

Engaging as Partners in Energy Efficiency:

Multifamily Housing and Utilities

Overview

There is tremendous potential for energy efficiency improvements in multifamily buildings. And there is a huge opportunity to leverage funds available through electric and natural gas utility efficiency programs to improve efficiency in the multifamily sector. To make the most of this opportunity, the multifamily housing sector must partner with utilities to develop effective, comprehensive energy efficiency retrofit programs.

In “[Engaging as Partners in Energy Efficiency: Multifamily Housing and Utilities](#),” CNT Energy and the American Council for an Energy-Efficient Economy (ACEEE) examine the opportunity and present strategies for effectively engaging with utilities to expand the resources available for energy efficiency improvements for multifamily buildings. Key findings are discussed below. A PDF of the full report and its companion report, “[Engaging as Partners: Introducing Utilities to the Energy Efficiency Needs of Multifamily Buildings and Their Owners](#),” are available at cntenergy.org. These reports are part of ACEEE’s ongoing [Multifamily Energy Savings Project](#). More information about that project is available at aceee.org/multifamily-project.

Multifamily housing owners in the United States could save more than \$3.4 billion annually on utility costs with quality energy efficiency programs.

Multifamily Housing Needs Energy Efficiency, but Barriers Exist

U.S. energy bills in multifamily buildings totaled approximately \$18 billion in 2005. Between 2005 and 2009, residential energy expenditures increased by 10.6 percent. Although energy costs in many parts of the country are currently declining due to low natural gas prices, energy efficiency upgrades can reduce those costs further and protect against future energy price increases.

Through cost-effective building upgrades, energy efficiency programs can achieve savings of 15 percent to 30 percent in buildings with five or more residential units. Based on 2010 national average residential energy prices, energy efficiency improvements of 15 percent for electricity and 30 percent for natural gas in all multifamily buildings would result in annual utility bill savings of approximately \$2 billion on electricity and \$1.3 billion on natural gas. Thus, the potential for energy efficiency savings from enrolling the entire multifamily sector in a quality program is more than \$3.4 billion.

Greater energy efficiency improves cash flow for building owners, frees up money for additional building improvements, reduces tenant turnover, and helps to maintain affordable housing. However, the multifamily housing sector faces a variety of barriers that can make it difficult to invest in energy efficiency upgrades. For instance, building owners may have difficulty finding technical assistance, financing, or qualified contractors to complete the upgrades. In addition, building owners may require financial incentives in order to adopt new technologies or install equipment with higher up-front costs.

Despite the sector’s high potential for energy efficiency, and perhaps because of the barriers owners face, studies have documented that affordable housing, often

FIGURE 1. ANNUAL POTENTIAL SAVINGS FROM MULTIFAMILY BUILDINGS BY STATE

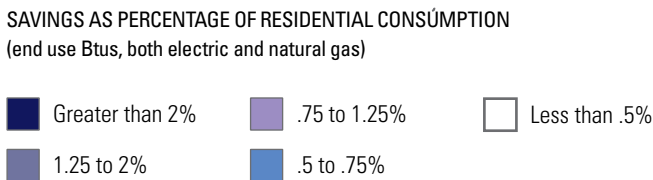
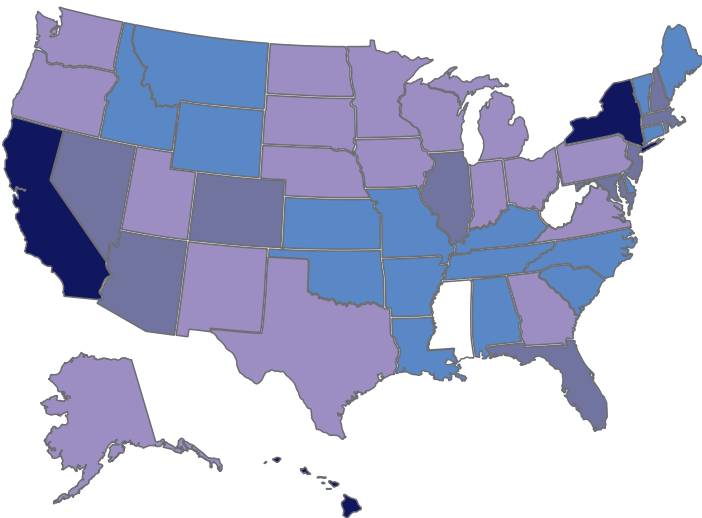


Figure 1 shows the savings potential for each state based on the number of housing units in buildings of five or more units and the national average electricity and natural gas consumption per unit of multifamily housing.

multifamily, receives a disproportionately small share of available energy efficiency funding. Additionally, states vary widely in terms of utility program resources dedicated to multifamily housing. To achieve the greatest benefit from energy efficiency, building owners and utilities should work together to jointly design and fund comprehensive multifamily efficiency improvement programs in ways that meet building owners' needs.

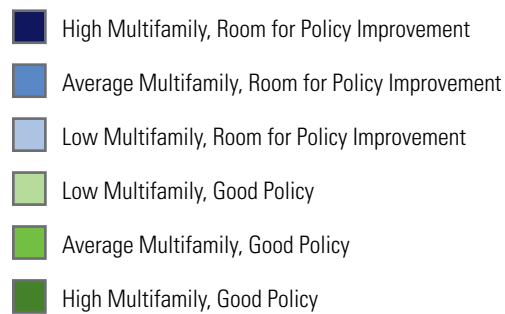
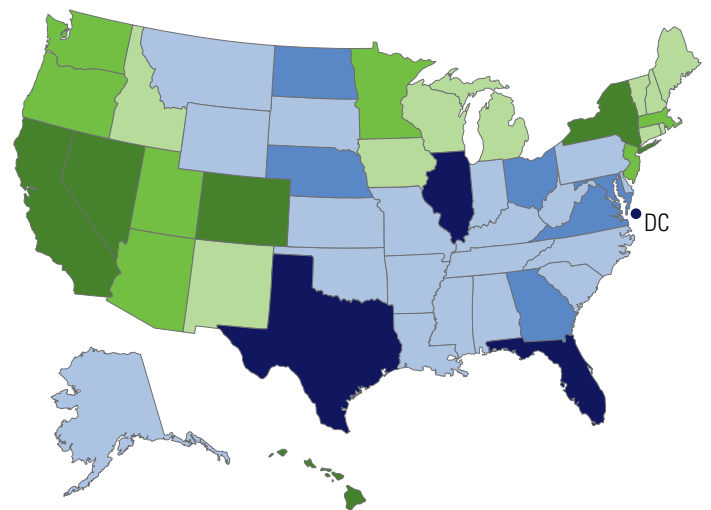
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1. Barbose, G.L., Goldman, C.A., Hoffman, I.M., Billingsley, M.A. (2013) The Future of Utility Customer-Funded Energy Efficiency Programs in the United States: Projected Spending and Savings to 2025. *Energy Efficiency Journal* DOI 10.1007/s12053-012-9187-1

Utilities Have Funding for Energy Efficiency that Could Serve Multifamily Housing

Utilities are major players in the energy efficiency arena, having contributed almost \$7 billion to electric and natural gas efficiency programs in 2011, and an expected \$6.5 billion to \$15.6 billion annually by 2020. While investments are becoming more widespread, almost 68 percent of utilities' contributions occurred in just 10 states as recently as 2008.¹

FIGURE 2: STATES THAT WOULD BENEFIT MOST FROM IMPROVED MULTIFAMILY ENERGY EFFICIENCY POLICY.



Every state holds opportunities to improve the energy efficiency of its building stock. CNT Energy analysis shows that the District of Columbia, Florida, Illinois, and Texas would benefit the most from improved energy efficiency policy for multifamily buildings.

Utility efficiency programs for multifamily buildings vary significantly in scope and impact. They range from simple rebates for energy efficient light bulbs or efficient water heaters to comprehensive programs that combine energy audits, contractor selection and oversight, financing from multiple sources, and post-retrofit review of actual energy savings. These comprehensive

programs combine building envelope, HVAC systems, and maintenance and operation improvements that garner the greatest savings per dollar over the long run. Some examples of leading programs, described in more detail in the full report, include the Energy Savers program in Chicago, National Grid's Multifamily Retrofit in Massachusetts, and NYSERDA's Multifamily Performance Program in New York.

Utility efficiency programs and the resources available for them vary because utility business models vary dramatically, with each state taking a different regulatory approach to energy efficiency. For example, some states integrate energy efficiency programs as an energy resource into their integrated resource planning processes, while others set energy efficiency targets in the form of energy efficiency resources standards. Each utility's circumstances dictate current energy efficiency investment and in turn influence the best methods to encourage utilities to partner for effective and comprehensive multifamily energy efficiency retrofit programs. State policies that align energy efficiency with utility financial incentives are needed to ensure successful program delivery, which requires buy-in from this important and powerful stakeholder.

Multifamily Industry Needs to Partner with Utilities on Energy Efficiency

Energy utilities represent a vast, largely untapped opportunity for engagement and leveraging of resources for improved energy efficiency in the multifamily housing sector. Utilities have longstanding, energy-centered relationships with building owners as well as unique access to customer energy usage data that can be used to design and target effective, comprehensive retrofit programs.

Utilities face a variety of regulatory barriers to designing robust multifamily energy efficiency programs, and the multifamily industry can help find solutions to these barriers. For example, utility energy efficiency programs are sometimes subject to funding limits and to cost-benefit tests that may not take full account of the many benefits of efficiency or that may direct funding away from larger efficiency investments. Only a few states provide a financial incentive for utilities to exceed mandated efficiency targets. Furthermore, the method for measuring utility program savings can vary from state to state and utility to utility, causing confusion and uncertainty.

To align utility incentives with the multifamily industry's needs, building owners and other housing industry players must become partners with utilities, engaging with them directly and in local and state regulatory proceedings. No single strategy will work nationwide, but by joining existing efforts at the state and local levels, housing industry players can work with utilities to increase and improve the use of utility energy efficiency investments in multifamily housing.

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The American Council for an Energy-Efficient Economy (www.aceee.org) is a nonprofit organization founded in 1980 that acts as a catalyst to advance energy efficiency policies, programs, technologies, investments, and behaviors.



CNT Energy (www.cntenergy.org) combines rigorous research with effective solutions to help consumers and communities control energy costs and become more energy efficient. We design and implement programs and conduct research in the areas of dynamic electricity pricing, building energy efficiency, and regional energy planning to achieve significant savings and job creation for low-income communities.