reasonable rates. They often participate in PUC proceedings to ensure that ratepayer funded programs are well-designed and prudently-administered.
- 3 Energy efficiency and consumer rights organizations**
Engages directly with utilities and regulators to influence energy efficiency policy. Consumer rights organizations advocate for fair treatment of low-income consumers in energy and utility related matters. These groups can serve as trusted facilitators of discussions given their established relationships with utilities and regulators.
- 4 State housing finance agency (HFA), affordable housing developers, and intermediaries**
HFAs finance the creation and preservation of multifamily affordable housing and administer federal and state housing programs. Affordable housing owners and developers are mission-driven organizations that create and maintain affordable housing for low-income families. Other intermediaries include non-profit community development financial institutions that provide below market financing for affordable housing. These groups can provide utilities a pipeline of projects.

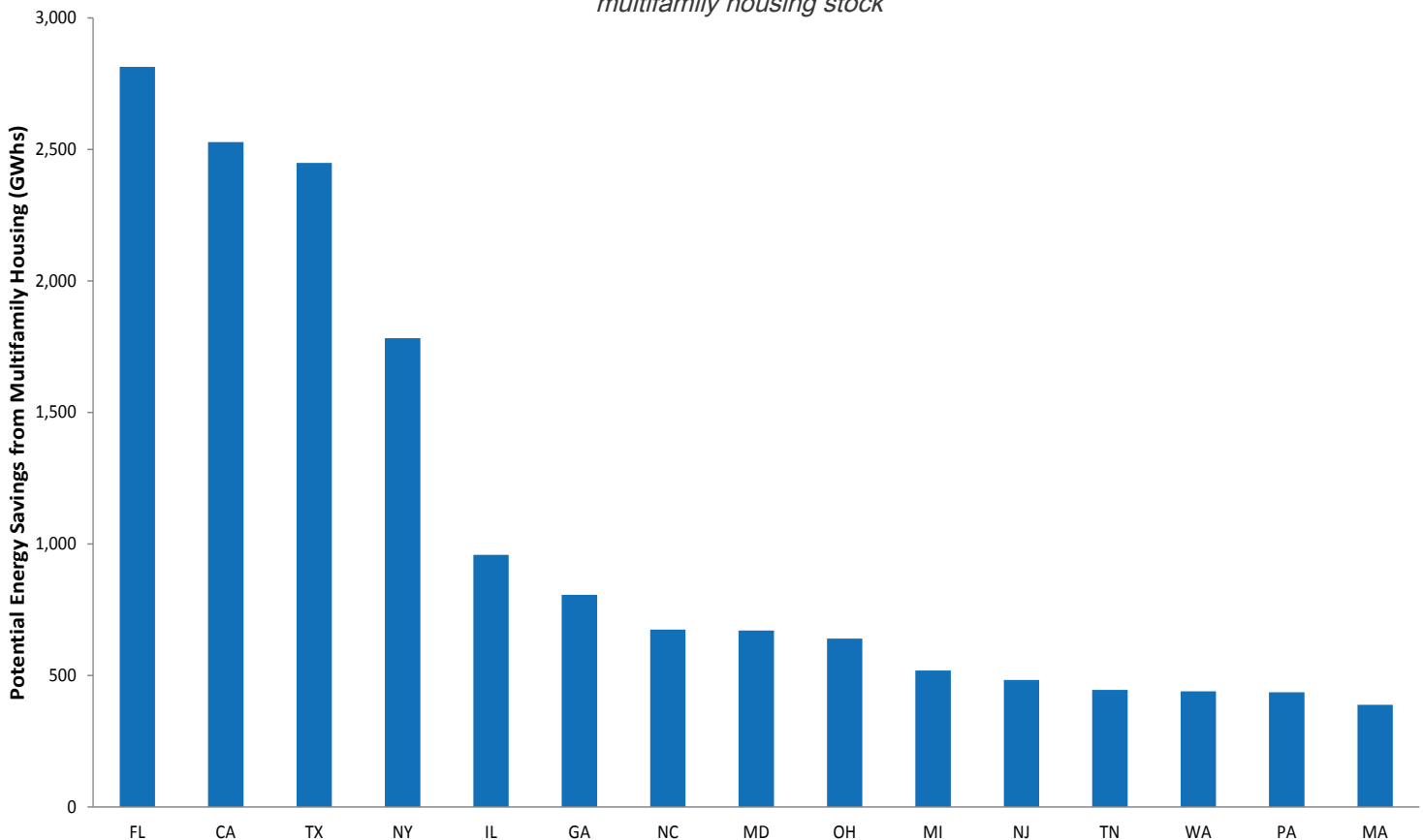
Define the value proposition for the utilities.

A primary objective of utility energy efficiency programs in many states is to achieve cost-effective energy savings in order to fulfill state mandated energy reduction goals. Therefore, it is important for affordable housing stakeholders to demonstrate that there is significant untapped energy savings potential in the multifamily housing stock. This can be done a number of ways including:

- Documenting successful examples of retrofit projects and resulting energy savings;
- Benchmarking energy use in multifamily affordable properties and identifying buildings with higher than average energy use; and
- Providing data on the size and age of the multifamily stock in the utilities' service areas.

The following chart estimates the total annual electricity energy savings that can be achieved in the multifamily housing stock for a subset of states (See Figure 8). These 15 states have the greatest electricity energy savings potential based on the number of multifamily apartments in the state and the average annual electricity consumed by a multifamily household in the region the state is located.²³ This analysis assumes that energy efficiency improvements to multifamily apartments will result in a modest 15% reduction in electricity consumption. Other analyses have used a similar approach to estimate the electricity savings potential in the multifamily housing stock.²⁴

Figure 8. Estimated electricity savings potential in GWhs from efficiency improvements in the multifamily housing stock



Convene stakeholders to discuss opportunities and challenges.

Simply bringing stakeholders together and facilitating an open dialogue can catalyze change. Engagement between utilities and affordable housing stakeholders should begin by developing a mutual understanding of each other's goals and how they overlap. It must also include building awareness about respective constraints and obstacles. Agreement by all parties on the main obstacles preventing multifamily affordable housing from receiving utility-funded services will help pave the way for discussion about appropriate solutions.

It is important for utilities to know that affordable housing stakeholders are motivated to provide sustainable housing because it helps to maintain housing affordability for low-income families. Affordable housing stakeholders should educate utilities about how federal and state housing agencies incorporate incentives for energy efficiency in their funding programs. For example, many state housing finance agencies require properties to meet minimum energy efficiency requirements in order to receive funding through the Low Income Housing Tax Credit program. Utilities will be more open to act if they are confident that sufficient demand exists to warrant the creation of new multifamily energy efficiency programs.

» As utilities and third-party program administrators push to achieve and sustain the high energy savings required by state policies, they cannot ignore or underserve multifamily housing markets. The savings potential from multifamily upgrades are large and can contribute significantly to overall program portfolio savings and thus help meet aggressive targets.

Utility and affordable housing stakeholders operate within complex and challenging regulatory frameworks and face unique constraints as they pursue their respective goals. Building a mutual understanding of these constraints is important early on in the engagement process. Agreement by all parties on the main obstacles preventing multifamily affordable housing from receiving utility-funded services will help pave the way for discussion about appropriate solutions.

The Power of Benchmarking Energy Use

Benchmarking can be a powerful tool for maximizing energy savings by helping utilities to target the most energy inefficient properties.

In 2010, several Massachusetts utilities began benchmarking energy usage in low-income buildings as part of their implementation of a comprehensive multifamily retrofit program. Utilities used an on-line application called WegoWise to collect and analyze the data. By 2011, the utilities had inventoried and ranked more

than 6,300 gas and electric utility accounts. Based on the available data, the utilities concluded that approximately 50% of gas accounts, 60% of whole-building electric accounts and 51% of common area electric accounts performed "worse than average" or "poor" in terms of average energy usage per square foot.

Based on the data, the utilities concluded that "there is a strong pool of candidates ripe for cost-effective energy efficiency improvements."²⁵

Affordable housing stakeholders should be aware that some of the common constraints faced by utilities include, but are not limited to, the following:

- **Strict cost-effectiveness tests.** Utilities must demonstrate to regulators that the benefits of their proposed energy efficiency programs outweigh any costs. Depending on how the regulators define the benefits and apply such tests, utilities may be restricted in the types of measures and incentive level they are able to provide.
- **Cost recovery requirements.** Utilities recover the costs of their investments in energy efficiency through surcharges on customer utility bills. Often utilities are required to attribute the costs of providing energy efficiency services to the customer sector that benefitted from the services. For example, the costs of providing services to commercial customers are recovered through a surcharge on utility accounts paid by commercial customers. This requirement can make it difficult for utilities to create single programs that serve multifamily buildings with a mix of accounts (commercial and residential).
- **Cost effectiveness of comprehensive portfolios.** As mentioned above, utilities must demonstrate that the benefits of a portfolio of programs outweigh the costs. Demonstrating the cost effectiveness of comprehensive energy efficiency services can be challenging for several reasons. Effective comprehensive energy efficiency programs require the implementation of “indirect” services such as energy audits which do not directly result in energy savings. While some regulators allow utilities to use ratepayer funds to recover the cost of providing energy audits, they might not allow utilities to claim energy savings from such measures. Therefore, the challenge facing the utility and the regulator is ensuring that the total cost of providing energy audits and direct energy saving measures does not outweigh program benefits. Utilities also face the challenge of attributing energy savings across various programs when measures save both electricity and natural gas (e.g. shell measures that result in electric savings by reducing cooling loads and in natural gas savings by reducing heating loads).
- **Compliance with low-income targets.** It is not uncommon for state law to require utilities to dedicate a portion of their energy efficiency budget towards achieving energy savings in low-income households. Utilities might require clarity from regulators on determining the eligibility of low-income buildings (including income levels, the necessary threshold of low-income units, and how to ensure tenants benefit from the measures) if they are to use savings from multifamily housing to meet this requirement. In addition, master-metered multifamily buildings are often not eligible to participate in low-income residential programs because they are designated as commercial customers.

Utilities should be aware that some of the common constraints faced by affordable housing stakeholders include, but are not limited to, the following:

- **Limited access to upfront capital and ability to take on new debt.** Owners of low-income buildings are constrained by restricted access to capital to make energy efficiency improvements. In subsidized housing, regulatory agreements sometimes prevent owners from using cash reserves to contribute towards the cost of upgrades.

Many affordable properties have multiple investors who might be unwilling to agree to additional asset-backed debt.

Utilities should be aware of these constraints when determining the type and level of incentives appropriate for low-income multifamily housing. Incentives that reduce owner upfront costs can be effective at overcoming this challenge. Financing approaches that are likely to succeed include low or zero interest loans coupled with on-bill repayment that allows the owner to repay the loan through a surcharge on their utility bill.

- **Limited staff capacity.** Most low-income multifamily properties are operated by staff with very limited resources to pursue and apply for energy efficiency funding. Owners will be discouraged from seeking utility-funded efficiency services if they must go through the time-consuming process of applying to multiple programs to address all energy saving opportunities in the building. Similarly, multifamily owners will be discouraged from participating in low-income utility programs if doing so requires a burdensome process to verify the eligibility of tenants. Utilities and regulators can avoid this obstacle by working with owners and housing agencies to use existing income documentation to verify that the building qualifies as low-income under the requirement of the utility program.

Putting it Together: PSE&G's Successful Multifamily Program

New Jersey's largest utility, PSE&G, has developed a successful approach to overcoming a number of the obstacles that have prevented multifamily housing from being appropriately served through previous utility energy efficiency programs. PSE&G has committed nearly \$40 million over four years to its Residential Multifamily Housing Program. The program provides upfront interest-free financing and grant incentives to cover the cost of eligible energy efficiency improvements.

In 2009, PSE&G developed the multifamily retrofit program in collaboration with the New Jersey Housing and Mortgage Finance Agency (NJHMFA). An initial investment of \$19 million was dedicated towards energy upgrades in multifamily housing. The program quickly became fully subscribed. PSE&G proposed investing another \$20 million in the program to address the backlog of applicants on the waiting list. To gain access to potential customers, PSE&G

relied on NJHMFA's help to reach multifamily owners.

Highlights of the program include the following:

- The program provides resources for whole building retrofits. PSE&G contractors perform a comprehensive energy audit to target the most cost-effective energy efficiency improvements. If owners do not pursue measures, they are required to pay back half the cost of the audit.
- Incentives eliminate or significantly reduce the owner's contribution to the construction costs. Owners have the option of repaying the zero interest loans through energy savings on their utility bill.
- Participating owners who may be unfamiliar with how to procure energy efficiency services receive guidance and technical assistance for soliciting contractor bids.^{26, 27}

Take advantage of strategic “entry points.”

Utilities and affordable housing stakeholders should be aware of key strategic entry points or milestones that can be taken advantage of to advance utility-funded energy efficiency services for multifamily affordable housing.

Utility plan filing deadlines. Utilities are often required to submit their energy efficiency portfolio plans to the state regulator for approval. The frequency of these filings varies by state but tends to be every two or three years. In preparation of submitting a plan, utilities will evaluate their current portfolio of programs to determine what changes, if any, should be made to improve the existing offerings and achieve the required reduction in energy consumption. Affordable housing stakeholders interested in advancing multifamily energy efficiency programs should find out the filing deadlines in their state and begin engaging with utilities about a year or so before they are required to file their plans (See Figure 9 for filing timelines for a sample of states). In addition, utility regulators typically provide the public an opportunity to review and comment on the submitted plans before they give final approval. Affordable housing stakeholders should use this process to comment on the need to address the multifamily housing stock and make recommendations for better serving this sector.

State housing finance agency pipeline. State housing finance agencies (HFAs) oversee a portfolio of low-income multifamily properties and administer funding for the recapitalization and rehabilitation of existing affordable housing. Utilities can partner with HFAs and gain access to a pipeline of properties that are well-poised to participate in utility-funded programs.

Utility stakeholder collaboratives. Many utilities hold regular stakeholder working group meetings to receive feedback on current and planned energy efficiency programs. Affordable housing stakeholders should identify and participate in these collaboratives in order to build support for multifamily programs.

Utility proceedings. State regulators conduct a broad range of rulemaking proceedings and hearings in response to utility applications in which the design of energy efficiency programs may be raised. Stakeholders should partner with groups that closely monitor these cases (e.g., the Office of Consumer Advocate, Office of the Attorney General, and consumer groups) to identify particular proceedings in which it would be appropriate to propose modifications to utility energy efficiency programs so that they better serve the multifamily sector.

Share best practices.

Sharing best practices from other states can be helpful in overcoming resistance to adopting multifamily energy efficiency programs from utilities and/or regulators. Best practices can be used to clearly demonstrate that obstacles to change can be overcome. However, to be most effective, the best practices used should be based in a similar context as to the one you are operating in (e.g. same region, regulatory environment, etc.).

Figure 9. Energy efficiency program plan filing timelines for a sample of states

State	Energy Efficiency Program Filing Deadlines
Arizona	By June 1 of each odd year each utility must file an implementation plan. ²⁸
Arkansas	Utilities must file plans by April 1, 2013 for the 2014-2016 program period. ²⁹
California	On July 2, 2012, utilities filed energy efficiency program plans for 2013-2014. ³⁰
Colorado	Xcel Energy filed its 2012-2013 energy efficiency plan in August 2011.
Connecticut	Plans must be submitted on September 1st of each year. ³¹
Hawaii	Hawaii's statewide energy efficiency administrator is required to submit an annual plan prior to July each year. ³²
Illinois	Beginning in 2007, a utility must file a plan no later than October 1 every 3 years. ³³
Indiana	Plans must be filed with the Commission on July 1, 2013, 2016, and 2019. ³⁴
Iowa	On November 30, 2012, Interstate Power and Light Company filed an energy efficiency plan for the years 2014-2018. ³⁵
Maine	Maine's statewide energy efficiency administrator must file an annual implementation plan prior to December 3 each year. ³⁶
Maryland	Beginning July 1, 2008, each electric utility must submit a plan every 3 years. ³⁷
Massachusetts	Beginning in 2009, the electric and natural gas distribution companies must submit their respective plans every 3 years on or before October 31. ³⁸
Minnesota	Beginning in 2009, gas and electric investor-owned utilities must file conservation improvement plans every three years by June 1. ³⁹
New Mexico	Public Service Company of NM July 1, 2014 and every 2 years thereafter; Southwestern Public Service Company on April 15, 2013 and every 2 years thereafter; El Paso Electric Company on June 15, 2013 and every 2 years thereafter. ⁴⁰
North Carolina	Beginning September 1, 2008, each utility must submit an integrated resource plan every 2 years that includes energy efficiency programs. ⁴¹
Ohio	Each electric utility must file an updated program portfolio plan by April 15, 2013, and by April 15th every third year thereafter. ⁴²
Pennsylvania	Plans for 2013-2015 program years were submitted on November 1, 2012.
Rhode Island	Annual plans must be submitted by November 1, 2012 of each year. ⁴³
Texas	An electric utility must submit a plan on or before April 1st of each year. ⁴⁴
Washington	Beginning Jan. 2010, electric utilities are required to file conservation plans every 2 years. ⁴⁵

Engagement in Action: State Case Studies

Pennsylvania

Case study at a glance	
Challenges:	<ul style="list-style-type: none">• Lack of targeted funding for multifamily.• Lack of one-stop-shop for multifamily.• Lack of policy guidance from the PUC in support of multifamily.
Engagement Approach:	<ul style="list-style-type: none">• Multiple convenings identified programmatic and policy barriers.• Partnered with the Pennsylvania Utility Law Project to facilitate conversations.• Multifamily retrofits completed by the Pennsylvania Housing Finance Agency demonstrated energy savings potential.• Advanced program and policy changes using strategic entry points including the PUC's review of existing program rules and utility plan filing requirement.• Demonstrated broad coalition of support for policy changes.
Outcomes:	<ul style="list-style-type: none">• PUC adopts policy change to incent the creation of targeted multifamily programs.• Utilities create targeted multifamily programs.

In November 2012 several Pennsylvania electric utilities announced new multifamily energy efficiency programs representing a total investment of more than \$12 million. One year earlier the project team began engaging with the utilities, the public utility commission, and other key stakeholders to address the lack of dedicated funding for multifamily housing. Early on it became apparent that more explicit incentives from the public utility commission (PUC) were necessary to encourage the utilities to better serve the multifamily housing sector. The project team proposed several policy changes that were ultimately adopted by the PUC and helped to incent utilities to create dedicated multifamily energy efficiency programs.

Right timing and state partners prove critical to success

Electric utilities in Pennsylvania are required by state law to adopt an energy efficiency and conservation plan (EE&C plan) to reduce electric consumption among their customers.⁴⁶ The Pennsylvania PUC is responsible for ensuring that utilities comply with the law, known as Act 129, and setting forth the rules and regulations by which the utilities must follow when developing their portfolio of programs. The PUC must approve a utility's EE&C plan before it can be

PHFA's Preservation through Smart Rehab Program Proves the Value of Multifamily Energy Efficiency

There are approximately 139,000 units of existing affordable housing in Pennsylvania, of which more than half are over 25 years old.⁴⁷ The Pennsylvania Housing Finance Agency (PHFA) identified high operating costs driven by rising utility expenses as a threat to the continued affordability of this housing stock. PHFA created the Preservation through Smart Rehab Program (Smart Rehab) to provide financing for capital improvements that will result in a measurable reduction in energy consumption and utility costs. In addition to financing, the program includes comprehensive energy audits, project oversight during construction, and benchmarking.⁴⁸

Presbyterian Apartments in Harrisburg, PA illustrates the benefits of energy efficiency improvements for the tenants and owners of multifamily affordable housing. Constructed in 1965, Presbyterian Apartments consists of 165 one-bedroom apartments reserved for low-income seniors. It also includes several common areas including a community room and laundry facility. It is a dual-fuel property with electricity used for heating/air conditioning and natural gas used for



Presbyterian
Apartments;
Low-income
senior housing in
Harrisburg, PA.

clothes drying. Steam is used to heat domestic water.⁴⁹

A comprehensive energy audit identified a number of energy saving opportunities. More efficient lighting was installed in common areas and apartments. ENERGY STAR refrigerators replaced inefficient models. Apartment heat pumps were also replaced. Each apartment was air sealed.

These improvements have resulted in significant energy savings. A 21% reduction in energy use was measured during the first five months after the retrofit was completed. The cost savings from lower utility bills is helping to stabilize the property's finances and ensure that it will continue to operate as quality affordable housing for seniors.

implemented. During the spring of 2012, the PUC began to develop rules that would govern EE&C programs implemented during the years 2013-2015.

In the fall of 2011 the National Housing Trust project team began working with several local partners to convene and engage the utilities with the goal of developing program recommendations for the next phase of Act 129. Critical to the success of this engagement was the involvement of several crucial local partners including the Pennsylvania Housing Finance Agency (PHFA) and the Pennsylvania Utility Law Project (PULP). PHFA has successfully administered \$25 million in funding to make energy efficiency improvements to more than 8,300 affordable apartments through its Preservation through Smart Rehab program.⁵⁰ PHFA's program was presented to the utilities as an opportunity to integrate utility funding into an existing retrofit

program that had achieved proven results. PHFA was also able to use examples of completed retrofits to demonstrate the potential for energy savings in older multifamily buildings.

The Pennsylvania Utility Law Project (PULP) played a critical role in facilitating discussions with key stakeholders including the utilities, the Public Utility Commission, the Office of Consumer Advocate and others. PULP's experience and credibility as an advocate for the rights of Pennsylvania's low-income consumers made it the ideal organization to facilitate discussions with these stakeholders.

Making sure everyone understands the challenges

In November 2011 the NHT project team convened representatives from Pennsylvania electric utilities along with energy efficiency advocates, affordable housing owners and advocates, legal aid providers, and representatives from several key state government agencies including PHFA, the PA PUC, the Department of Community and Economic Development, and the Office of Consumer Advocate. Participants discussed the opportunities and benefits of retrofitting multifamily affordable housing using utility programs, as well as the challenges. Several challenges quickly surfaced as the main impediments to using utility funding for multifamily affordable housing. They included the following:

- Utilities required assurance that they will receive the benefits of energy consumption savings if they implemented low-income multifamily programs. The utilities needed to feel confident that such programs would help them satisfy their energy savings obligations under Act 129.
- Utilities and affordable housing stakeholders cited metering issues as a stumbling block. Commercial utility programs are only available to customers with commercial meters, while residential programs, including programs designated for low-income residents, are only available to customers with residential meters. An owner of a multifamily building with a mix of meters would have to apply to both programs to address the full building- a time-consuming and confusing process. Furthermore, programs designated for low-income households only served residential accounts, effectively shutting out residents of master-metered affordable multifamily buildings from receiving any benefits.
- Affordable housing stakeholders also identified the challenge of securing capital for up-front costs as an obstacle.

PUC announces support for multifamily housing

In March 2012 the PA PUC issued a secretarial letter requesting feedback on the implementation of Act 129 in anticipation of utilities' next plan filing.⁵¹ The project team submitted multiple comment letters calling on the PUC to provide appropriate incentives to ensure that multifamily housing is adequately served by utility EE&C plans. More than 30 organizations representing a broad coalition of national and state energy efficiency experts and service providers, affordable housing advocates, providers, investors and managers, and supporters of low-income consumer rights, joined this effort.⁵²

In its final implementation order, the PUC agreed that multifamily housing has been underserved and “encouraged the [utilities] to recognize the available potential for energy savings in multifamily housing and develop strategies and programs to sufficiently address this opportunity within their Phase II EE&C plans.”⁵³ Although the project team requested that the PUC require utilities to meet certain funding and savings targets in the multifamily sector, the PUC declined to do so. Several utilities opposed the creation of such a mandate because there was no such requirement for a specific carve-out of budget or savings from the multifamily housing sector in the Act 129 legislation.

Absent specific multifamily requirements, there needed to be some other way to incent the utilities to create multifamily programs. The Act 129 legislation requires utilities to obtain a minimum of 10% of all consumption reductions from the units of federal, state and local governments, educational institutions, and nonprofit entities. The project team urged the Commission to allow utilities to count energy savings achieved through low-income multifamily programs against the Government/Educational/Nonprofit requirement.⁵⁴ The Commission agreed and determined that any savings achieved from multifamily housing that was financed under a federal or state housing program would count under the Government/Educational/Nonprofit carve-out. This includes for-profit owned multifamily properties so long as long-term rent restrictions are in place.

Utilities create new multifamily programs

In November 2012 the utilities filed their 2013-2015 EE&C plans with the PUC. Several utilities included new or improved multifamily programs. PECO created the Smart Multi-Family Solutions program. The program is designed for retrofit and replacement projects in both master-metered common areas and individually-metered units of multifamily facilities. By creating a single program that addresses both residential and commercial meters, PECO has streamlined the process owners must go through to access energy efficiency incentives for the entire multifamily building.⁵⁵

Duquesne Light has also created a program geared towards providing a simplified, one-stop-shop for owners of low-income multifamily properties seeking energy efficiency services. The Multifamily Housing Retrofit Program provides energy efficiency audits and financial incentives, assistance to owners in evaluating potential measures and soliciting contractors, and support for owners in integrating funding from non-utility sources.⁵⁶

PPL Electric created a Master Metered Low-Income Multifamily Housing Program. The program will provide direct installation, financial incentives, and rebates for electric efficiency improvements in low-income multifamily buildings. The program offers higher incentives than typically offered through other utility programs in order to best engage building owners with limited available capital.⁵⁷

Minnesota

Case study at a glance	
Challenges:	<ul style="list-style-type: none">• Lack of targeted funding for low-income multifamily.• Lack of guidance on how to qualify multifamily properties as low-income.• Multifamily owners unaware of utility incentives.• Utilities unaware of energy savings potential in multifamily and how to access the sector.
Engagement Approach:	<ul style="list-style-type: none">• Multiple convenings identified the barriers to energy efficiency and the potential energy savings available.• Convenings also identified opportunities to help utilities access multifamily owners.• MN PUC Commissioner and leaders from the MN Division of Energy Resources participated in the convenings and underscored the importance of capturing savings from multifamily housing.• Affordable multifamily stakeholders provided recommendations for streamlining the low-income documentation process.
Outcomes:	<ul style="list-style-type: none">• Utilities create pilot low-income multifamily programs.• DER releases guidance allowing properties with use restrictions to automatically qualify for utility low-income programs.

In the fall of 2011 the project team began working with stakeholders in Minnesota to advance low-income multifamily utility programs. There were several opportunities that the project team seized on in Minnesota. These included a very engaged and effective state housing finance agency; clear energy savings goals for utilities; a history of robust utility energy efficiency programs for other building sectors; a supportive and engaged public utility commission; and a statutory requirement that utilities dedicate a certain percentage of their efficiency budgets to benefit low-income households. The main obstacle to the creation of low-income multifamily programs was a lack of understanding of the respective goals and constraints of utility and multifamily affordable housing stakeholders. To address this challenge, the project team facilitated several structured discussions among key players in order to collaborate to develop specific and practical program design concepts.

Maintaining early momentum

Stakeholders in Minnesota realized the importance of serving multifamily housing and formed the Rental Housing Energy Efficiency Working Group in early 2010. Xcel Energy and CenterPoint Energy, the state's two largest investor-owned utilities, attended the Working Group, as did representatives from legal aid organizations, Minnesota Green Communities, the Minnesota Housing Finance Agency, among others. The Group published a report in January of 2011 outlining detailed and comprehensive recommendations to overcome barriers to providing energy efficiency upgrades in multifamily housing.

The Trust convened key stakeholders in September of 2011, including utility companies, state agencies, and the housing finance agency. Early on, the Trust allied with Minnesota Green Communities, an affordable housing initiative that had well-developed relationships with the utilities. The aims of the meeting were to revisit the importance of improving the efficiency of multifamily housing and to develop cooperative partnerships between the key stakeholders. Several affordable housing providers presented examples of completed multifamily retrofit projects, noting the resultant energy savings. Utilities left the meeting with a better understanding of the scale of energy savings that could be achieved in the multifamily stock and how they might access the sector. Affordable housing providers left the meeting more aware of the utilities' role in providing energy efficiency services. These takeaways spurred continued interest among both sets of stakeholders to advance multifamily programs.

Identifying the barriers

A second convening was held in January 2012. It was structured as a workshop with the goal of collaboratively developing specific and practical design concepts of cost-effective and easily accessible multifamily energy efficiency programs. Utility representatives and multifamily affordable housing stakeholders were provided an opportunity to share their respective goals and constraints. Key challenges discussed included:

- Ensuring that low-income multifamily buildings can be deemed eligible for low-income utility energy efficiency programs using a streamlined income verification process to reduce the burdens of income verifying every household.
- Allowing multifamily owners to access funding designated for low-income households when buildings are master-metered.
- Providing incentive levels sufficiently high to ensure the participation of multifamily affordable properties given the limited access to other sources of funding for energy efficiency improvements.

Realizing the value of collaboration

Critical to the success of the workshop was the participation of key leaders from the state energy office and the public utility commission (PUC), the two state agencies responsible for overseeing and regulating the utilities' energy efficiency portfolios. PUC Commissioner Betsy Wergin reminded the utilities that the multifamily housing stock had been underserved and is an opportunity for achieving energy savings. Commissioner Wergin chaired the NARUC committee responsible for the adoption of a resolution calling for the fair expenditure of ratepayer funding for multifamily housing (See page 14 of this report for more information about the NARUC resolution). She made it clear that the state supported efforts to develop cooperative approaches to capture new energy savings.

Another key component of the workshop was a presentation by Minnesota Housing outlining the agency's goals and approach to financing multifamily affordable housing. Like many state housing finance agencies, Minnesota Housing's finance programs include mandatory energy efficiency requirements- something the utilities were not aware of. The agency outlined several ways it could help the utilities overcome some of the challenges of serving multifamily affordable

housing. These included:

- Easy access to multifamily owners and property managers who have committed to making energy efficiency improvements but are in need of resources;
- Assurance that low-income tenants will benefit from the improvements since properties financed by the agency are subject to long-term affordability restrictions; and
- An existing process for income verification to ease concern about time-consuming document collection.⁵⁹

Utilities and regulators act

Xcel Energy and CenterPoint submitted multifamily program proposals in June of 2012. Xcel created its first ever Multi-Family Energy Savings Program which will offer free the replacement of lighting, refrigerators, freezers, and air-conditioning units.⁶⁰ The program will also provide seminars in multifamily housing to educate tenants on conservation and free in-unit upgrades.

CenterPoint launched a Low-Income Multi-Family Building Rebate Project which focuses on heating system and water heater rebates. The rebates are 25% higher than the rebates typically offered for Commercial/Industrial projects.⁶¹

Energy Efficient Housing Reduces Ear Infections and Respiratory Allergies in Children

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, MN resulted in measurable decreases in certain ailments for both young and old residents. Viking Terrace consists of 60 apartments affordable to households with a mix of incomes. Built in 1974, the property received a significant redevelopment in 2007 led by Southwest Minnesota Housing Partnership (SMHP). SMHP incorporated extensive energy efficient and green measures as part of the property rehabilitation. Improvements included a new geo-thermal heating and cooling



Viking Terrace;
Energy Efficient and
Healthy Housing in
Worthington, MN

system, enhanced insulation, whole-unit ventilation system, ENERGY STAR rated appliances, and much more.

These measures reduced energy use by 45%. More importantly a study by the National Center for Healthy Housing found that the incidence of specific medical conditions decreased, including:⁶²

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

The Division of Energy Resources (DER) also handed a victory to the coalition. DER is the state agency responsible for overseeing utility programs to ensure that ratepayer dollars are used effectively and energy savings are reported as accurately as possible. As discussed above, the Rental Housing Energy Efficiency Work Group cited lack of guidance on how to qualify multifamily properties as low-income as a major barrier to accessing efficiency programs.

The DER facilitated the eligibility of multifamily buildings for energy efficiency funding by providing guidance clarifying the process of designating buildings with five or more units as low-income.⁶³ The DER determined that meeting any one of the following features would qualify a multifamily building as low-income:

- An appearance on the U.S. Dept. of Energy's Weatherization Assistance Program (WAP) list of eligible buildings
- Designated as a Low Income Renter Certification (LIRC) property based on MN Housing's data on the number of low-income units in a building
- Use restriction contracts that specify a certain percent of units within a development are rented to tenants with annual income 60% or less of AMI

The low-income multifamily programs launched by Xcel Energy and CenterPoint Energy are pilots and are limited in scope but represent progress towards addressing some of the barriers that have prevented low-income residents of multifamily buildings from benefiting from energy efficiency improvements. Critical to this progress was ensuring that both affordable housing stakeholders and utilities understood each other's goals and constraints. This was achieved through multiple structured discussions and ongoing dialogue between the key players.

Maryland

Case study at a glance

Challenges:	<ul style="list-style-type: none">• Utilities fail to meet state mandated energy efficiency requirements for low-income programs.• Master-metered multifamily buildings are ineligible for funding through low-income energy efficiency programs.
Engagement Approach:	<ul style="list-style-type: none">• Supported the MD Dept. of Housing and Community Development (DHCD) in its bid to administer utility-funded low-income energy efficiency programs.• Provided testimony to the Public Service Commission (PSC) documenting examples of state housing agencies like DHCD that were instrumental to implementing utility-funded efficiency programs.• Testified before the PSC urging that additional funding for low-income multifamily housing be provided as part of a merger settlement.
Outcomes:	<ul style="list-style-type: none">• The PSC transferred authority to DHCD to administer all utility-funded low-income energy efficiency programs and approved \$12.5 million for low-income multifamily housing.• The PSC approved an additional \$9 million in funding for low-income multifamily housing as part of a merger settlement and determined that master-metered buildings are eligible to receive funding.

In 2011 and 2012, the Maryland Public Service Commission (PSC) directed utilities to set aside a total of \$21 million in funding for the purpose of making energy efficiency improvements in multifamily affordable housing. The Maryland Department of Housing and Community Development (DHCD) was designated by the PSC to manage the funding. The PSC made this decision, in part, because it determined that the utilities had failed to adequately provide energy services to the state's low-income population. In contrast, DHCD has a proven record of delivering weatherization and retrofit services to low-income households, including in multifamily properties.

Utilities fail to meet state mandated energy efficiency requirements

In December 2011, the PSC completed a review of the utilities' performance under the first three years of the state's mandated energy efficiency savings requirements known as EmPOWER Maryland. The EmPOWER Maryland Energy Efficiency Act of 2008 directed the utilities to achieve a 15% reduction in electricity consumption and peak demand by 2015.⁶⁴ The Act also required each investor-owned utility to operate low-income energy efficiency programs. In the first few years of the program, however, the utilities reported drastically low participation numbers in their low-income programs.⁶⁵

The EmPOWER Act requires each electric utility company to file an energy savings and demand reduction plan every three years beginning in 2008. In the fall of 2011 the PSC conducted hearings to evaluate the utilities' performance over the last three years and consider

their proposed programs for the next three years. DHCD argued that the utilities had failed to meet their obligations under the EmPOWER Act with respect to serving low-income families and proposed that it manage the low-income programs instead, including \$12.5 million for low-income multifamily housing. The Trust supported DHCD's request and provided testimony documenting other examples of state housing agencies like DHCD that were instrumental to implementing utility-funded efficiency programs for low-income multifamily properties. The PSC ultimately agreed to DHCD's request, transferring the responsibility for administering low-income energy efficiency programs to the agency.

DHCD's experience makes it ideal for administering utility funding

DHCD's case for managing utility funding was bolstered by its previous experience working with the Maryland Energy Administration (MEA) to successfully administer federal stimulus funding for efficiency improvements in low-income multifamily housing. The Maryland Energy Administration (MEA) and DHCD teamed up to create the Multifamily Energy Efficiency and Housing Affordability (MEEHA) program in 2009. MEA provided \$6.5 million in seed funding from the American Recovery and Reinvestment Act (ARRA) to initiate the MEEHA program. The program provided funding for energy audits, energy efficiency retrofits, and renewable energy improvements.

Part of MEEHA's success can be attributed to DHCD's experience administering several affordable housing programs which facilitated targeted outreach and streamlined project execution. 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 multifamily finance staff leveraged their existing relationships with affordable housing providers to recruit participation.

By the time the PSC was considering DHCD's request to administer a utility-funded multifamily program, the MEEHA program had built a solid record of success. Energy efficiency improvements were completed or underway in over 5,100 apartments in 48 multifamily rental developments. Annual energy savings of nearly 10,000 megawatt hours (MWh) were expected; savings equal to the electricity consumption of 800 Maryland homes. A reduction of 6,500 metric tons of carbon emissions were also expected; the equivalent of taking more than 1,200 cars off the road. The program was shown to be very cost effective. The average investment of \$1,750 per apartment returns more than \$10,000 in cost savings over the life of the energy efficiency measures. These savings will help to ensure that low-income housing can remain affordable for families and seniors.

Merger provides an opportunity for additional funding

While the ratepayer funding expanded the number of multifamily properties that could receive energy efficiency upgrades, demand still far exceeded available resources. An opportunity to further increase funding for efficiency improvements in multifamily affordable housing presented itself when the PSC began evaluating the proposed merger of Exelon Corporation and Constellation Energy Group. As a condition of approval of the merger, PSC required Exelon to capitalize a \$113 million Customer Investment Fund (CIF) to benefit ratepayers of Constellation's

subsidiary, Baltimore Gas & Electric (BGE), through investments in energy efficiency and utility payment assistance.⁶⁶ In March 2012, the PSC invited specific proposals for how the funding should be distributed.

The Trust participated in the public comment process and urged the PSC to allocate additional funding to DHCD for expansion of the MEEHA program. In testimony before the PSC, the Trust made the case that funding through the EmPOWER program will only serve 2% of the multifamily rental housing stock in BGE's electric service territory and that additional resources were needed to address this underserved sector.⁶⁷

The Trust also urged the PSC to allow CIF funding to be used to expand existing energy efficiency services to master-metered low-income multifamily properties. Due to the commercial classification of these properties, they are currently ineligible for utility funding through the EmPOWER Low Income Energy Efficiency programs despite the fact that many such properties are home to low-income families. The Trust made the case that providing funding to master-metered properties would result in a more equitable treatment of low-income renters. Residents of master-metered properties receive numerous benefits from energy efficiency investments including stable affordable housing, lower rents due to more efficient property operations, and improved health and comfort due to better air sealing and insulation.

On November 8, 2012, the PSC issued its final ruling on the allocation of CIF funds providing an additional \$9 million for energy efficiency improvements in multifamily affordable housing, including master-metered properties.

Tapping into State Housing Agency Pipelines to Achieve Energy Savings

The MD Department of Housing and Community Development (DHCD) administers the Multifamily Energy Efficiency and Housing Affordability (MEEHA) program. The program provides funding for energy audits and energy efficiency improvements.

Part of MEEHA's success can be attributed to DHCD's experience administering several affordable housing programs

which facilitated targeted outreach and streamlined project execution. Affordable multifamily projects already being considered for other DHCD rental financing were targeted for MEEHA funding.

Mountain View Towers, senior affordable housing in Cumberland, Maryland, was redeveloped in 2009 with financing from DHCD, including MEEHA funding. The proforma below demonstrates how the MEEHA funding fit into the project's overall financing.

Mountain View Towers Proforma:

Sources of Funds		Uses of Funds	
Federal LIHTC Equity (DHCD)	\$4,913,000	Acquisition	\$3,300,000
Tax 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

Rhode Island

Case study at a glance	
Challenges:	<ul style="list-style-type: none">• Multifamily stakeholders faced barriers when trying to access comprehensive energy efficiency services.• Key staff from National Grid and the Rhode Island Housing Finance Agency were not collaborating.
Engagement Approach:	<ul style="list-style-type: none">• Facilitated several meetings with key players to discuss the fair allocation of ratepayer dollars to multifamily energy efficiency efforts, overcoming program design challenges, and achieving comprehensive retrofits.• Rhode Island Housing presented a pipeline of multifamily properties that were to be recapitalized as potential candidates for energy efficiency services.
Outcomes:	<ul style="list-style-type: none">• National Grid proposed a new and improved process for serving multifamily housing that includes a single-point-of-contact for property owners and better coordination among the various energy efficiency programs that provide incentives for multifamily housing.

Families living in affordable multifamily housing in Rhode Island face high energy bills and barriers to ratepayer-funded energy efficiency investments. Almost 50% of multifamily renters spend 30% or more of their income on housing and utility bills.⁶⁸ Despite a demonstrated need for multifamily energy efficiency resources, existing utility programs were not set up to adequately address the sector.

Key opportunities emerge

Although Rhode Island's multifamily housing was underserved, the state had several features amenable to implementing a targeted program.

- First, the stakeholders were limited. Only one major utility, National Grid, serves Rhode Island.
- Second, the housing finance agency, Rhode Island Housing, had prioritized the preservation of existing affordable housing stock.
- Finally, decisions by the Public Utility Commission, bolstered by legislative changes, expanded energy efficiency program budgets and relaxed restrictions on energy efficiency measures for natural gas.⁶⁹

Legislative revisions provided an opportunity for multifamily stakeholders to reshape energy efficiency offerings to better serve the multifamily sector. In late 2010, Rhode Island's legislature adopted a revenue decoupling bill that extended the "Least Cost Procurement" provision to natural gas energy efficiency programs.⁷⁰ Previously, the Commission was obligated to approve only utility electric energy efficiency plans so long as the measures were cost-effective

compared to supply. Ratepayer funding for electric energy efficiency programs was also on the rise. In 2011, Rhode Island's Public Utilities Commission approved \$45.6 million for electric energy efficiency, a 47% increase over 2010 spending.⁷¹

Connecting the utility and housing finance agency

A key team partner, National Consumer Law Center (NCLC), seized the opportunity to convene stakeholders to influence the multifamily energy efficiency offerings. On May 9, 2011, Charlie Harak of NCLC led a meeting with several key Rhode Island stakeholders, including representatives from the Rhode Island Energy Efficiency Resource Management Council (EERMC), public health and housing advocates, Providence city planners, the Rhode Island Housing Finance Agency, and the Rhode Island Foundation.


At the meeting participants considered the fair allocation of ratepayer dollars to multifamily energy efficiency efforts, overcoming program design challenges, and achieving comprehensive retrofits. Representatives from the Rhode Island Housing Agency reported that the agency had a portfolio of more than 16,000 apartments but faced challenges in preserving low-income housing. Some of the multifamily buildings must be refinanced and could not support the additional debt required to install energy efficiency upgrades.

This initial stakeholder meeting proved crucial. The broad coalition of perspectives represented eventually helped National Grid shape its multifamily pilots and proposals. The inclusion of representatives from the EERMC was critical. The EERMC serves a consultative function for National Grid, as mandated by statute and provides feedback and advice on improving energy efficiency programs.

Following the initial meeting, NCLC brought together National Grid and representatives from Rhode Island Housing. The meeting established a working relationship between the two organizations, one that had a multifamily pipeline, the other with responsibility to meet its energy efficiency goals. The Rhode Island Housing representatives provided affordable multifamily housing projects that could easily meet the "least cost procurement" requirement for National Grid and achieve deep energy savings. Rhode Island Housing also provided a series of recommendations to National Grid for improving their multifamily program such as providing a single point of contact for multifamily owners and implementing an energy use benchmarking pilot. Both National Grid and Rhode Island Housing have indicated that they see value in continuing their collaboration to better leverage energy efficiency resources.

National Grid revamps its approach to multifamily energy efficiency

One area of improvement identified by Rhode Island Housing and other stakeholders was the need to create a more streamlined, integrated process to make it easier for multifamily owners to access utility funding. Multifamily buildings can qualify for energy efficiency incentives under various National Grid residential and commercial programs depending on the mix of meters at the property and the type of efficiency improvements that are needed. However, requiring owners to apply to multiple programs to address the full energy efficiency needs of a building creates a significant barrier to their participation.



In its Energy Efficiency Program Plan for 2013, National Grid proposed a new and improved process for serving multifamily housing that includes a single-point-of-contact for property owners and better coordination among the various energy efficiency programs that provide incentives for multifamily housing.⁷² A Multifamily Program Manager will be hired to help customers understand and apply for all eligible incentives. Through this tailored approach National Grid will be able to comprehensively address efficiency improvements for living spaces, common areas, and exterior lighting. Available incentives include building shell measures such as air sealing and insulation, heating and domestic hot water, cooling, lighting, and appliances. The program offers no-cost services and measures for low income multifamily buildings, defined as housing owned by public housing authorities or that receive state or federal government subsidies.

Conclusion

We are faced with an important opportunity to achieve significant energy savings and in turn help to sustain much needed affordable housing for our nation's low-income families. Utility spending on energy efficiency programs is expected to increase substantially over the next decade. By effectively targeting these resources to multifamily affordable rental housing we will help utilities and state governments achieve their energy savings goals, increase housing affordability for low-income households, spur economic growth, and significantly reduce carbon emissions.

Advancing effective utility-sponsored multifamily energy efficiency programs can be challenging. Stakeholders must address a number of obstacles if successful efforts are to become commonplace. Obstacles include the split incentive problem; lack of targeted, streamlined multifamily programs; limited access to upfront capital; and lack of coordination and collaboration among key players from both sectors. Nonetheless, the case studies presented in this report clearly show that such obstacles can be overcome. The Pennsylvania Public Utility Commission changed its policies to make it more attractive for utilities to address multifamily housing and that led to the creation of several targeted utility programs. Utilities in Minnesota created the first ever low-income multifamily programs in the state. The Maryland Public Service Commission made it significantly easier to mesh utility and affordable housing funding streams by tapping the Maryland Department of Housing and Community Development to administer more than \$20 million in utility funding. And collaboration among National Grid and the Rhode Island Housing Finance Agency led to a much more streamlined and efficient process for delivering services to multifamily housing.

These case studies provide several common lessons about successful engagement to advance multifamily utility programs. Building relationships with key utility and regulatory decision makers is critical. Simply bringing stakeholders together and facilitating an open dialogue can begin to catalyze change. Multifamily stakeholders must define the value proposition for utilities by demonstrating the significant energy savings potential in this housing stock and should take advantage of strategic entry points such as utility plan filing deadlines and rulemaking proceedings in which the design of energy efficiency programs could be raised.

The path is now defined and the National Housing Trust along with its partners – ACEEE, the National Consumer Law Center and D&R International – looks forward to a future where affordable multifamily rental properties in every state are harnessing utility energy efficiency resources.

Endnotes

1. U.S. Department of Housing and Urban Development Office of Policy Development and Research, "Quantifying Energy Efficiency in Multifamily Rental Housing." *Evidence Matters*, Summer 2011.
2. Ibid.
3. Cohen, Rebecca, *The Impacts of Affordable Housing on Health: A Research Summary* (Washington, DC: Center for Housing Policy, 2011).
4. Mackres, Eric, *Energy Efficiency and Economic Opportunity* (Washington, DC: American Council for an Energy Efficient Economy, 2012).
5. Energy Information Administration. *2009 Residential Energy Consumption Survey* [Table CE1.1]. Retrieved from <http://www.eia.gov/consumption/residential/data/2009/index.cfm?view=consumption#summary>.
6. See Pivo, Gary, *Energy Efficiency and its Relationship to Household Income in Multifamily Rental Housing* (2012). Mr. Pivo used data from the 2005 and 2009 U.S. Residential Energy Consumption Surveys to determine that multifamily rentals averaged 34% fewer energy efficiency features than the number found in other types of housing. He also concluded that lower income multifamily renters lived in less energy efficient units than higher income multifamily renters and that this efficiency gap grew between 2005 to 2009.
7. Bipartisan Policy Center. *Housing America's Future: New Directions for National Policy* (Washington, DC: 2013).
8. American Community Survey, 5-Year Estimates 2007-2011, Tenure by Units in Structure (U.S. Census Bureau).
9. Pivo, Gary, *Energy Efficiency and its Relationship to Household Income in Multifamily Rental Housing* (2012).
10. Lee, Christopher, *2012 Survey of Operating Income & Expenses in Rental Apartment Communities* [Executive Summary] (Arlington, VA: National Apartment Association, 2012).
11. U.S. Department of Housing and Urban Development Office of Policy Development and Research, "Quantifying Energy Efficiency in Multifamily Rental Housing." *Evidence Matters*, Summer 2011.
12. See McKibben, Anne, et al., *Engaging as Partners in Energy Efficiency: Multifamily Housing and Utilities* (CNT Energy and American Council for an Energy Efficient Economy, 2012); Harak, Charlie, *Up the Chimney: How HUD's Inaction Costs Taxpayers Millions and Drives Up Utility Bills for Low-Income Families* (Boston MA: National Consumer Law Center, 2010); Johnson, Kate and Erik Mackres, *Scaling up Multifamily Energy Efficiency Programs: A Metropolitan Area Assessment* (Washington, DC: American Council for an Energy Efficient Economy, 2013); and Benningfield Group, *US Multifamily Energy Efficiency Potential by 2020* (Folsom, CA: The Benningfield Group, 2009).
13. By "energy efficiency programs for utility customers" we mean those programs funded by utility customers via customer rates or special purpose, "public benefits fees." Such programs may be administered by utilities or non-utility organizations. As shorthand, throughout this report we often refer to these as "utility-sector" programs in recognition of both utility and non-utility administration.
14. Foster, Ben, et al., *The 2012 State Energy Efficiency Scorecard* (Washington, DC:

- American Council for an Energy Efficient Economy, 2012).
15. For recent data on utility energy efficiency spending by state, see Foster, Ben, et al., *The 2012 State Energy Efficiency Scorecard* (Washington, DC: American Council for an Energy Efficient Economy, 2012).
 16. Energy Information Administration. *2009 Residential Energy Consumption Survey* [Table CE2.1]. Retrieved from <http://www.eia.gov/consumption/residential/data/2009/index.cfm?view=consumption#fuel-consumption>
 17. For example, see See McKibben, Anne, et al., *Engaging as Partners in Energy Efficiency: Multifamily Housing and Utilities* (CNT Energy and American Council for an Energy Efficient Economy, 2012); and Harak, Charlie, *Up the Chimney: How HUD's Inaction Costs Taxpayers Millions and Drives Up Utility Bills for Low-Income Families* (Boston MA: National Consumer Law Center, 2010).
 18. Johnson, Kate and Erik Mackres, *Scaling up Multifamily Energy Efficiency Programs: A Metropolitan Area Assessment* (Washington, DC: American Council for an Energy Efficient Economy, 2013).
 19. Ibid.
 20. Ibid.
 21. Benningfield Group, *US Multifamily Energy Efficiency Potential by 2020* (Folsom, CA: The Benningfield Group, 2009).
 22. The text of NARUC's resolution can be retrieved here: <http://www.naruc.org/Resolutions/Resolution%20Supporting%20Fair%20Expenditure%20of%20Energy%20Efficiency%20Funds.pdf>. The text of NASUCA's resolution can be retrieved here: <http://www.nasuca.org/archive/NASUCA%202011-4.pdf>.
 23. Regional data on the average annual electricity consumed by multifamily are from the Energy Information Administration. *2009 Residential Energy Consumption Survey* [Tables CE2.2-CE2.5]. Retrieved from <http://www.eia.gov/consumption/residential/data/2009/index.cfm?view=consumption#fuel-consumption>; Data on the number of multifamily units in each state are from American Community Survey, 5-Year Estimates, *Units in Structure* (U.S. Census Bureau, 2011).
 24. See, for example, McKibben, Anne, et al., *Engaging as Partners in Energy Efficiency: Multifamily Housing and Utilities* (CNT Energy and American Council for an Energy Efficient Economy, 2012).
 25. "Massachusetts Affordable Housing Energy Benchmarking 2011 Metric 3 Final Report". Prepared for the Low Income Energy Affordability Network (LEAN)", January 26, 2011.
 26. For more information about the PSE&G's multifamily program see: Bryant, Elaine and Susan Lacey Ringhof, *The Collaborative Program Design and Delivery Strategies Behind the Development, Regulatory Approval, and Successful Implementation of PSE&G's Residential Multifamily Housing Program*.
 27. For information about the expansion of PSE&G's multifamily program see: Public Service Electric and Gas Company, *In the Matter of the Petition of Public Service Electric and Gas Company for an Extension of Three Sub-Program Components of its Energy Efficiency Economic Stimulus Program in its Service Territory on a Regulated Basis and Associated Cost Recovery and for Changes in the Tariff for Electric Service*. Before the State of New Jersey Board of Public Utilities (January 24, 2011).
 28. Arizona Corporation Commission, *In the Matter of the Notice of Proposed Rulemaking on Electric Energy Efficiency*. Docket No. RE-00000C-09-0427, Decision No. 7819 (August 10, 2010).
 29. Arkansas Public Service Commission, *In the Matter of the Continuation, Expansion, and Enhancement of Public Utility Energy Efficiency Programs in Arkansas*. Docket No.

- 13-002-U , Order No. 1 (January 4, 2013).
30. California Public Utilities Commission, *Decision Providing Guidance on 2013-2014 Energy Efficiency Portfolios and 2012 Marketing, Education, and Outreach*. Decision 12-05-015 (May 10, 2012).
 31. Public Utilities Regulatory Authority, PURA Review of the Connecticut Energy Efficiency Fund's Electric Conservation and Load Management Plan for 2012. Docket No. 12-02-01 (August 8, 2012).
 32. See: <http://hawaiienergy.com/75/hawaii-energy-reports>.
 33. See: Illinois Compiled Statutes (220 ILCS 5/8-103).
 34. Indiana Utility Regulatory Commission, Docket No. 42693, Phase II Order (December 9, 2009).
 35. Interstate Power and Light Company, *2014-2018 Energy Efficiency Plan*. Before the Iowa Utilities Board: Docket No. EEP-2012-0001 (November 30, 2012).
 36. Maine Public Law, Chapter 372 LD 1485, item 1, 124th Maine State Legislature (An Act Regarding Maine's Energy Future).
 37. See: http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=MD16R
 38. Massachusetts Department of Public Utilities, *Petition of Massachusetts Electric Company and Nantucket Electric Company, d/b/a National Grid, pursuant to G.L. c. 25, § 21 for approval by the Department of Public Utilities of its Three-Year Energy Efficiency Plan for 2010 through 2012*. Dockets 09-116 through 09-120 (January 28, 2010).
 39. For detailed information on the CIP filing process, see: Minnesota Rules Chapter 7690 (<https://www.revisor.mn.gov/rules/>).
 40. These filing deadlines were proposed by the New Mexico Public Regulation Commission in a Notice of Proposed Rulemaking, Case No. 12-00057-UT on November 20, 2012. These deadlines may change in the final rulemaking.
 41. North Carolina General Statutes § 62-133.8 Renewable Energy and Energy Efficiency Portfolio Standard (REPS).
 42. Ohio Administrative Code, Chapter 4901:1-39: Energy Efficiency and Demand Reduction Benchmarks.
 43. Rhode Island General Laws, Title 39 Public Utilities and Carriers, Section 39-1-27.7.
 44. Texas Utilities Code Sec. 39.9054
 45. Washington Administrative Code Chapter 480-109.
 46. Detailed information about Act 129 including legislative language can be found on the PA Public Utility Commission's website here: http://www.puc.state.pa.us/filing_resources/issues_laws_regulations/act_129_information.aspx
 47. Presentation by Dave Evans, Pennsylvania Housing Finance Agency, November 18, 2011.
 48. Ibid.
 49. Ibid.
 50. More information on the Preservation through Smart Rehab program can be found here: <http://www.phfa.org/developers/preservation/default.aspx>.
 51. Pennsylvania Public Utility Commission, Act 129 Energy Efficiency and Conservation Program Phase Two Secretarial Letter, Docket No. M-2012-2289411 (Issued March 1, 2012).
 52. The coalition letter can be found here: <http://www.puc.state.pa.us/pcdocs/1173112.pdf>.
 53. Pennsylvania Public Utility Commission, Act 129 Implementation Order, Docket No. M-2012-2289411 (Issued August 2, 2012), at pg. 49.
 54. The letter with our complete recommendations can be found here: <http://www.puc.state.pa.us/pcdocs/1182588.pdf>.
 55. Pennsylvania Public Utility Commission, Act 129 Implementation Order, Docket No. M-2012-2289411 (Issued August 2, 2012), at

- pg. 50.
56. PECO, *PECO Program Years 2013-2015 Act 129- Revised Phase II Energy Efficiency and Conservation Plan*. Before the Pennsylvania Public Utility Commission: Docket No. M-2012-2289411 (January 24, 2013). <http://www.puc.state.pa.us/pcdocs/1211882.pdf>
 57. Duquesne Light, *Energy Efficiency and Conservation Plan*. Before the Pennsylvania Public Utility Commission: Docket No. M-2012-2289411. <http://www.puc.state.pa.us/pcdocs/1213694.pdf>
 58. PPL Electric Utilities, *Energy Efficiency and Conservation Plan: Act 129 Phase II*. Before the Pennsylvania Public Utility Commission: Docket No. M-2012-2289411. <http://www.puc.state.pa.us/pcdocs/1213702.pdf>
 59. Presentation by Jeanette Blankenship, Minnesota Housing, "How Affordable Housing Works in Minnesota" (January 9, 2012).
 60. Xcel Energy, *2013-2015 Minnesota Electric and Natural Gas Conservation Improvement Program*. Before the Minnesota Department of Commerce: Docket No. E,G002/CIP-12-447 (June 1, 2012) at pg. 124.
 61. Presentation by Rick Goodeman, Southwest Minnesota Housing Partnership, "Energy Retrofits of Existing Multifamily Affordable Housing" (September 13, 2011).
 62. CenterPoint Energy, *CenterPoint Energy's 2013-2015 Triennial Conservation Improvement Program Plan Filing*. Before the Minnesota Department of Commerce: Docket No. G008/CIP-12-564 (June 1, 2012).
 63. Minnesota Department of Commerce Division of Energy Resources, *CIP Program Recommendations: Meaning of Low-Income in CIP Programming* (May 7, 2012).
 64. For more information about the EmPOWER Act see: http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=MD16R.
 65. Schneider, Jordan et al., *Falling Behind on Energy Efficiency: Maryland Risks Missing Its Electricity Savings Goals* (Maryland PIRG Foundation, 2011).
 66. Maryland Public Service Commission, *In the Matter of the Merger of Exelon Corporation and Constellation Energy Group, Inc.* Case No. 9271, Order No. 85187 (November 8, 2012).
 67. The Trust's testimony to the MD PSC can be retrieved here: http://webapp.psc.state.md.us/Intranet/Casenum/NewIndex3_VOpenFile.cfm?ServerFilePath=C:\Casenum\9200-9299\9271\304.pdf
 68. American Community Survey, 2009
 69. Environment Northeast, *A Boost for Energy Efficiency in Rhode Island: Regulators Approve Expanded Savings for Electric Customers Technical Fix Needed to Expand Natural Gas Program* (Providence: ENE, 2011).
 70. See: <http://www.aceee.org/sector/state-policy/rhode-island>.
 71. Environment Northeast, *A Boost for Energy Efficiency in Rhode Island: Regulators Approve Expanded Savings for Electric Customers Technical Fix Needed to Expand Natural Gas Program* (Providence: ENE, 2011).
 72. The Narragansett Electric Company d/b/a National Grid, *Energy Efficiency Program Plan for 2013*. Before the Rhode Island Public Utilities Commission: Docket No. 4366 (November 2012).



1101 30th Street, NW, Suite 400, Washington, D.C. 20007
(202) 333-8931 | www.nhtinc.org | twitter: @natlhsingtrust