Scaling up Multifamily Energy Efficiency Programs: A Metropolitan Area Assessment

Kate Johnson and Eric Mackres

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529 14th Street NW, Suite 600, Washington, DC 20045

Phone: (202) 507-4000 • Twitter: @ACEEEDC

Facebook.com/myACEEE • www.aceee.org

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Executive Summary

More than 20 million American households, almost 18% of households nationwide, live in apartments and condominiums in multifamily buildings, commonly defined as buildings containing five or more housing units. These buildings represent a large, and in many places untapped, potential for saving energy. Energy efficiency programs offered by utilities and other statewide organizations are among the biggest drivers of energy efficiency investment nationwide. These programs target residential, commercial, and industrial utility customers with programs tailored to the way they use energy in their homes and businesses. Multifamily buildings present unique challenges that can easily be overlooked when grouped with single-family and/or commercial buildings. By failing to effectively deliver programs that reach this market segment, utility-sponsored programs miss out on significant energy savings potential.

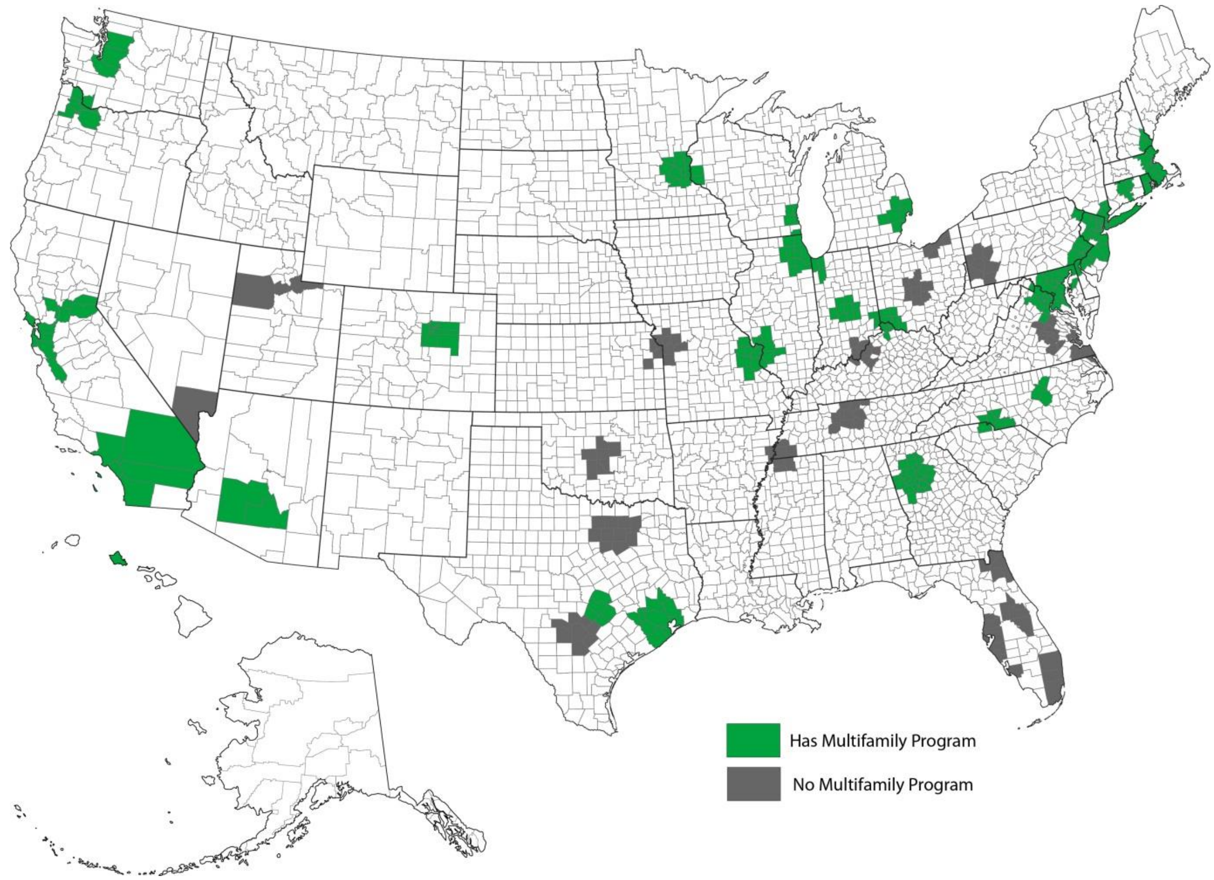
The American Council for an Energy-Efficient Economy (ACEEE) has launched a multi-year project to expand customer-funded energy efficiency programs targeting multifamily housing. The purpose of this report is to provide a baseline assessment of the current landscape of multifamily energy efficiency programs in the 50 metropolitan areas with the largest multifamily housing markets. Additionally, the report identifies the specific opportunity in each metropolitan area to scale up multifamily programs based on a three part analysis of (1) local housing market characteristics, (2) current utility customer-funded energy efficiency programs, and (3) the statewide policy environment and potential for local partnerships with non-utility-funded energy efficiency programs.

We describe the local housing markets for each of the metropolitan areas in detail to highlight important characteristics that should influence energy efficiency program design. These characteristics include the fuels used in heating rental and owner-occupied buildings, the number of households that do not pay for their utilities directly, the age of the multifamily building stock, and the number of public and federal-assisted housing units.

Not surprisingly, a large majority of multifamily households rent rather than own their homes in nearly all of metropolitan areas we analyzed. This is important for energy efficiency program design as programs must overcome the split incentives between building owners and their tenants, especially in buildings individually metered for one or more utilities. From the perspective of energy efficiency program administrators, master-metered buildings where the building owner pays for all of the utilities are generally easier to reach because building owners have a more direct financial incentive to invest in energy efficiency to reduce their operating costs. Overall, however, a relatively small share of multifamily housing units is located in master-metered buildings. The average across the 50 metropolitan areas we analyzed was just 10%, underscoring the importance of programs specifically designed to address the issue of split incentives in multifamily buildings.

To the authors' knowledge, this is the first attempt to broadly catalogue existing multifamily energy efficiency programs and measure the level of resources available to the multifamily sector through a detailed analysis of utility regulatory filings. We used spending reported for 2011, the most recent year with widely available data. Our assessment of the 50 metropolitan areas with the largest multifamily housing markets found that one or more customer-funded programs targeting multifamily buildings exist in 30 metropolitan areas, as shown in the following map.

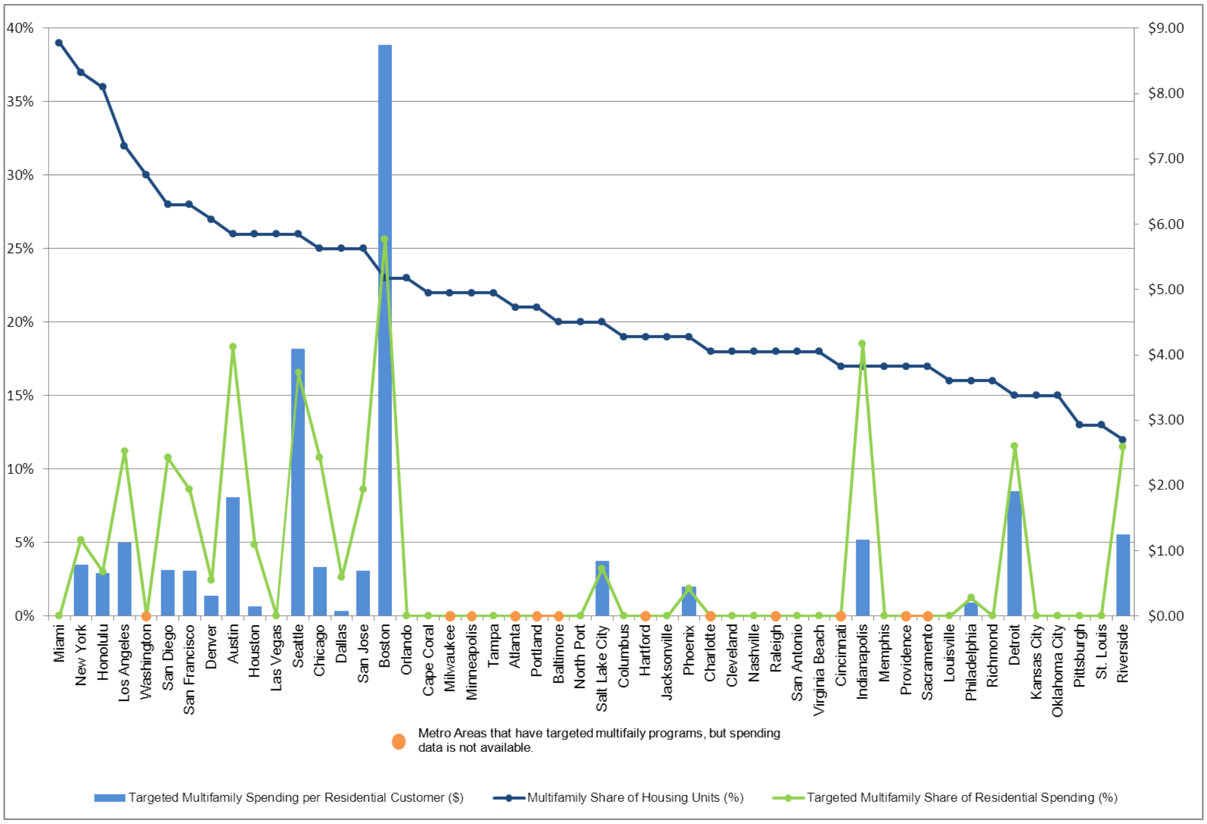
Figure ES-1: Metropolitan Areas Analyzed with One or More Multifamily Energy Efficiency Programs



Notes: Shaded areas with and without programs are the 50 metropolitan areas analyzed in this report. These areas have the most multifamily housing units.

Spending on multifamily programs varied widely across the metropolitan areas, ranging from nearly $9 per residential utility customer by Boston area utilities to less than $1 in many areas. The median for areas where spending information was available was just $0.72 per residential customer. While it is encouraging to find programs targeting multifamily buildings in so many of the metropolitan areas, in most areas multifamily programs account for a small share of overall spending on energy efficiency programs. Spending on targeted multifamily programs accounted for more than 10% of overall energy efficiency spending in just two areas, Boston and Austin. Multifamily program spending as share of all residential programs only met or surpassed the multifamily share of the housing market in Boston, Indianapolis, and Riverside. As shown in Figure ES-2, in all of the remaining metropolitan areas, the share of residential spending on targeted multifamily programs was less than the multifamily share of households, indicating room to expand these programs to better reach the multifamily sector.

Figure ES-2: 2011 Multifamily Program Spending and Multifamily Share of Housing Units by Metropolitan Area



Notes: Spending shown is for the entire service territory of the primary electric and gas utilities serving each metropolitan area. The multifamily share of households is for the metropolitan area only. Salt Lake City and Dallas had programs in 2011 that were discontinued in 2012, which is why they do not appear in the map above.

We identified 50 utility customer-funded programs[1] that offered a variety of services ranging from the direct installation of measures such as compact florescent lamps (CFLs) and low-flow water fixtures at no cost to participants to financial and technical support for comprehensive, whole-building energy efficiency retrofits and new construction. Of these 50 programs, we found that:

1. 38 offer rebates and incentives;
2. 16 provided direct installation of no or low-cost measures;
3. 20 provided for comprehensive whole-building approaches for retrofits or new construction; and
4. more than half (28) offered services to target both electric and gas savings.

[1] Programs offered by multiple utilities within a state, in multiple metropolitan areas, and programs jointly delivered by separate electric and gas utilities were counted as one program.

While the large number of programs we identified is promising, especially because many programs address both electricity and natural gas, our assessment makes clear that in many metropolitan areas there is room to significantly expand or create new programs to better reach multifamily building owners and residents.

Our analysis of the policy context in each metropolitan area relied on results from ACEEE's *State Energy Efficiency Scorecard*. A number of metropolitan areas with utility policy environments that support robust energy efficiency programs have only limited resources dedicated to multifamily programs, indicating room for increased investment. We also identified potential partners from outside the utility sector working to address energy efficiency in multifamily housing. These partners include local organizations funded through the Department of Energy's Weatherization Assistance Program and Better Buildings Neighborhood Program, and community development organizations, as well as state housing agencies.

By looking across the analysis of the housing market, existing energy efficiency programs, and utility policy, we are able to provide a guide to the opportunities in each metropolitan area to improve multifamily energy efficiency programs to achieve significant energy savings. We created a scoring system to rank the metropolitan areas based on key metrics from each of the three areas:

1. The size of the housing opportunity is scored using the share of metropolitan area households living in multifamily buildings;

2. The current level of spending on all customer-funded energy efficiency programs by utilities serving the metropolitan area is scored to represent the potential size of the resource available to scale up multifamily programs; and

3. Both the recent growth in statewide energy efficiency program budgets (2009-2011) and the 2012 *ACEEE Energy Efficiency Scorecard* score for Utility and Public Benefit Programs & Policy is used to reflect the level of political and policy support for expanding energy efficiency programs at the state level.

Based on the programs currently offered in each area, and recent policy and program developments, we then categorized each area as leading the way or offering opportunities to (1) create new programs (or support newly created programs), (2) expand on existing programs to offer additional services or reach a greater portion of the multifamily sector, or (3) enhance current programs to support comprehensive, whole-building retrofits or new construction. The following table shows how the opportunity was categorized in each metropolitan area as a result of this analysis.

Table ES-1: Metropolitan Areas by Type of Program Opportunity

Leaders	Comprehensive Program	Expand Existing Programs	Create New Programs	
New York	Seattle	Baltimore	Philadelphia	Tampa
Boston	Los Angeles	Denver	Miami	Louisville
Portland	Providence	Cincinnati	Cleveland	Kansas City
San Francisco	Hartford	Houston	Riverside	Oklahoma City
Sacramento	Honolulu	Charlotte	Salt Lake City	Richmond
San Diego	Minneapolis	Raleigh	San Antonio	Virginia Beach
Chicago	Detroit	St. Louis	Cape Coral	Memphis
Austin	Indianapolis	Atlanta	Dallas	Nashville
Milwaukee	Phoenix		Jacksonville	Columbus
Washington	San Jose		Las Vegas	Orlando
			North Port (FL)	Pittsburgh

Introduction

Energy efficiency programs offered by utilities and other statewide organizations are among the biggest drivers of energy efficiency investment nationwide. These programs target residential, commercial, and industrial utility customers with programs tailored to the way they use energy in their homes and businesses. Multifamily buildings, occupied by renters and condominium owners, present unique challenges that can easily be overlooked when grouped with single-family and/or commercial buildings. By failing to effectively deliver programs that reach this market segment, utilities miss out on significant energy savings potential.

This report is the first step in a multi-year ACEEE project to improve and expand utility customer-funded programs to increase the energy efficiency of multifamily buildings. The purpose of this report is first to assess the current landscape of energy efficiency programs targeting multifamily buildings in the metropolitan areas with the largest multifamily housing markets. It provides a baseline against which to measure progress toward expanding multifamily programs. The analysis will be updated in three years to assess changes in the level of utility energy efficiency resources dedicated to the multifamily sector and to describe trends in program design. Secondly, this report seeks to provide a guide to metropolitan areas that present the greatest opportunity to scale up programs in the near term and to describe the specific program opportunity in each area. This analysis will help guide ACEEE's efforts to work directly with utilities and the multifamily housing community in a number of metropolitan areas to support efforts to expand the level of resources available for multifamily energy efficiency programs.

We began by identifying the 50 metropolitan areas with the largest multifamily housing markets defined by the number of housing units in buildings with five or more units. These 50 areas account for a significant share of the nation's multifamily housing with 70% of all multifamily households, and nearly 80% of households that live in the largest buildings with more than 50 units. Then, we analyze these 50 metropolitan areas along three dimensions:

1. Housing—we describe the important characteristics of the multifamily housing stock in each metropolitan area from the perspective of energy efficiency program design;
2. Utility Programs—we evaluate the extent to which existing utility energy efficiency programs in these areas serve the multifamily sector; and
3. Policy Environment—we describe the energy efficiency policy environment in each metropolitan area that drives utility investment and shapes opportunities to expand multifamily programs.

Based on this analysis we highlight the metropolitan areas with significant near-term opportunity to achieve greater energy savings in multifamily housing, and identify where there are opportunities to expand or create new programs.

Background

More than 20 million American households, almost 18% of households nationwide, live in apartments and condominiums in multifamily buildings, which for the purposes of this report are identified as containing five or more units. Defining multifamily buildings as containing five or more units is consistent with real estate industry definitions and is the threshold used by many energy efficiency programs to determine eligibility for their multifamily versus single family programs. In 2009, these multifamily residents spent $22 billion on energy utilities, 10% of the total residential spending on utilities (EIA 2009).[2] Table 1 shows the distribution of multifamily households by building size. Small multifamily buildings with 2-4 units are not a focus of this report, but could represent a large share of households in some areas. The Large Multifamily Buildings category in the table is a subset of buildings with five or more units.

Table 1: Nationwide Multifamily Housing Market

	Number of Households (millions)	Percent of all U.S. Households
Small Multifamily (2-4 units)	10.9	8.3
Multifamily (5 or more units)	23.4	17.8
Large Multifamily (50 or more units)	6.5	0.9

Source: American Community Survey Three Year Estimates 2009-2011 (U.S. Census Bureau 2011)

In many metropolitan areas, the percentage of housing units in multifamily buildings is much larger than the national figure. This is especially true for large multifamily buildings with 50 or more units. According to the 2011 American Housing Survey (HUD 2011), just 7% of multifamily households live outside of metropolitan areas, and just 3% of households living in a building with 50 or more units live outside of metropolitan areas.

There is considerable potential to improve the energy efficiency of multifamily buildings and save both building owners and tenants money. A previous report by CNT Energy and ACEEE found that leading current multifamily energy retrofit programs can cost-effectively reduce energy consumption by 30% for natural gas and 15% for electricity.[3] Nationwide, at 2010 national average energy prices, this level of savings would translate into utility bill cost savings of almost $3.4 billion annually (McKibbin et al. 2012).

Energy efficiency programs funded by utility customers and delivered through electric and gas utilities or statewide program administrators are shaped by regulation from state public utility commissions. These programs exist in nearly every state and are estimated to have provided $7 billion for energy efficiency improvements in 2011 (Foster et al. 2012). Utility customers fund these

[2] RECS Table CE2.1 available from http://www.eia.gov/consumption/residential/index.cfm.

[3] Performance levels are based on results from the Energy Savers program in Chicago, which provides financing and technical assistance for comprehensive energy retrofits of multifamily buildings.

programs through public benefit surcharges on their bills or through other mechanisms approved by utility regulators and reflected in rates. Spending by utilities on energy efficiency is expected to increase to as much as $15.9 billion by 2025 (Barbose et al. 2013), representing a significant opportunity to leverage utility resources to improve the energy efficiency of multifamily homes.

Scaling up utility programs for multifamily homes, however, will require a concerted effort by utilities and the multifamily housing sector to create programs that are designed to overcome the unique challenges associated with multifamily buildings. Traditional utility sponsored energy efficiency programs focus on specific energy saving measures, especially lighting, and do not distinguish between multifamily and other types of buildings. The strategies to save energy in multifamily buildings often differ from other building types and programs designed for business and single family homeowners may not effectively serve multifamily building owners and tenants. Among the challenges that effective multifamily programs need to account for are:

1. split incentives which differ depending on whether landlords or tenants pay for utilities in units and common areas;[4]

2. the diverse building ownership and financing structures that shape decision-making; and

3. rehabilitation and maintenance schedules which influence when and how building owners can invest in energy efficiency improvements.

The top-level analysis provided here focuses on utility policy and omits several important aspects of the housing landscape that also shape the potential for scaling up programs and can drive building owners to take advantage of the benefits of energy efficiency programs. Missing from this analysis, but important to consider, are local housing community networks of building owners, developers and managers as well as the actors involved in housing finance and policy including state housing finance agencies (HFAs) and community development financial institutions (CDFIs). A forthcoming report by CNT Energy and ACEEE (McKibbin et al. 2013) will describe these actors, the segments of the multifamily housing market, its unique characteristics, and their implications for utility program design in more detail.

Methodology

First, we identified the 50 Metropolitan Statistical Areas (MSAs) with the most households in buildings with five or more units. Then each of these metropolitan areas was analyzed along three dimensions: housing, utility customer-funded programs and spending, and the state and local political and policy context.

HOUSING Data from the American Community Survey, American Housing Survey and other sources is used to describe the multifamily housing stock and energy consumption characteristics which are important from an energy efficiency program design perspective. These include:

[4] Split incentives are further complicated in properties with tenants that receive rental assistance that channels savings to the subsidy provider (e.g., the Department of Housing and Urban Development) rather than building owner or tenant.

1. rental vs. owner occupied households;
2. who pays for utilities;
3. the primary heating fuel source;
4. building age; and
5. assisted and affordable housing units.

UTILITY ENERGY EFFICIENCY PROGRAMS In order to assess where multifamily programs exist currently, and to identify areas where multifamily buildings do not have much access to utility programs,[5] we examined state regulatory commission and federal reporting by the primary electric and gas utilities in each metropolitan area. We identify utilities and statewide administrators which offer programs explicitly designed for multifamily building owners and/or residents and compare spending on these programs to overall energy efficiency spending. As multifamily building owners and tenants may be eligible for broader residential, commercial, or low-income programs, we also attempt to quantify spending on programs for which multifamily building owners and residents are eligible. However, it is often challenging to determine program eligibility from websites, applications, and program plans. Furthermore, utilities are not typically required by federal and state regulators to report spending details broken down beyond the residential, industrial and commercial customer classes. Therefore, these figures should be taken as best estimates and may over- or under-estimate the resources which multifamily buildings have access to. Furthermore, we relied on publicly available reporting and were therefore unable to determine program level or building-type specific spending for all utilities.

POLICY AND POLITICAL CONTEXT State utility policy as well as the potential for partnerships with non-utility ratepayer funded programs will impact how quickly multifamily programs can scale up. We used results from the ACEEE's *State Energy Efficiency Scorecard* (Foster et al. 2012) to identify states that are supportive of expanding energy efficiency resources. We also looked at potential multifamily program partners including local administrators of the federally-funded Department of Energy Weatherization Assistance Program and the Better Buildings Neighborhood Program and programs funded by state housing finance agencies.

We then scored the metropolitan areas using key metrics from each of these three topics in order to provide a ranking of areas with the greatest potential for large-scale multifamily energy efficiency programs. Finally, we categorize each area as leading the way or as an opportunity to:

1. create a comprehensive, whole building retrofit program;
2. expand on existing programs;

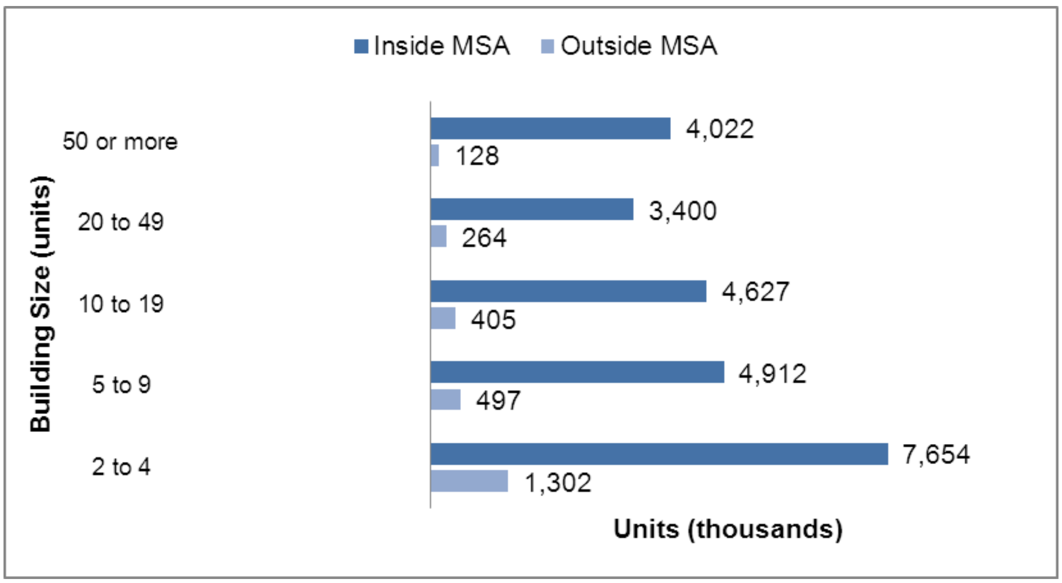
[5] Throughout this report we use the term "utility programs" to include all programs that serve utility customers and are funded through rates or public benefits fees. This includes non-utility and third-party administered programs including NYSERDA in New York, Focus on Energy in Wisconsin, the Energy Trust of Oregon, the New Jersey Clean Energy Program, the Connecticut Energy Efficiency Fund, and Hawaii Energy.

3. create a new utility customer-funded program.

Multifamily Housing by Metropolitan Area

In order to identify areas where a focus on multifamily housing will yield significant savings, we analyzed the metropolitan areas with the largest number of multifamily housing units. We focus on metropolitan areas rather than states because of the large variation in housing stock within states and the concentration of multifamily units within metropolitan areas. States are served by multiple utilities, and not every utility in a state serves areas with a large number of multifamily units. Figure 1 shows the location of multifamily units by building size. Larger multifamily buildings, in particular, are highly concentrated in metropolitan areas. By focusing on metropolitan areas, and the utilities which serve them, we can better identify the best opportunities for scaling up multifamily energy efficiency programs.

Figure 1: Location of Multifamily Housing Units by Building Size



Source: American Housing Survey 2011 (HUD 2011)

Table 2 shows the number of multifamily units, the percentage of households which live in multifamily buildings, and the share of rental households for each of the 50 metropolitan areas[6] with the largest multifamily housing markets. Figure 2 shows the location of each metropolitan area as well as the number of multifamily housing units. The following section describes the housing markets in these areas in terms of tenure (owner versus renter occupancy), who pays for utility bills, the primary heating fuel source, age, and the ownership of multifamily buildings. These characteristics, as well as more local detail on the various building types, should guide program designers as they develop programs that will reach the various types of multifamily housing in their service territories. Detailed data for each metropolitan area is presented in Appendix A.

[6] For the purposes of this report, metropolitan areas refer to Metropolitan Statistical Areas (MSAs) as defined by the U.S. Census Bureau. Unless otherwise noted, the data reflect the geographic definitions utilized in the 2010 Census.

Table 2: Metropolitan Areas with the Largest Multifamily Housing Markets

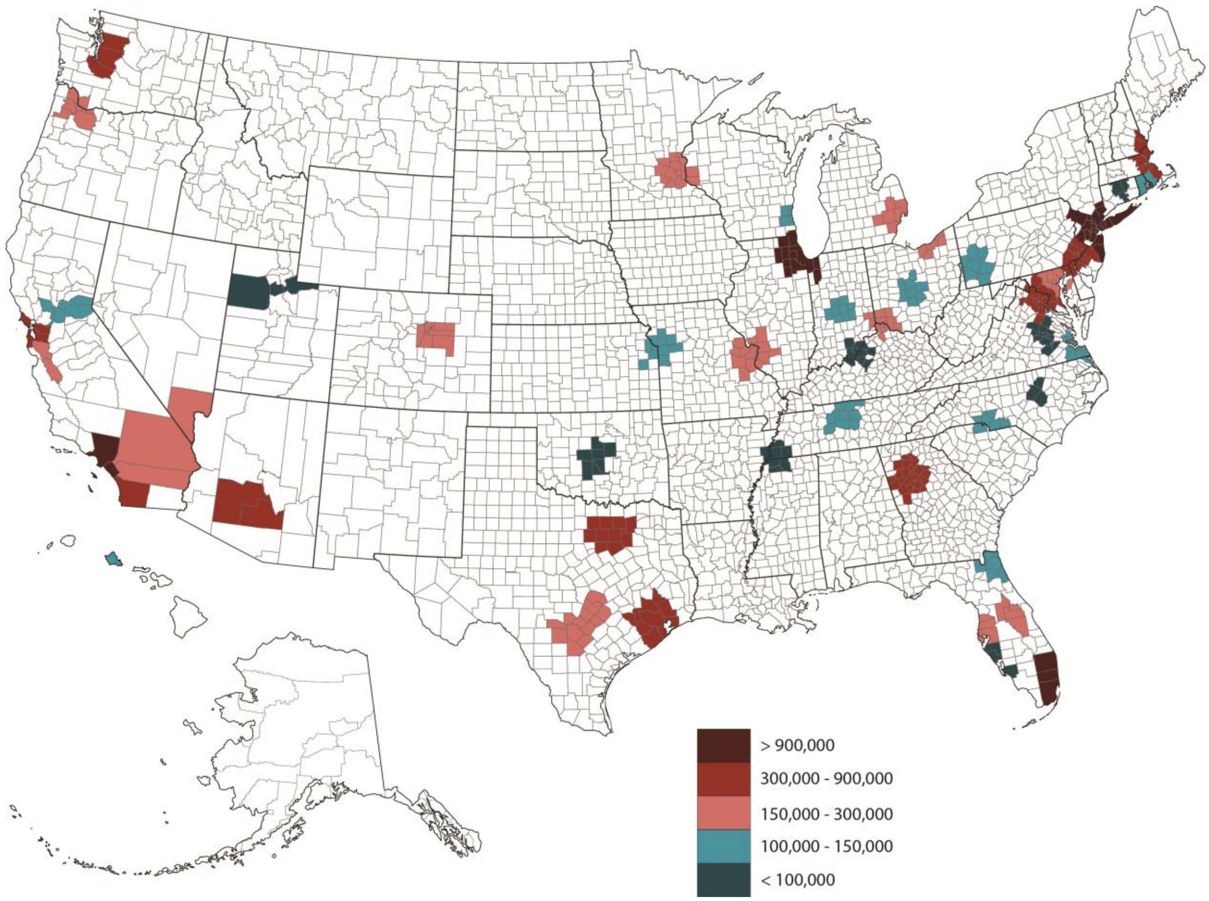
Rank	Metropolitan Area	Multifamily Units	Percent of Households in Multifamily Buildings (5+ units)	Percent of Multifamily Units Occupied by Renters
1	New York-Northern New Jersey-Long Island, NY-NJ-PA	2,818,320	37	82
2	Los Angeles-Long Beach-Santa Ana, CA	1,437,828	32	90
3	Miami-Fort Lauderdale-Pompano Beach, FL	953,273	39	60
4	Chicago-Joliet-Naperville, IL-IN-WI	936,293	25	72
5	Washington-Arlington-Alexandria, DC-VA-MD-WV	662,719	30	80
6	Dallas-Fort Worth-Arlington, TX	622,931	25	97
7	Houston-Sugar Land-Baytown, TX	591,647	26	95
8	San Francisco-Oakland-Fremont, CA	487,807	28	87
9	Atlanta-Sandy Springs-Marietta, GA	449,217	21	92
10	Boston-Cambridge-Quincy, MA-NH	440,215	23	80
11	Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	388,356	16	87
12	Seattle-Tacoma-Bellevue, WA	379,306	26	86
13	Phoenix-Mesa-Glendale, AZ	339,587	19	92
14	San Diego-Carlsbad-San Marcos, CA	332,190	28	88
15	Minneapolis-St. Paul-Bloomington, MN-WI	295,312	22	86
16	Tampa-St. Petersburg-Clearwater, FL	291,525	22	77
17	Denver-Aurora-Broomfield, CO	288,718	27	84
18	Detroit-Warren-Livonia, MI	285,384	15	91
19	Baltimore-Towson, MD	225,296	20	84
20	Las Vegas-Paradise, NV	215,647	26	92
21	Orlando-Kissimmee-Sanford, FL	213,306	23	90
22	Portland-Vancouver-Hillsboro, OR-WA	196,174	21	93
23	Riverside-San Bernardino-Ontario, CA	186,899	12	95
24	Austin-Round Rock-San Marcos, TX	182,130	26	97
25	Cleveland-Elyria-Mentor, OH	172,178	18	93
26	St. Louis, MO-IL	162,761	13	90

Rank	Metropolitan Area	Multifamily Units	Percent of Households in Multifamily Buildings (5+ units)	Percent of Multifamily Units Occupied by Renters
27	San Jose-Sunnyvale-Santa Clara, CA	162,633	25	90
28	Cincinnati-Middletown, OH-KY-IN	160,028	17	89
29	San Antonio-New Braunfels, TX	152,793	18	97
30	Columbus, OH	149,423	19	95
31	Sacramento--Arden-Arcade--Roseville, CA	146,410	17	96
32	Milwaukee-Waukesha-West Allis, WI	145,545	22	89
33	Pittsburgh, PA	140,862	13	93
34	Kansas City, MO-KS	135,316	15	96
35	Charlotte-Gastonia-Rock Hill, NC-SC	131,863	18	92
36	Indianapolis-Carmel, IN	129,565	17	97
37	Virginia Beach-Norfolk-Newport News, VA-NC	123,984	18	92
38	Honolulu, HI	122,254	36	63
39	Nashville-Davidson--Murfreesboro--Franklin, TN	119,567	18	93
40	Jacksonville, FL	116,320	19	86
41	Providence-New Bedford-Fall River, RI-MA	114,606	17	90
42	Hartford-West Hartford-East Hartford, CT	95,184	19	84
43	Memphis, TN-MS-AR	93,916	17	97
44	Richmond, VA	87,398	16	94
45	Louisville/Jefferson County, KY-IN	86,944	16	90
46	Raleigh-Cary, NC	84,612	18	95
47	Cape Coral-Fort Myers, FL	82,629	22	58
48	Salt Lake City, UT	80,417	20	86
49	North Port-Bradenton-Sarasota, FL	79,847	20	63
50	Oklahoma City, OK	79,676	15	98

Source: American Community Survey Three Year Estimates 2009-2011 (U.S. Census Bureau 2011).

Notes: List excludes San Juan, PR as policy and utility data is less complete. Percent of households in multifamily buildings is the percentage of total housing units in buildings with more than five units. Percent of multifamily units occupied by renters is the percent of units in buildings with five or more units which are occupied by renters

Figure 2: The 50 Metropolitan Areas with the Most Multifamily Housing Units



Source: American Community Survey Three Year Estimates 2009-2011 (U.S. Census Bureau 2011)
Notes: Total number of housing units in buildings with 5 or more units.

Tenure and Who Pays Utilities

Housing tenure, or whether a unit is occupied by a renter or its owner, can have important implications for the implementation of utility energy efficiency programs. Renters are less likely to own their major appliances and less likely to pay their electric and natural gas utility bills directly, making it harder for typical utility programs to reach them. With few exceptions in the top 50 areas we analyzed, a large majority of multifamily units are occupied by renters. In all but six of the areas shown in Table 2, renters occupy more than 80% of the multifamily units, and in 29 of the areas more than 90% of multifamily units are occupied by renters.

In metropolitan areas, including the six listed below in Table 3, where a large share of the multifamily units are occupied by owners, different utility program strategies may be necessary to specifically target condominium associations.

Table 3: Metropolitan Areas with the Highest Share of Owner-Occupied Multifamily Units

Metropolitan Area	Percent of Multifamily Units Occupied by Owners
Cape Coral-Fort Myers, FL	42
Miami-Fort Lauderdale-Pompano Beach, FL	40
North Port-Bradenton-Sarasota, FL	37
Honolulu, HI	37
Chicago-Joliet-Naperville, IL-IN-WI	28
Tampa-St. Petersburg-Clearwater, FL	23

Source: American Community Survey Three Year Estimates 2009-2011 (U.S. Census Bureau 2011)

Related to the number of households that rent rather than own their homes, is the question of who pays for utilities, landlords or tenants. In master-metered buildings, the building owner typically pays for the energy used in both common areas and residential units, and the utility cost is reflected in rents. In separately metered buildings, tenants pay for one or more of their utilities directly. Either situation can lead to a split-incentive problem if the party paying for the energy efficiency investment is not the same party who would reap the financial benefit of the savings. From the building owner's perspective, in separately metered buildings, owners may have little incentive to upgrade heating and cooling systems to save their tenants money. From the tenant's perspective, they may qualify for rebates for energy efficiency improvements, but they will have no incentive to pay any upfront cost if they do pay for their utilities or own their own appliances. Utility programs which fail to address the differences between separately and master-metered buildings by offering incentives that make sense for renters and/or their landlords, may fail to reach the vast majority of multifamily households in these metropolitan areas.

Table 4 shows the metropolitan areas with the largest percentage of households with their utilities included in their rent. Overall, a relatively small share of multifamily units is located in master-metered buildings where tenants do not pay extra for any utilities. The average across the 50 metropolitan areas we analyzed was 10%. This means that, on average, 9 out of 10 multifamily units in these areas are separately metered for at least one utility. It may be more effective in these cases to target multifamily building owners to improve the energy efficiency of both building common areas and resident units based on other benefits to their business, such as decreased unit turnover and vacancy, even if their direct energy cost savings may be limited.

Table 4: Metropolitan Areas with the Largest Share of Rental Units with Utilities Included in Rent

Metropolitan Area	Percent of Rental Units with Utilities Included in Rent
Honolulu	30
Washington-Arlington-Alexandria	24
Providence-New Bedford-Fall River	21
Boston-Cambridge-Quincy	19
New York-Northern New Jersey-Long Island	18
Pittsburgh	16
Minneapolis-St. Paul-Bloomington	14
Cleveland-Elyria-Mentor	13
Louisville/Jefferson County	12
Richmond	12
Philadelphia-Camden-Wilmington	12
Baltimore-Towson	12
Salt Lake City	12

Source: American Community Survey Three Year Estimates 2009-2011 (U.S. Census Bureau 2011)
Notes: Figure is the percentage of households in renter-occupied units that "do not pay extra" for any utilities.

Heating Fuels

The percentage of multifamily homes that use electricity or gas delivered from their utility for heating purposes is important from the perspective of utility program administrators as it indicates the potential for utility sponsored programs to reach these households. For example, in areas where heating oil is the primary fuel source, natural gas utilities may be reluctant to offer programs which address the efficiency of heating systems as there would be a limited market for their programs and limited energy savings available. Our analysis shows, however, that even in metropolitan areas in the Northeastern U.S. where fuel oil accounts for a large share of heating in *owner*-occupied households, the share of rental housing units (which are more likely to be in multifamily buildings) using fuel oil is significantly lower; indicating an opportunity for both electric and gas utilities to reach these customers. Heating fuel data are not available by building type for all 50 metropolitan areas, which is why we compare rental to owner-occupied households.

In all but six metropolitan areas we analyzed, more than 90% of the rental-occupied housing units use a utility fuel (electricity or gas) for heating. The six remaining areas, shown in Table 5, include the northeast metros (Philadelphia, Boston, Hartford, Providence and New York), where fuel oil accounts for a larger share of heating, and Honolulu where a large share of units use no heating fuel.

Table 5: Metropolitan Areas with the Smallest Share of Households Using a Utility Fuel for Heat

Metropolitan Area	Percent of Households Using a Utility Fuel for Heat (Electricity or Gas)		Percent of Households Using Utility Gas		Percent of Households Using Electricity		Percent of Households Using Fuel Oil	
	Renter-Occupied	Owner-Occupied	Renter-Occupied	Owner-Occupied	Renter-Occupied	Owner-Occupied	Renter-Occupied	Owner-Occupied
Honolulu	36	41	3	2	33	39	0	0
New York	69	71	57	65	12	6	27	27
Hartford	71	39	44	31	27	7	25	54
Providence	77	51	60	47	17	4	20	44
Boston	77	54	52	48	25	6	19	40
Philadelphia	87	75	56	62	32	13	9	20

Source: American Community Survey Three Year Estimates 2009-2011.

Notes: Data shown is for all building types. Figures are percent of total occupied rental or owner occupied housing units (including both single family and multifamily units) using each fuel type.

An illustration of split incentives at work can be found in the large number of rental units that rely on electricity for heating. Electric heating systems are cheap to install, which saves developers money, but are generally less efficient than a natural gas heating system to operate. An analysis of multifamily buildings in Wisconsin found that while virtually no owner-occupied homes use electric heat, more than one-third of apartments do (Hynek et al. 2012). Nationwide, according to our analysis, just 30% of owner-occupied households use electricity for heat, while 46% of renter-occupied households heat with electricity (ACS 2011).

Building Age

The age of multifamily buildings can be an indicator of the potential for energy savings, as there may be greater opportunities in older buildings constructed before building energy codes were enacted and those with older, less-efficient heating systems. The first building energy codes were adopted in 1978 (Benningfield Group 2009). Building energy codes have spurred significant improvement in the energy efficiency of new homes and buildings. For example, buildings which meet the 2012 International Energy Conservation Code (IECC), the model code for residential single and multifamily buildings, use 30% less energy compared to buildings which meet the 2006 code (DOE 2012a). While building age can be an indicator of the energy efficiency potential of the building, older buildings are not always less efficient than newer buildings. Initial analyses of building energy use data acquired through New York City's benchmarking and disclosure law indicates that multifamily buildings more than 80 years old, as a group, use less energy than younger age groups (Krukowski and Burr 2012). With this in mind, program developers should consider other characteristics of the local building stock in addition to building age. This includes the dominant building type (i.e., high-rises versus low-rise complexes), and whether buildings are likely to have central space heating and cooling systems or separate systems in each unit.

Metropolitan areas with oldest multifamily building stock are concentrated in New England and the Midwest. The following table lists the ten metropolitan areas with the largest percentage of multifamily units built prior to 1980. Summary data on the distribution of building ages for all 50 metropolitan areas is provided in Appendix A-3.

Table 6: Metropolitan areas with the Largest Percentage of Multifamily Units Built prior to 1980

Metropolitan Area	Percent of Multifamily Units in Buildings Built Prior to 1980
New York-Northern New Jersey-Long Island	79
Cleveland-Elyria-Mentor	71
Providence-New Bedford-Fall River	70
Boston-Cambridge-Quincy	68
Chicago-Joliet-Naperville	67
San Francisco-Oakland-Fremont	66
Pittsburgh	66
Philadelphia-Camden-Wilmington	66
Honolulu	65
Hartford-West Hartford-East Hartford	64
Los Angeles-Long Beach-Santa Ana	63

Source: American Community Survey Three Year Estimates 2009-2011 (U.S. Census Bureau 2011)
Notes: Multifamily Percentage is the portion of units in buildings with five or more units.

Public, Assisted, and Affordable Housing

Assisted housing refers to properties which receive some form of subsidy in order to maintain low rents. However, it is important to note that the majority of affordable, low-rent apartments are privately owned and do not receive any federal or state rental assistance (Joint Center for Housing 2011). The Harvard University Joint Center for Housing Studies estimates that nearly 60% of the 5.1 million units which rented for less than $400 per month in 2009 received no assistance.[7] So while, as shown in Table 7 below, federally assisted units account for a relatively small share of the multifamily units, affordable, but un-assisted, rental units make up a large share of the multifamily housing nationwide. This segment of the multifamily housing market includes millions of households that live in affordable multifamily housing, but may not qualify for traditional energy efficiency programs targeting low-income utility customers; underscoring the need for multifamily energy efficiency programs which reach both assisted and unassisted housing.

[7] According the Joint Center for Housing, $400 a month is the rent that a family of two living near the poverty line or one full-time minimum wage worker can afford.

Improving the energy efficiency of public and assisted multifamily buildings involves unique challenges compared to non-assisted buildings. The three primary types of assisted housing are 1) privately-owned rental properties that receive subsidies from the U.S. Department of Housing and Urban Development (HUD), USDA, or are insured by the Federal Housing Administration (FHA), 2) properties that are owned and subsidized by the federal government and operated by local public housing authorities, 3) privately owned buildings financed with Low Income Housing Tax Credits (LIHTC) (Bamberger 2010).[8] In a building receiving rental assistance from HUD, the split incentive challenges are further complicated by utility allowances which HUD pays to tenants. Depending on how rent subsidies are determined, and how and when the allowances are calculated, the savings gained through energy-efficiency improvements may be passed along to HUD rather than to the building owner or tenant. For a full discussion of the challenges of retrofitting assisted housing, including access to capital to finance improvements see Bamberger (2010) or Harak (2010).

As a result of these traditional barriers to investing in energy efficiency, assisted housing may offer untapped potential for significant savings. Utilities in metropolitan areas with a large number of public and assisted housing units may partner with local public housing authorities and others to develop programs specifically targeting these buildings. According to National Housing Preservation Database (2012), a compilation of data on federally and state assisted housing from HUD and the U.S. Department of Agriculture (USDA), the metropolitan areas with the greatest percentage of federally assisted multifamily units are shown in Table 7.[9] Data for all 50 metropolitan areas is shown in Appendix A.

[8] Many LIHTC-financed buildings also receive HUD assistance.

[9] Descriptions of each of the housing programs included in the database are available from the National Housing Preservation Database (2012) website at http://www.preservationdatabase.org/programdesc.html.

Table 7: Metropolitan Areas with the Largest Percentage of Multifamily Units that Are Publicly Owned or Receiving Federal Assistance

Metropolitan Area	All Assisted Units	Percentage of MF units (2+ units)
Memphis	29,534	23%
Kansas City	42,386	22%
Richmond	24,669	22%
Louisville/Jefferson County	26,768	21%
Virginia Beach-Norfolk-Newport News	35,219	21%
Baltimore-Towson	55,716	20%
Pittsburgh	45,555	20%
Nashville-Davidson--Murfreesboro--Franklin	29,994	19%
Indianapolis-Carmel	33,186	19%
Columbus	41,655	18%
Sacramento--Arden-Arcade--Roseville	37,054	18%
Detroit-Warren-Livonia	68,537	18%

Source: National Housing Preservation Database (2012)

Notes: All assisted units may include some single-family rental homes, but the programs included primarily provide rental or construction assistance to multifamily properties.

Utility Energy Efficiency Programs for Multifamily Housing

In this assessment we look specifically at energy efficiency programs funded by electric and natural gas utility customers and administered by the utilities themselves, statewide agencies or third-party organizations.[10] As noted above, these programs spent an estimated total of $7 billion in 2011 (Foster et al. 2012, 17). However, in a utility program environment where few programs are designed specifically to serve multifamily buildings, it is likely that only a fraction of those budgets are reaching multifamily households.

The following section relies on detailed public utility commission filings and annual reports to describe how multifamily buildings are served by existing utility programs in each metropolitan area and attempts to quantify the level of spending dedicated to programs that specifically target multifamily buildings. Spending levels from 2011 were used as the most recent year for which data is widely available.

[10] As noted above, utility customer-funded programs includes energy efficiency programs funded in part through charges included on customer bills, including those wrapped into rates and public benefit surcharges. Whether these programs are administered by the utilities directly or by other entities that receive the customer funds varies by state.

There are three general types of programs for which multifamily building owners and residents may be eligible:

1. Equipment and product rebates—includes rebates and other incentives for utility customers to purchase energy-efficient products such as lighting and appliances. Rebates may be awarded at the point-of-sale by participating retailers or require customers to apply after purchase.

2. Direct install services—involve a home-visit by an energy service contractor to install measures such as lighting, weather-stripping, and faucet aerators. They are often coupled with rebates and discount programs and target many of the same energy saving measures.

3. Comprehensive energy retrofits or new construction programs—rather than focusing on individual measures, these programs take a whole-building approach to saving energy and typically include an energy audit or assessment to identify cost-effective energy efficiency improvements. Successful implementation often requires coordination between electric and gas utilities in areas where these services are delivered by different entities. The best programs will also help customers identify incentives and financing opportunities available through the utility and other funding sources.

In general, rebate and direct install programs target a smaller level of savings from a larger number of participants. Comprehensive retrofit programs may reach fewer participants but seek deeper levels of savings from each building. Comprehensive programs may require participants to reach a certain energy performance level to qualify for incentives (e.g., a 15% reduction in total energy use).

In addition to these general models, there are programs that specifically target low-income utility customers. Several non-utility providers target low-income households including the federally-funded Weatherization Assistance Program (WAP) and state-level programs funded by Housing Finance Agencies (HFAs) and HUD. Our assessment attempts to capture these programs when a utility is involved in funding or administration, but is not comprehensive.

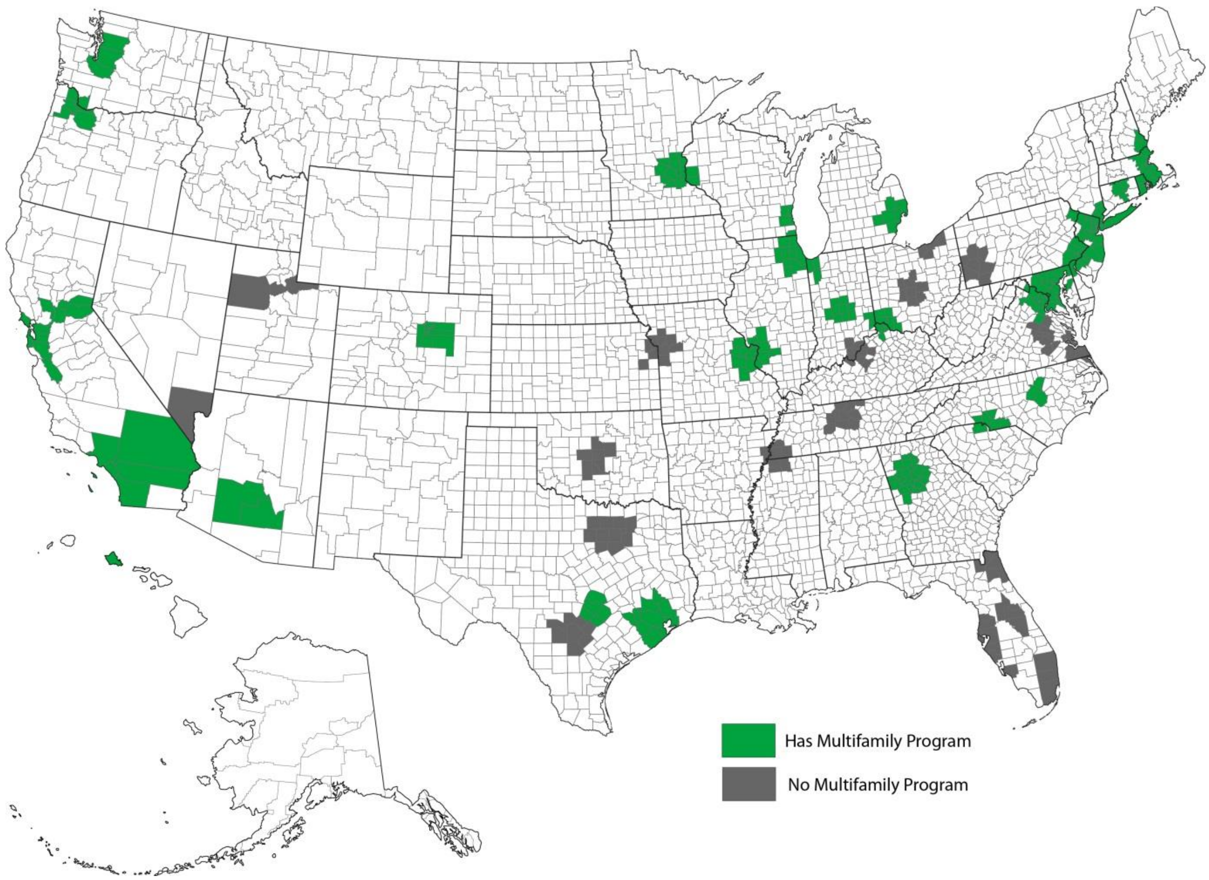
MULTIFAMILY PROGRAMS BY UTILITY

For the purposes of this analysis we distinguish between programs that exclusively target multifamily buildings and are designed to overcome the unique challenges of reaching this sector, and those residential or commercial programs for which multifamily building residents or owners may be eligible. Under some utility programs, the building owner may qualify for commercial programs, while residents may be eligible for rebates and other residential program incentives. Low-income programs in particular may reach tenants of multifamily buildings along with single-family households. We define targeted multifamily programs as those specifically designed for and marketed to the multifamily sector.[11] Across the 50 metropolitan areas, 30 areas were served by one or more targeted multifamily programs. This does not include Salt Lake City and Dallas that had programs in

[11] Eligibility requirements for the maximum and minimum number of units in a building vary for each of the targeted multifamily programs we identified, but programs for which only single-family or small multifamily buildings with 2-4 units are excluded.

2011 that were discontinued in 2012. The remaining 20 areas had no multifamily utility programs. The map in Figure 3 shows the geographic distribution of the metropolitan areas with access to one or more multifamily energy efficiency program.

Figure 3: Metropolitan Areas Analyzed With one or More Multifamily Energy Efficiency Programs



Notes: Shaded areas with and without programs are the 50 metropolitan areas with the most multifamily housing units analyzed in this report.

Spending on Multifamily Programs

Table 8 shows the level of spending on multifamily programs and is ordered by the number of multifamily housing units, showing that while many of the largest multifamily housing markets do have access to multifamily programs several of the largest areas, including Miami and Dallas, do not. Those areas where spending information is not available are indicated in the table as "n/a." One or more of the utilities in these areas offer targeted multifamily programs, but spending is not reported by the relevant program, or not broken down by building type. The level of spending on multifamily programs (normalized here as spending per residential customer), varies widely across the metropolitan areas. The Boston area utilities spent the most on multifamily programs ($8.74 per residential customer), while in many areas spending on multifamily programs is under one dollar per residential customer. The median for all areas with data is $0.72 per residential customer. A full summary table, provided in Appendix B, indicates spending on residential and commercial programs for which multifamily buildings may be eligible.

In those areas with targeted multifamily programs, we compared the spending on these programs (where available) with overall program spending, spending on residential programs, and spending on programs that exclusively target single-family or small multifamily buildings to determine whether spending on multifamily programs is in line with the multifamily share of the metropolitan housing market. The results are shown in Table 9.

Comparing spending to the multifamily share of the housing market is not a perfect metric for evaluating spending in the metropolitan areas as utility service territories do not match up perfectly with metropolitan area boundaries. The table shows that in most areas multifamily programs account for a small share of overall spending on energy efficiency programs, with the exception of areas like Austin, Boston, Indianapolis, Detroit and Seattle. Multifamily program spending as share of all *residential* program spending met or surpassed the multifamily share of the housing market in Boston, Indianapolis, and Riverside only.[12] In all of the remaining metropolitan areas, the share of residential spending on targeted multifamily programs was less than the multifamily share of households; indicating room to expand these programs to better reach the multifamily sector. As noted previously, multifamily building owners or residents may be eligible for broader commercial or residential programs; however determining which programs they are eligible for was not an easy task. It is likely even more difficult for building owners and residents to determine unless programs are actively marketed to the multifamily sector. The last column of Table 9 compares multifamily programs to programs which specifically target single-family homes including whole-home performance programs. The number shown is the percentage of spending on multifamily and single family specific programs which is directed toward multifamily buildings. Only in Chicago and Indianapolis did spending on multifamily programs approach the level of spending on single-family programs. Honolulu and Austin do not offer any programs exclusively for single-family homes.

Figure 4 shows the spending on targeted multifamily programs per residential customer and this spending as a share of total spending on residential programs compared to the percentage of households living in multifamily buildings.

Table 8: Multifamily Utility Programs by Metropolitan Area

MF Units Rank	Metropolitan Area	Multifamily Percent of Total Households	Multifamily Program?	Targeted Multifamily Spending per Residential Customer ($)[1]
1	New York-Northern New Jersey-Long Island[2]	37	✓	0.78
2	Los Angeles-Long Beach-Santa Ana	32	✓	1.12
3	Miami-Fort Lauderdale-Pompano Beach	39		0.00

[12] Note, that not all utilities classify multifamily spending as residential. Some programs are classified as commercial while some utilities and program administrators classify multifamily separately. All spending on multifamily programs, regardless of how it is classified, is shown here.

MF Units Rank	Metropolitan Area	Multifamily Percent of Total Households	Multifamily Program?	Targeted Multifamily Spending per Residential Customer ($)[1]
4	Chicago-Joliet-Naperville	25	✓	0.75
5	Washington-Arlington-Alexandria[3]	30	✓	n/a
6	Dallas-Fort Worth-Arlington[4]	25		0.08
7	Houston-Sugar Land-Baytown	26	✓	0.15
8	San Francisco-Oakland-Fremont	28	✓	0.69
9	Atlanta-Sandy Springs-Marietta[5]	21	✓	n/a
10	Boston-Cambridge-Quincy	23	✓	8.74
11	Philadelphia-Camden-Wilmington[6]	16	✓	0.20
12	Seattle-Tacoma-Bellevue	26	✓	4.08
13	Phoenix-Mesa-Glendale	19	✓	0.44
14	San Diego-Carlsbad-San Marcos	28	✓	0.70
15	Minneapolis-St. Paul-Bloomington[7]	22	✓	n/a
16	Tampa-St. Petersburg-Clearwater	22		0.00
17	Denver-Aurora-Broomfield	27	✓	0.30
18	Detroit-Warren-Livonia	15	✓	1.91
19	Baltimore-Towson[8]	20	✓	n/a
20	Las Vegas-Paradise	26		0.00
21	Orlando-Kissimmee-Sanford	23		0.00
22	Portland-Vancouver-Hillsboro[9]	21	✓	n/a
23	Riverside-San Bernardino-Ontario	12	✓	1.25
24	Austin-Round Rock-San Marcos	26	✓	1.81
25	Cleveland-Elyria-Mentor	18		0.00
26	St. Louis[10]	13	✓	0.00
27	San Jose-Sunnyvale-Santa Clara	25	✓	0.69
28	Cincinnati-Middletown[11]	17	✓	n/a
29	San Antonio-New Braunfels	18		0.00
30	Columbus	19		0.00
31	Sacramento--Arden-Arcade--Roseville[12]	17	✓	n/a
32	Milwaukee-Waukesha-West Allis[13]	22	✓	n/a

MF Units Rank	Metropolitan Area	Multifamily Percent of Total Households	Multifamily Program?	Targeted Multifamily Spending per Residential Customer ($)[1]
33	Pittsburgh	13		0.00
34	Kansas City	15		0.00
35	Charlotte-Gastonia-Rock Hill[14]	18	✓	n/a
36	Indianapolis-Carmel	17	✓	1.16
37	Virginia Beach-Norfolk-Newport News	18		0.00
38	Honolulu	36	✓	0.65
39	Nashville-Davidson--Murfreesboro--Franklin	18		0.00
40	Jacksonville	19		0.00
41	Providence-New Bedford-Fall River[15]	17	✓	n/a
42	Hartford-West Hartford-East Hartford[16]	19	✓	n/a
43	Memphis	17		0.00
44	Richmond	16		0.00
45	Louisville/Jefferson County	16		0.00
46	Raleigh-Cary[14]	18	✓	n/a
47	Cape Coral-Fort Myers	22		0.00
48	Salt Lake City[17]	20		0.84
49	North Port-Bradenton-Sarasota	20		0.00
50	Oklahoma City	15		0.00

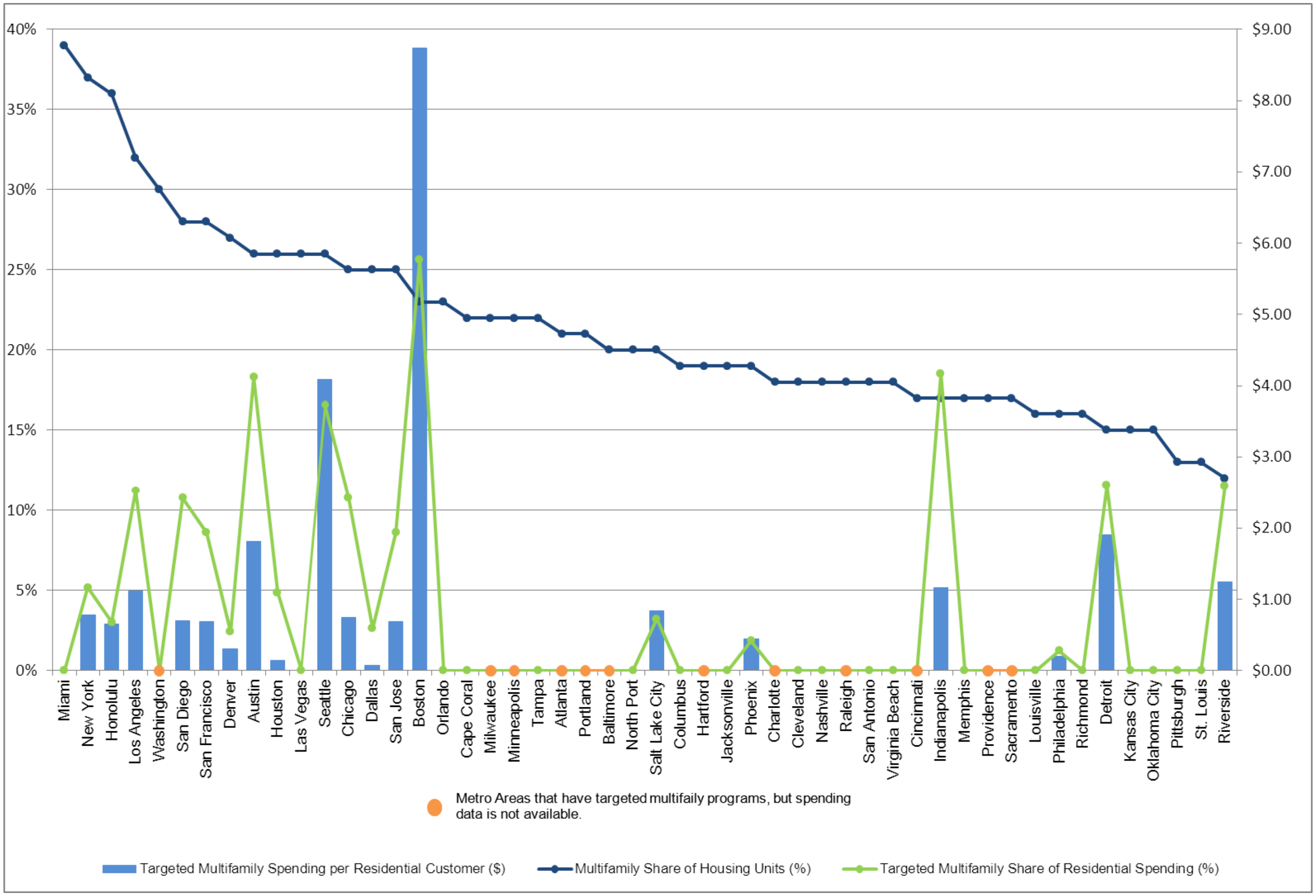
Notes: [1]Total 2011 spending on targeted multifamily programs for all primary utilities in the metro area divided by total number of residential customer served all by primary utilities or statewide public benefit program administrators. [2]Figure shown includes the Long Island Power Authority, National Grid, and Public Service Electric and Gas only as NYSERDA and Consolidated Edison do not report annual spending by program. [3]Both the DC Sustainable Energy Utility and PEPCO Maryland had multifamily programs, but spending by program/building type is not available for 2011. [4]In Dallas, Oncor's multifamily program, ENERGY STAR for Low Rise Buildings, was discontinued in 2012 and is not included in the 30 metropolitan areas with programs. [5]Georgia Power does not report spending for its EarthCents Program, which provides a track for multifamily, by building type. [6]In the Philadelphia metropolitan area, PSE&G in New Jersey offers a multifamily program, but there were no multifamily programs in PECO's service territory which includes the central city of Philadelphia. [7]Spending for CenterPoint Energy's Multifamily Commercial Rebate Program is included with larger their commercial rebate program and not broken out by building type. [8]Baltimore Gas & Electric's Quick Home Energy Check-up (QHEC) program includes a track specifically for multifamily buildings, but spending is not reported by building type. [9]The Energy Trust of Oregon, the statewide program administrator, only reports spending by sector, not program. [10]Ameren Missouri's Multifamily Income Qualified program is planned for 2013.[11]Spending on Duke Energy Ohio's Property Managers CFL Program is included in larger lighting rebate program. [12]Spending on the Sacramento Municipal Utility District's Multifamily Home Performance Program is not available. [13]Focus on Energy, Wisconsin's statewide program administrator, does not report annual spending by program. [14] Spending on Duke Energy North Carolina's Property Managers CFL Program is included in larger lighting rebate program. [15] National Grid RI's EnergyWise program has a track for multifamily buildings but spending is not reported by building type. [16]The Connecticut Energy Efficiency Fund, the statewide program administrator, offers a Multifamily Initiative which provides building owners one point of contact to access all eligible programs, but spending is not reported by building type. [17]Questar Gas in Salt Lake City rolled its multifamily program into its related residential programs in 2012.

Table 9: Comparison of 2011 Spending on Targeted Multifamily Programs to the Multifamily Share of the Housing Market

Metropolitan Area	Multifamily Share of Housing Market	Multifamily Program Spending (1000s)	Share of Total Energy Efficiency Spending	Share of Residential Spending	Share of Multifamily + Single Family Spending
Austin-Round Rock-San Marcos	26%	$1,732,515	11%	18%	100%
Boston-Cambridge-Quincy	23%	$ 25,978,863	10%	26%	28%
Indianapolis-Carmel	17%	$759,224	9%	19%	44%
Detroit-Warren-Livonia	15%	$ 11,472,496	7%	12%	4%
Seattle-Tacoma-Bellevue[1]	26%	$8,239,794	7%	17%	n/a
Chicago-Joliet-Naperville	25%	$3,117,970	3%	11%	50%
Riverside-San Bernardino-Ontario[2]	12%	$ 12,150,253	3%	12%	27%
New York-Northern New Jersey-Long Island	37%	$ 10,925,453	2%	5%	n/a
Los Angeles-Long Beach-Santa Ana[3]	32%	$ 12,150,253	2%	11%	27%
Salt Lake City	20%	$1,283,185	2%	3%	11%
San Diego-Carlsbad-San Marcos	28%	$1,436,056	2%	11%	17%
Honolulu	36%	$271,303	1%	3%	100%
Houston-Sugar Land-Baytown	26%	$405,157	1%	5%	8%
San Francisco-Oakland-Fremont	28%	$5,978,769	1%	9%	21%
San Jose-Sunnyvale-Santa Clara	25%	$5,978,769	1%	9%	21%
Phoenix-Mesa-Glendale	19%	$855,569	1%	2%	5%
Denver-Aurora-Broomfield	27%	$713,795	1%	2%	9%
Dallas-Fort Worth-Arlington	25%	$272,019	1%	3%	19%
Philadelphia-Camden-Wilmington	16%	$1,343,751	0.5%	1%	8%

Notes: Only those areas with a multifamily program and available spending data are shown. Spending is the total spending for all primary utilities in each metropolitan area. The service territories for these utilities extend beyond the metropolitan area so the multifamily share of the housing market in the metro area does not exactly reflect the share in the utility service territory. [1] Spending on single-family only programs is not reported by Puget Sound Energy. [2]Does not include Riverside Public Utilities which does not report spending by program. [3] Does not include LADWP which does not report spending by program.

Figure 4: Multifamily Program Spending and Multifamily Share of Housing Units by Metropolitan Area



Notes: Spending shown is for the entire service territory of the primary electric and gas utilities serving each metropolitan area. The multifamily share of households is for the metropolitan area only.

Multifamily Program Design

We found a wide variety of multifamily programs across the metropolitan areas ranging from simple direct install programs to comprehensive programs to support energy-efficient new construction and major retrofits. In total we identified 50 separate multifamily programs implemented by 41 of the utilities and statewide program administrators we analyzed. We did not double count statewide programs offered by multiple utilities or in multiple metro areas. For example, the Multifamily Energy Efficiency Rebate Program offered by all four California investor-owned utilities was only counted once. We also did not double count programs that were jointly administered by separate electric and gas utilities such as the joint Citizens Gas and Indianapolis Power & Light direct install program.[13] There were several metropolitan areas served by multiple programs. A full summary of spending on each of these programs by utility is provided in Appendix B.

Of the 50 programs identified, 38 offered rebates or financial incentives, 16 provided direct installation of free measures, and 20 supported comprehensive energy efficiency retrofits or new construction. Descriptions of each of these programs are provided in Appendix B, Table 4. Many programs use multiple approaches to offer building owners or managers a variety of participation options. For example, several direct install programs also offer rebates as an option to help cover the cost of more expensive measures not addressed through the no-cost direct installation services. These rebates may come from broader commercial or residential programs, but in order to be included here, programs must provide support to multifamily building owners to help combine incentives from multiple sources or highlight what programs they are eligible for. Nearly all of the comprehensive programs also offered rebates and financial incentives to support whole-building energy efficiency approaches. Two comprehensive programs, Arizona Public Service's Multifamily Energy Efficiency Program and Focus on Energy's Apartment and Condo Efficiency Services Whole-Building Existing Program also provided direct installation of free measures. These multiple tiers of services can offer building owners an entry point to consider more comprehensive retrofits in the future.

More than half (28) of the programs target both electric and gas savings. In several metropolitan areas where natural gas and electricity are delivered by separate utilities, cooperative programs deliver both gas and electricity savings. These areas include Chicago (People's Gas and Commonwealth Edison), Los Angeles and Riverside (Southern California Edison and Southern California Gas), Boston (National Grid and NStar), Indianapolis (IPL and Citizens Energy), and Detroit (Detroit Edison, MichCon Gas, and Consumers Energy). Programs delivered by statewide administrators, including the Energy Trust of Oregon, the Connecticut Energy Efficiency Fund (CEEF), the DC Sustainable Energy Utility, New York State Energy Research and Development Authority (NYSERDA), and Wisconsin's Focus on Energy, also target both gas and electric measures.

[13] If each of these programs were counted separately, there would be a total of 68 multifamily programs.

Policy and Political Support for Expanding Multifamily Programs

Utility regulation and state-level policy drives utility investment in energy-efficiency and shapes the choices utilities make when it comes to designing their programs. Regulation and policy vary widely across the states. In the following section we assess the existing policy landscape and changes in policy over time in order to identify metropolitan areas located in states with a supportive policy environment. We rely on the ACEEE's *State Energy Efficiency Scorecard* to measure state policy drivers, which include mandatory energy savings targets, or energy efficiency resource standards (EERS), public benefit charges, and fixed cost recovery or decoupling.

Opportunities to expand multifamily programs are further influenced by the potential to partner with non-utility program implementers including state housing department and housing finance agencies, Weatherization Assistance Program implementation partnerships, and other federally funded programs such as the Department of Energy's Better Buildings Neighborhood Program. We highlight these potential partners below.

Utility Regulation and Program Trends

ACEEE's *State Energy Efficiency Scorecard* reviews state performance in implementing utility programs and enacting enabling policies to encourage utilities to invest in energy efficiency. A state's score on Utility and Public Benefits Programs and Policies is a good indicator of commitment to utility-sector energy efficiency programs. The score captures five aspects of utility programs and policy:

1. Program budgets for electric utilities
2. Program budgets for natural gas utilities
3. Energy savings from electric programs
4. Enabling policy: the strength of EERS policies[14]
5. Utility financial incentives: fixed cost recovery (decoupling) and performance incentives

Table 10 shows the metropolitan areas in states with the highest 2012 ACEEE Utility and Public Benefit Programs and Policies score. For metropolitan areas that cover more than one state, the state in which the central city is located was used.

[14] For a discussion of EERS policy details and their potential impact on multifamily programs, see McKibben et al. 2012.

Table 10: Metropolitan Areas in States with the Highest 2012 ACEEE Utility Score

Metropolitan Area	State	2012 Utility & Public Benefit Programs & Policies Score
Boston-Cambridge-Quincy	MA	19.5
Minneapolis-St. Paul-Bloomington	MN	19
Providence-New Bedford-Fall River	RI	18.5
Los Angeles-Long Beach-Santa Ana	CA	17.5
San Diego-Carlsbad-San Marcos	CA	17.5
Riverside-San Bernardino-Ontario	CA	17.5
Sacramento--Arden-Arcade--Roseville	CA	17.5
San Francisco-Oakland-Fremont	CA	17.5
San Jose-Sunnyvale-Santa Clara	CA	17.5
New York-Northern New Jersey-Long Island	NY	17.5
Portland-Vancouver-Hillsboro	OR	16
Hartford-West Hartford-East Hartford	CT	15
Seattle-Tacoma-Bellevue	WA	14.5
Detroit-Warren-Livonia	MI	13.5
Phoenix-Mesa-Glendale	AZ	13.5
Honolulu	HI	12.5
Baltimore-Towson	MD	12
Salt Lake City	UT	11.5
Denver-Aurora-Broomfield	CO	11
Milwaukee-Waukesha-West Allis	WI	10.5

Source: Foster et al. 2012

Notes: Scores are out of a total of 20 points. States listed are the states in which the central city of the metropolitan area is located.

Of the metropolitan areas with the highest scores listed in Table 11, Minneapolis, Salt Lake City and Denver all spent relatively little on multifamily programs in 2011. However, the Minneapolis utilities, CenterPoint and Xcel, have proposed expanding their multifamily programs for affordable housing in 2013 (CenterPoint Energy 2012b; Xcel Energy 2012c). As the most recent State Scorecard captures activity from 2011, states that have just enacted new policies, or are expanding existing programs, will not be included in the lists above. These states include Missouri (St. Louis and Kansas City), Illinois (Chicago), and Pennsylvania (Philadelphia and Pittsburgh).

In addition to utility regulations which drive the level of resources available for energy efficiency programs, policies such as energy benchmarking and disclosure laws that apply to multifamily buildings can drive demand for energy efficiency programs. Utilities can make building energy data accessible to enable benchmarking, and can tailor their programs to reach multifamily buildings owners and managers that must comply.

Potential Multifamily Program Partners

In states with active multifamily energy efficiency programs funded by non-utility sources, utilities may have a ready partner. These programs offer the advantage of existing implementation infrastructure, relationships with the community of multifamily building owners, and the opportunity to develop more comprehensive programs. These potential partners include administrators of federally funded programs such as the Weatherization Assistance Program (WAP), the Department of Energy Better Buildings Neighborhood Program (BBNP), and various HUD programs. State Housing Finance Agencies and local public housing authorities may also deliver programs for publicly owned or assisted multifamily housing and can help connect utility programs with building owners and developers.

Federally Funded, Locally Implemented Programs In 2010, the Department of Energy implemented new rules to make it easier for multifamily buildings to qualify for WAP funding (DOE 2010). As a result, partnerships between utilities and local Community Action Agencies which implement WAP can be an effective strategy to deliver multifamily energy efficiency programs for low-income residents. Capacity for implementing WAP in multifamily programs is still improving and DOE is developing tools to help local WAP implementers and others deliver multifamily energy efficiency retrofits.[15]

Partnerships between the owners of affordable multifamily housing, local community Action Agencies, and utilities can help address the barriers owners face participating in traditional programs. For example, in Massachusetts, the LEAN Multifamily retrofit program is funded and promoted through a partnership between the state's electric and gas utilities, the Massachusetts Association for Community Action (MASSCAP) and Low-Income Energy Affordability Network (LEAN). The cooperative program was developed to better serve non-profit owners who found it challenging to participate in existing energy efficiency programs. (Stratton 2011).

[15] For example, DOE has commissioned Oak Ridge National Laboratory to develop an online energy audit tool for multifamily buildings, MultTEA. The tool will be available to WAP practitioners as well as the general public. See http://waptac.org/data/files/website_docs/public_information/fact-sheets/waptac_multifamilyfact_091812_web.pdf.

The following is list of metropolitan areas with utility funding for multifamily eligible WAP programs according to Economic Opportunity Studies' (2013) index of utility-WAP partnership programs. Existing partnerships with Community Action Agencies and program implementation infrastructure could provide a ready opportunity to expand programs to incorporate multifamily building owners as well as tenants. A list of participating utilities and program names is provided in Appendix C.

1. Sacramento—Sacramento Municipal Utility Division
2. San Diego—San Diego Gas and Electric
3. San Francisco & San Jose—Pacific Gas and Electric
4. Los Angeles & Riverside—Southern California Edison
5. Hartford—Connecticut Light and Power, Connecticut Gas
6. Indianapolis—Indianapolis Power and Light
7. Boston—National Grid, NSTAR
8. Baltimore & Washington DC—all regulated Maryland electric utilities
9. Minneapolis—Xcel Energy
10. Las Vegas—all regulated Nevada gas and electric utilities
11. Columbus—Columbia Gas, First Energy
12. Cleveland—Dominion East Ohio, First Energy
13. Cincinnati—Duke Energy Ohio
14. Portland—Portland General Electric, Northwest Natural
15. Pittsburgh—Peoples Gas
16. Philadelphia—PECO Energy, Philadelphia Gas Works
17. Seattle —Puget Sound Energy

The Department of Energy Better Building Neighborhood Program (BBNP) provided $508 million in one-time grants to 41 local and statewide programs for building energy retrofit programs in 2010. BBNP grantees are competitively selected community organizations and local and state government entities. These programs were designed to leverage private funds and be sustainable beyond the BBNP grant. They offer utilities potential partners to help deliver multifamily programs through the networks of energy contractors they have developed. In fact, many programs are already partnering with their utilities and leveraging existing utility incentive and rebates. Of the metropolitan areas we analyzed, the following eleven have BBNP programs targeting multifamily buildings:

1. New York City: NYSERDA Home Performance with ENERGY STAR
2. Los Angeles, Sacramento, San Francisco, and San Diego: Energy Upgrade California Multifamily Program
3. Chicago: Energy Impact Illinois
4. Washington and Baltimore: Be SMART Maryland
5. Philadelphia: Energy Works
6. Seattle: Community Power Works
7. Austin: Austin Energy Clean Energy Accelerator
8. Sacramento: Sacramento Municipal Utility District's Neighborhood Performance Program

A full summary of BBNP grantees located in the 50 metropolitan areas we analyzed is provided in Appendix C.

STATE HOUSING FINANCE AGENCIES AND COMMUNITY DEVELOPMENT FINANCIAL INSTITUTIONS Utilities and utility regulatory commissions in several states are partnering with state housing agencies and finance authorities (HFAs) to develop and implement energy efficiency programs for affordable multifamily housing. State HFAs are publicly-charted authorities that seek to provide and preserve affordable housing. HFAs can help utilities connect with multifamily building owners and managers whom they have relationships with through their various programs. Utilities can help HFAs provide additional energy efficiency incentives to affordable multifamily property owners. Examples of existing partnerships between utilities and state HFAs, each of which is described above in Table 10, include:

1. the Maryland Department of Housing and Community Development's Multifamily Energy Efficiency and Housing Affordability;
2. the LEAN Multifamily Retrofit Program in Massachusetts;
3. the Michigan State Housing Development Authority GREEN Loan Fund pilot project of which DTE Energy is a partner;
4. the New Jersey Housing and Mortgage Finance Agency and the state's largest utility, Public Service Electric & Gas (PSE&G) Residential Multifamily Housing Program (NHT 2012).

Community Development Finance Institutions, or CDFIs, can provide a similar gateway to the multifamily sector through their existing relationships with building owners and developers. Some

CDFIs also provide low-interest financing for multifamily energy efficiency retrofits, which could be combined with utility rebate and or direct install programs. In addition, independent regional and national non-profit organizations offer technical assistance to building owners to help them identify incentives and financing opportunities and manage retrofit projects including the Energy Savers program administered by CNT Energy and Enterprise's Green Communities program.

Multifamily Program Opportunity Guide

Based on our analysis of the three areas discussed above: housing stock, existing utility programs, and policy opportunities; we attempt to identify the metropolitan areas that represent the biggest opportunity for scaling up multifamily programs in the near term. We created a scoring system to rank the metropolitan areas based on key metrics from each of the three categories. Once the areas are ranked, we discuss the level of programs currently targeting the multifamily sector in each metropolitan area. This discussion is meant to provide a guide to efforts to expand the level of resources available to improve the energy efficiency of multifamily buildings.

The metrics we used to score the metropolitan areas were:

1. Housing—the size of the housing opportunity is scored using the share of metropolitan area households living in multifamily buildings with five or more units;

2. Utility Funded Programs—the potential size of the resource available to scale up multifamily programs is score using the total spending on energy efficiency programs per residential customer by primary utilities and statewide programs serving the metropolitan area in 2011 or the most recent available year;[16]

3. Policy—Both the recent growth in statewide energy efficiency program budgets (2009-2011) and the 2012 ACEEE Energy Efficiency Scorecard score for Utility and Public Benefit Programs & Policy are scored to reflect the level of political and policy support for expanding energy efficiency programs at the state level.

Up to five points were awarded for each metric according to ranges shown in Table 11. The total score out of 30 points was calculated using the following formula:

Total Score (30 possible points) = Housing Score x 2 + Utility Spending x 2 + Change in Budgets + 2012 ACEEE Utility Score

[16] Spending per residential customer is calculated using the total spending on energy efficiency programs for each utility and/or statewide customer-funded program (i.e., NYSERDA) divided by the total number of residential electric and gas customers served by each utility and/or statewide program. In areas like New York City where both the utilities and statewide programs administer programs, customers are only counted once.

Table 11: Metropolitan Area Scoring

Housing Score (percentage of households in multifamily buildings)	Total Spending on Utility Customer-funded Energy Efficiency Programs (dollars per residential customer)	Change in Statewide Energy Efficiency Budgets	2012 ACEEE Utility and Public Benefit Programs & Policies Score
30% or higher: 5 points	$50 or higher: 5 points	100% or higher: 5 points	Total score, out of 20 points, is divided by 4.
25-29%: 4 points	$40-49: 4 point	50-99%: 4 points	
20-24% 3 points	$30-39: 3 points	31-49%: 3 points	
15-19%: 2 points	$20-29: 2 points	11-30%: 2 points	
10-14%: 1 point	$10-19: 1 point	0-10%: 1 point	
Less than 10%: 0 points	Less than $10: 0 points	less than 0%: 0 points	

The results for each of the 50 metropolitan areas are shown in Table 12.

Table 12: Summary of Metropolitan Area Scores

	Metropolitan Area	State	Percent of Households in Multifamily Buildings	Score	Total Energy Efficiency Spending per Residential Customer 2011	Score	Change in Energy Efficiency Budgets Statewide 2009-2011	Score	2012 ACEEE Utility Score	Score	Total Score (30 possible points)
1	New York	NY	37.4	5	41.72	4	183%	5	17.5	4	27
2	Boston	MA	23.4	3	89.66	5	157%	5	19.5	5	26
2	Seattle	WA	25.9	4	62.47	5	84%	4	14.5	4	26
4	Portland	OR	21.2	3	66.89	5	86%	4	16.0	4	24
5	Los Angeles	CA	32.0	5	44.64	4	4%	1	17.5	4	23
5	San Francisco	CA	28.0	4	60.32	5	4%	1	17.5	4	23
5	San Jose	CA	25.0	4	60.32	5	4%	1	17.5	4	23
5	Providence	RI	16.5	2	58.21	5	64%	4	18.5	5	23
9	Honolulu	HI	36.3	5	47.84	4	0%	1	12.5	3	22
9	Baltimore	MD	19.9	3	43.33	4	323%	5	12.0	3	22
9	Hartford	CT	18.8	2	74.17	5	91%	4	15.0	4	22
12	Minneapolis	MN	21.8	3	37.45	3	74%	4	19.0	5	21

	Metropolitan Area	State	Percent of Households in Multifamily Buildings	Score	Total Energy Efficiency Spending per Residential Customer 2011	Score	Change in Energy Efficiency Budgets Statewide 2009-2011	Score	2012 ACEEE Utility Score	Score	Total Score (30 possible points)
13	Denver	CO	26.7	4	34.16	3	39%	3	11.0	3	20
14	Sacramento	CA	16.8	2	60.19	5	4%	1	17.5	4	19
14	San Diego	CA	28.5	4	33.65	3	4%	1	17.5	4	19
16	Philadelphia	PA	15.9	2	42.43	4	134%	5	5.0	1	18
16	Chicago	IL	24.7	4	26.64	2	80%	4	8.0	2	18
16	Miami	FL	38.7	5	29.37	2	45%	3	3.5	1	18
19	Cleveland	OH	18.0	2	33.07	3	301%	5	8.5	2	17
19	Columbus	OH	18.8	2	38.54	3	301%	5	8.5	2	17
21	Detroit	MI	15.1	2	27.80	2	157%	5	13.5	3	16
21	Phoenix	AZ	18.8	2	28.62	2	146%	5	13.5	3	16
21	Kansas City	MO	15.3	2	33.25	3	124%	5	3.5	1	16
24	Riverside	CA	12.4	1	45.60	4	4%	1	17.5	4	15
24	Cincinnati	OH	17.4	2	28.16	2	301%	5	8.5	2	15
24	Salt Lake City	UT	19.6	3	38.66	3	-12%	0	11.5	3	15
27	Las Vegas	NV	25.6	4	19.81	1	20%	2	9.5	2	14
27	Pittsburgh	PA	12.8	1	31.24	3	134%	5	5.0	1	14
27	Cape Coral	FL	22.3	3	29.20	2	45%	3	3.5	1	14
27	Jacksonville	FL	19.4	3	24.67	2	45%	3	3.5	1	14
27	North Port	FL	19.9	3	29.20	2	45%	3	3.5	1	14
27	Orlando	FL	22.6	3	27.34	2	45%	3	3.5	1	14
27	Tampa	FL	21.5	3	26.66	2	45%	3	3.5	1	14
27	Austin	TX	25.7	4	15.29	1	44%	3	3.0	1	14
27	Dallas	TX	24.8	4	13.31	1	44%	3	3.0	1	14
27	Houston	TX	25.6	4	10.24	1	44%	3	3.0	1	14
27	San Antonio	TX	18.2	2	30.69	3	44%	3	3.0	1	14
38	Louisville	KY	15.5	2	21.21	2	55%	4	4.0	1	13

	Metropolitan Area	State	Percent of Households in Multifamily Buildings	Score	Total Energy Efficiency Spending per Residential Customer 2011	Score	Change in Energy Efficiency Budgets Statewide 2009-2011	Score	2012 ACEEE Utility Score	Score	Total Score (30 possible points)
38	Indianapolis	IN	17.1	2	12.29	1	155%	5	7.0	2	13
38	Milwaukee	WI	21.7	3	21.60	2	-38%	0	10.5	3	13
41	Oklahoma City	OK	14.8	2	15.68	1	1253%	5	5.0	1	12
41	Washington	DC	29.9	4	16.41	1	-37%	0	6.0	2	12
43	Richmond	VA	16.4	2	11.77	1	1475%	5	1.5	0	11
43	Virginia Beach	VA	18.0	2	11.49	1	1475%	5	1.5	0	11
45	Memphis	TN	17.0	2	13.57	1	52%	4	1.5	0	10
45	Nashville	TN	17.9	2	11.69	1	52%	4	1.5	0	10
45	Charlotte	NC	17.8	2	20.42	2	-11%	0	6.0	2	10
45	Raleigh	NC	18.1	2	22.12	2	-11%	0	6.0	2	10
49	St. Louis	MO	13.2	1	6.65	0	124%	5	3.5	1	8
50	Atlanta	GA	20.7	3	3.91	0	2%	1	1.5	0	7

Notes and Sources: [1] (ACS 2011). [2]See Table B-3 in the Appendix for data by utility for each metropolitan area and sources. [3]2009 budgets are from (Molina et al. 2010), 2011 budgets are from (Foster et al. 2012). [4](Foster et al. 2012).

It is important to note that these results are based on a snapshot in time. While we attempt to capture policy trends by using results from the ACEEE State Scorecard, this may not reflect the latest policy changes or expansion of utility programs in each state. For example, there is a significant opportunity to influence program design and invest when utilities and statewide program administrators propose new multi-year plans for their efficiency programs to state regulatory commissions. Proposed spending on new programs is not captured here. Furthermore, the policy metrics used measure the statewide context, which may be less of a driver in areas with a municipally owned utility. The considerable local variation in policy drivers and potential partnerships underscores the importance of collaboration between utilities, regulators, the multifamily housing community, and other local partners.

Summary of Program Opportunities

The analysis of existing multifamily programs above makes it clear that there is great variation in types of multifamily energy efficiency programs and the share of spending dedicated to the multifamily sector. Accordingly, the opportunity to achieve greater energy savings in multifamily buildings differs across the metropolitan areas we analyzed. In some areas, the opportunity will be to create a targeted multifamily program for the first time. In other areas with established programs, there may be in opportunity to enhance programs in order to support whole-building approaches for retrofits and new construction. The following summary of current programs provides a guide to which type of approach may increase the amount of resources available to improve the energy efficiency of multifamily housing. We attempt to capture the latest policy development and categorize each area based on the type of program opportunity available to it. The four categories we use are:

1. Leaders—these areas have multiple programs targeting multifamily buildings including comprehensive programs that support whole-building approaches. There are likely opportunities to improve coordination between existing programs, increase program funding, and refine program offerings for higher participation and savings.

2. Comprehensive retrofit—these areas are currently served by at least one multifamily program that provides rebates or direct install services and could enhance these efforts with a new program to support comprehensive, whole-building retrofits.

3. Expand on existing programs—these areas have limited multifamily programs that could be expanded to address additional energy efficiency measures or reach more of the multifamily sector.

4. New utility program—these areas either do not have a multifamily program currently, or new programs have just been proposed.

Table 13: Summary of Multifamily Program Opportunities by Metropolitan Area

Rank	Metro Area	Utilities	Existing Multi-Family Program	Description of Current Programs	Opportunity Category
1	New York	NYSERDA, Consolidated Edison, National Grid, Long Island Power Authority, Public Service Electric & Gas, New Jersey Clean Energy Program	✓	Each of the primary utilities and program administrators in the New York metropolitan area implements multifamily programs except for the New Jersey Clean Energy Program. NYSERDA's Multifamily Performance Program and Public Service Electric & Gas' Residential Multifamily Program provide incentives or financing for comprehensive retrofits, while the other utilities' programs offer direct install measures and prescriptive rebates.	Leader

Rank	Metro Area	Utilities	Existing Multi-Family Program	Description of Current Programs	Opportunity Category
2	Boston	National Grid, NStar	✓	Each of the Boston area electric and gas utilities fund three statewide programs: a retrofit program for non-low income buildings, the LEAN administered retrofit programs for affordable rental buildings, and a pilot program for new construction. Each of these programs involves coordination between the electric and gas utilities and use a comprehensive, whole-building approach.	Leader
2	Seattle	Puget Sound Energy, Seattle City Light	✓	There is a high level of overall spending on multifamily programs in Seattle, but there is an opportunity for a comprehensive, whole-building retrofit program for existing multifamily buildings. Currently Seattle City Light and Puget Sound Energy have comprehensive programs for new construction, and both Puget Sound Energy and Seattle City Light implement multifamily rebate programs for existing buildings.	Comprehensive Retrofit
4	Portland	Energy Trust of Oregon, Portland General Electric, NW Natural Gas	✓	The Energy Trust of Oregon Multifamily Solutions Program offers direct install services and rebates for existing buildings. The program also provides comprehensive design, installation and certification incentives for new construction and major rehab projects. In addition to the customer-funded programs, the Energy Trust of Oregon and several community partners are piloting an on-bill finance program called MPower to fund comprehensive retrofits of affordable multifamily buildings.	Leader

Rank	Metro Area	Utilities	Existing Multi-Family Program	Description of Current Programs	Opportunity Category
5	Los Angeles	Southern California Edison, Los Angeles Department of Water and Power (LADWP), Southern California Gas	✓	The investor-owned utilities serving Los Angeles, Southern California Edison and Southern California Gas, offer several rebate and direct install programs as well as the whole-building Energy Upgrade California Program. LADWP, the municipal utility, however, does not offer any multifamily programs, and the Energy Upgrade Multifamily program for Los Angeles County stopped accepting applications in April, 2012.	Comprehensive Retrofit (LADWP)
5	Providence	National Grid	✓	National Grid, beginning in 2012, worked to provide one primary point-of-contact and better coordination of services offered to multifamily building owners and property managers through their existing programs. Multifamily building owners are currently eligible for free direct install measures and incentives for air sealing and insulation. According to plans reported to the Rhode Island Public Utilities Commission, they are exploring a more holistic program approach beginning in the latter half of 2013 (National Grid 2012c).	Comprehensive Retrofit
5	San Francisco	Pacific Gas & Electric (PG&E)	✓	PG&E currently funds the Energy Upgrade California Multifamily Program for San Francisco County, also called the SF Energy Watch Program. In addition to this comprehensive retrofit program, PG&E offers rebates through the statewide Multi-Family Residential Energy Efficiency Rebate Program and incentives for energy-efficient new construction through the California Multifamily New Homes Program.	Leader

Rank	Metro Area	Utilities	Existing Multi-Family Program	Description of Current Programs	Opportunity Category
5	San Jose	Pacific Gas & Electric (PG&E)	✓	San Jose multifamily buildings are eligible for PG&E's rebate and new construction programs described above, but not the Energy Upgrade California comprehensive retrofit program.	Comprehen-sive Retrofit
9	Baltimore	Baltimore Gas & Electric (BG&E)	✓	BG&E currently targets multifamily buildings through its Quick Home Energy Check-up program, but does not have a dedicated multifamily program. BG&E does provide funding to the Multifamily Energy Efficiency and Housing Affordability Program (MEEHA) program administered by the Maryland Department of Housing and Community Development that provides loans and grants for energy efficiency retrofits of multifamily rental properties for low and moderate income households.	Expand Existing Programs
9	Hartford	Connecticut Light & Power, Connecticut Gas	✓	The Connecticut Energy Efficiency Fund, the statewide administrator for utility customer-funded programs, Multifamily Initiative gives multifamily buildings owners and managers access to multiple energy efficiency programs through a single point of contact. In addition to the utility customer-funded programs, the Multifamily Energy Conservation Loan Program is administered by the Connecticut Housing Investment Fund, Inc. (CHIF) with funding from the Connecticut Department of Economic and Community Development (DECD). The program provides financing at below market rates to single family and multi-family residential property owners for the purchase and installation of cost-saving energy conservation improvements.	Comprehen-sive Retrofit

Rank	Metro Area	Utilities	Existing Multi-Family Program	Description of Current Programs	Opportunity Category
9	Honolulu	Hawaii Energy	✓	Hawaii Energy's Energy Hero Landlord Program provides affordable rental property owners with comprehensive retrofit services including potential project financing through local lenders. Currently, spending on this multifamily program is less than 1% of Hawaii Energy's overall program spending indicating an opportunity to expand on this existing effort to reach more property owners. Hawaii Energy also explicitly targets landlords, property managers and rental tenants for all their residential programs as "hard-to-reach" customers. A "one-stop-shop" for multifamily buildings may increase access to these existing incentive programs.	Comprehen-sive Retrofit
12	Minneapolis	Xcel Energy, CenterPoint, Energy	✓	Both Xcel and CenterPoint have started to ramp up rebate and direct install programs for affordable multifamily housing (CenterPoint Energy 2012b; Xcel Energy 2012c). CenterPoint also offers tailored commercial rebates to multifamily property owners for natural gas efficiency measures. In addition to the successful implementation of these programs, there is an opportunity to expand on these services to include comprehensive retrofits and encourage partnerships between the utilities to address electricity and gas simultaneously.	Comprehen-sive Retrofit
13	Denver	Xcel Energy	✓	Xcel Energy currently funds a weatherization program for low-income qualified multifamily buildings implemented by Energy Outreach Colorado. Spending on this program is currently just 1% of Xcel's total energy efficiency spending.	Expand Existing Programs

Rank	Metro Area	Utilities	Existing Multi-Family Program	Description of Current Programs	Opportunity Category
14	Sacramento	Sacramento Municipal Utility Department (SMUD), Pacific Gas & Electric (PG&E)	✓	The Energy Upgrade California Multifamily Program in Sacramento County, also known as "SMUD Home Performance Program—Multifamily," provides incentives for comprehensive retrofits that achieve at least 10% savings. Prescriptive rebates are also available if building owners choose not to pursue the performance program. Customers served by PG&E are eligible for the PG&E Multifamily Energy Efficiency Rebate program.	Leader
14	San Diego	San Diego Gas & Electric	✓	San Diego Gas & Electric offers the statewide Multifamily Energy Efficiency Rebate program, and provides incentives for comprehensive retrofits through the Energy Upgrade California Multifamily program in San Diego County.	Leader
16	Chicago	Common-wealth Edison People's Gas	✓	Both Chicago area utilities jointly administer electric and gas rebate programs for multifamily building owners. In addition to the utility programs, the Illinois Department of Commerce & Economic Opportunity implements the ratepayer-funded New Multi-Family and Gut Rehab program for low-income affordable housing properties. In addition to these utility customer-funded programs, Energy Savers administered by CNT Energy provides technical assistance for multifamily building owners to help them obtain utility incentives and low-cost financing for retrofits provided by a local community foundation, the Community Investment Corporation.	Leader
16	Miami	Florida Power & Light, TECO People's Gas,		None of the Miami area utilities offer multifamily programs, but Miami has the highest concentration of multifamily households of any metro	New Utility Program

Rank	Metro Area	Utilities	Existing Multi-Family Program	Description of Current Programs	Opportunity Category
		Florida City Gas		area (39% of total households), indicating considerable untapped potential for energy savings.	
16	Philadelphia	PECO Energy, Public Service Electric & Gas, Philadelphia Gas Works	✓	PECO Energy, the electric utility serving the city of Philadelphia did not have a targeted multifamily program during 2011, but they have proposed a new Smart Multi-Family Solutions program for 2013-2015 that will provide direct install services and prescriptive rebates for electric efficiency measures (PECO Energy 2012b). The gas utility, Philadelphia Gas Works, does not offer any multifamily programs. A potential partner is the Pennsylvania Housing Finance Agency's Preservation through Smart Rehab Program (Smart Rehab) which provides financing for energy efficiency improvements of affordable multifamily rental properties.	New Utility Program
19	Columbus	AEP Ohio, Columbus Gas, Ohio First Energy (Ohio Edison)		None of the Columbus area utilities offer multifamily programs, but statewide utilities are increasing their spending on energy efficiency programs as Ohio's EERS is implemented.	New Utility Program
19	Cleveland	First Energy, Cleveland Electric Illuminating, Dominion East Ohio		None of the primary utilities serving the Cleveland metro area currently offer a multifamily program, but spending on energy efficiency programs is increasing across the state of Ohio as utilities are implementing programs to comply with the state's EERS.	New Utility Program
21	Detroit	DTE (Detroit Edison and MichCon Gas), Consumers Energy	✓	Both DTE and Consumers Energy offer direct install measures for dwelling units and prescriptive rebates for common areas. Neither administers a comprehensive retrofit program,	Comprehen-sive Retrofit

Rank	Metro Area	Utilities	Existing Multi-Family Program	Description of Current Programs	Opportunity Category
				however DTE is participating in the Michigan State Housing Development Authority pilot GREEN Loan Fund to finance energy efficiency improvements in affordable multifamily buildings. DTE and Consumer's Energy coordinate their direct install programs in dual service territories to provide both electric and gas measures.	
21	Kansas City	Kansas City Power & Light (KCP&L), Missouri Gas		KCP&L gained approval from the Missouri Public Utilities Commission in 2013 for new energy efficiency programs for its Greater Missouri Operations service territory, which does not include central Kansas City. The new programs include a multifamily rebate program. As KCP&L considers expanding programs in its other service territories, there is an opportunity to expand on this new multifamily program. KCP&L and Missouri Gas are also partners in Energy Works KC, a program supported by the Department of Energy's Better Buildings Neighborhood Program to supplement existing utility rebates, including for multifamily building owners.	New Utility Program
21	Phoenix	Arizona Public Service (APS), Southwest Gas	✓	The electric utility, APS, has a Multifamily Energy Efficiency Program that offers three program tracks including free measures for resident units, free energy assessments and incentives for common areas, builder incentives for new construction and major renovations based on Home Performance with ENERGY STAR. Southwest Gas does not offer any energy efficiency programs targeting multifamily buildings. Coordination	Comprehen-sive Retrofit.

Rank	Metro Area	Utilities	Existing Multi-Family Program	Description of Current Programs	Opportunity Category
				between the electric and gas utilities could enable programs to support both electric and gas energy efficiency measures.	
24	Cincinnati	Duke Energy Ohio, Duke Energy Kentucky, Dayton Power & Light	✓	Duke Energy Ohio's Property Managers CFL Program offers discounted CFLs to multifamily property managers through their larger residential lighting program. There is an opportunity to expand the incentives available to property managers and owners for additional energy efficiency measures and to use a comprehensive, whole-building approach. Neither Dayton Power & Light nor Duke Energy Kentucky currently offer multifamily programs.	Expand Existing Program
24	Riverside	Riverside Public Utilities, Southern California Edison, Southern California Gas	✓	Electric customers served by Riverside's municipal utility do not have access to a multifamily program. Customers served by Southern California Edison and Southern California Gas have access to their statewide multifamily rebate programs.	New Utility Program
24	Salt Lake City	PacifiCorp (Rocky Mountain Power), Questar Gas		Questar Gas suspended its stand-alone multifamily rebate program in 2012 and folded multifamily buildings into its broader commercial and residential programs citing administrative efficiency. They still offer tailored rebates for multifamily property owners under their ThermWise programs. There are no multifamily programs offered by the electric utility, PacificCorp indicating potential for a joint electric and gas program in partnership with Questar.	New Utility Program

Rank	Metro Area	Utilities	Existing Multi-Family Program	Description of Current Programs	Opportunity Category
27	Austin	Austin Energy, Texas Gas	✓	Austin Energy, the municipal electric utility offers extensive rebates to multifamily property owners, managers, or developers based on the result of an energy audit. Multifamily buildings ten years or older are required to complete audits in order to comply with City of Austin's Energy Conservation Audit and Disclosure Ordinance. Texas Gas does not offer any multifamily programs.	Leader
27	Cape Coral-Fort Myers	Florida Power & Light, TECO People's Gas		None of the Cape Coral area utilities offer multifamily programs, yet nearly a quarter of households in the metropolitan area live in multifamily buildings. Both utilities serve several metropolitan areas in Florida with a large share of households residing in multifamily buildings.	New Utility Program
27	Dallas-Fort Worth	Oncor, Atmos Energy		Oncor discontinued its ENERGY STAR Low-Rise Multifamily program in 2012 due to lack of demand resulting from the downturn in the new construction market. There are no programs targeting existing multifamily buildings. Atmos Energy, the natural gas utility, does not offer energy efficiency programs.	New Utility Program
27	Houston	CenterPoint Energy	✓	CenterPoint's Multi-Family Water & Space Heating Market Transformation Program provides incentives to multifamily property developers to install non-electric water and space heating systems in new buildings. There are not targeted programs for existing multifamily buildings.	Expand Existing Programs
27	Jacksonville	JEA, TECO People's Gas		Neither the municipal electric utility, JEA, nor TECO People's Gas offer multifamily programs, yet nearly 20% of Jacksonville households live in multifamily buildings, indicating an	New Utility Program

Rank	Metro Area	Utilities	Existing Multi-Family Program	Description of Current Programs	Opportunity Category
				opportunity for JEA. TECO serves several metropolitan areas in Florida.	
27	Las Vegas	Nevada Power, Southwest Gas		Neither of the Las Vegas utilities offers targeted multifamily programs. Overall spending on customer-funded energy efficiency programs is almost $20 per residential customer, towards the low end of areas we analyzed. With a quarter of households living in multifamily buildings, however, there is an opportunity to reach a large number of households through a new multifamily program.	New Utility Program
27	North Port-Bradenton-Sarasota	Florida Power & Light, TECO People's Gas		None of the Tampa area utilities offer multifamily programs, yet serve several metropolitan areas in Florida with large concentrations of multifamily units.	New Utility Program
27	Orlando	Orlando Utilities Commission, TECO People's Gas, Florida Power & Light, Progress Energy Florida		None of the Orland area utilities offer multifamily programs, yet nearly a quarter of households in the metropolitan area live in multifamily buildings. Assuming this share is higher in the city itself, there may be an opportunity for the municipal utility, the Orland Utilities Commission to reach more customers through a targeted multifamily program.	New Utility Program
27	Pittsburgh	Duquesne Light, Peoples Gas		While they are currently no multifamily programs offered by the Pittsburgh utilities, Duquesne Light has proposed a new program in its plan for 2013-2015. The Multifamily Housing Retrofit Program would offer income-qualified property owners integrated funding, technical assistance, and energy assessment services (Duquesne Light Company 2012).	New Utility Program

Rank	Metro Area	Utilities	Existing Multi-Family Program	Description of Current Programs	Opportunity Category
27	San Antonio	CPS Energy, Texas Gas		CPS Energy, the municipal electric and gas utility, spends a significant amount on energy efficiency programs (nearly $60 per residential customer), yet does not offer a program targeted at multifamily buildings. With nearly 20% of area households living in multifamily buildings, there is an opportunity for CPS Energy could reach a large number of residents with a joint electric and gas program.	New Utility Program
27	Tampa	TECO Tampa Electric, TECO People's Gas, Progress Energy Florida		None of the Tampa area utilities offer multifamily programs, yet serve several metropolitan areas in Florida with large concentrations of multifamily units.	New Utility Program
38	Indianapolis	Indianapolis Power & Light (IPL), Citizen's Energy	✓	IPL and Citizen's Energy jointly administer a direct install program that accounts for nearly 10% of each of their overall spending on energy efficiency programs. This program could be expanded to provide incentives for more comprehensive measures.	Comprehensive Retrofit.
38	Louisville	Louisville Gas & Electric, Kentucky Utilities		Neither of the Louisville area utilities currently offers a multifamily program.	New Utility Program
38	Milwaukee	Focus on Energy	✓	Focus on Energy, the statewide energy efficiency program administrator, offers comprehensive incentives along with free energy assessments and direct install measures for existing multifamily buildings. Their program for new construction offers incentives to multifamily property developers.	Leader

Rank	Metro Area	Utilities	Existing Multi-Family Program	Description of Current Programs	Opportunity Category
41	Oklahoma City	Oklahoma Gas & Electric, Oklahoma Natural Gas		While neither of the Oklahoma City area utilities currently offers a multifamily program, statewide budgets for energy efficiency programs increased significantly from 2009 to 2011 indicating an opportunity for expanded programs in the future.	New Utility Program
41	Washington	District of Columbia Sustainable Energy Utility (DC SEU), PEPCO Maryland, Dominion (Virginia Electric Power), Washington Gas (MD, VA)	✓	In 2011, the District of Columbia launched the DC SEU to administer its customer-funded energy efficiency programs. In 2011 the DC SEU offered a "quick-start" direct install program for qualified low-income properties. They expanded on this program in 2012 and now offer a comprehensive program for new and existing affordable rental property owners. There may be an opportunity to expand on these programs to reach non-income qualified buildings as large multifamily properties over 50,000 square feet will soon have to comply with the District's new benchmarking and disclosure law. Outside of the District of Columbia, PEPCO Maryland customers can participate in the Multifamily Energy Efficiency and Housing Affordability Program (MEEHA) program administered by the Maryland Department of Housing and Community Development. There are no multifamily programs available in Virginia.	Leader
43	Richmond	Dominion (Virginia Electric Power), City of Richmond Dep. of Public Utilities		Neither of the Richmond area utilities currently offers a program for multifamily buildings.	New Utility Program

Rank	Metro Area	Utilities	Existing Multi-Family Program	Description of Current Programs	Opportunity Category
43	Virginia Beach	Dominion (Virginia Electric Power), Virginia Natural Gas		Neither of the Virginia Beach area utilities currently offers a program for multifamily buildings.	New Utility Program
45	Charlotte	Duke Energy Carolinas. Piedmont Natural Gas	✓	Duke Energy provides free CFLs to multifamily property managers through their Property Managers CFL program. This program could be expanded to include rebates for additional measures and to use a more comprehensive approach. Piedmont Natural Gas does not offer any multifamily programs.	Expand Existing Programs
45	Memphis	Memphis Light, Gas & Power, Entergy Mississippi		The municipal utilities in both Nashville and Memphis are local partners of TVA and participate in TVA's energy efficiency programs. A TVA multifamily program could reach both metropolitan areas where 17% of households live in multifamily buildings.	New Utility Program
45	Nashville	Nashville Electric Service (NES), Atmos Energy		The municipal utilities in both Nashville and Memphis are local partners of TVA and participate in TVA's energy efficiency programs. A TVA multifamily program could reach both metropolitan areas where 17% of households live in multifamily buildings.	New Utility Program
45	Raleigh	Progress Energy Carolinas, Duke Energy Carolinas, Public Service Company of North Carolina	✓	Neither Progress Energy nor the Public Service Company of North Carolina offered multifamily programs. Duke Energy Carolinas, which recently merged with Progress, does offer free CFLs to multifamily property managers. This program could be expanded to include rebates for additional measures and to use a more comprehensive approach.	Expand Existing Programs

Rank	Metro Area	Utilities	Existing Multi-Family Program	Description of Current Programs	Opportunity Category
49	St. Louis	Ameren, Missouri Laclede Gas	✓	Ameren, St. Louis' electric utility, recently gained approval from the Missouri Public Service Commission for a new 3 year plan for their energy efficiency programs. Included in the plan is direct install and rebate program for owners of federally assisted rental properties. Laclede Gas does not offer any multifamily energy efficiency programs.	Expand Existing Programs
50	Atlanta	Georgia Power, Atlanta Gas Light	✓	Georgia Power's Residential EarthCents Home Energy Improvement program includes a track for multifamily property owners offering incentives for both whole-unit retrofits and individual upgrades. Spending is not available by building type, but the overall Home Energy Improvement program accounted for a third of Georgia Power's spending on energy efficiency programs in 2011. Atlanta Gas Light does not offer any energy efficiency programs.	Expand Existing Programs

Conclusions and Recommendations

The purpose of this report is to provide a baseline for future assessment of trends in multifamily energy efficiency programs, and to serve as a guide to the current opportunities to create new programs, or expand existing programs to reach the multifamily sector. Our analysis of the 50 metropolitan areas with the largest multifamily housing markets revealed a varied landscape of existing energy efficiency programs funded by utility customers. Characteristics of the local building stock and the local policy context are similarly diverse.

The good news is, more than half the 50 areas we analyzed are currently served by an energy efficiency program that specifically targets multifamily buildings. In several areas, there are multiple customer-funded programs that reach different segments of the multifamily housing market including new construction, and both income-qualified and non-income qualified existing properties. However, we found room for improvement in most areas to increase the multifamily sector's share of overall spending on energy efficiency programs.

The majority of the 50 programs funded in 2011 were based around rebates for specific energy efficiency measures as, but 20 supported comprehensive, whole-building approaches for new construction or major retrofits. In metropolitan areas with an opportunity to expand on existing programs, utilities can look to areas identified here as leaders in order to develop comprehensive programs to achieve deep, whole-building savings. The multiple programs offered in areas that are leading the way show the opportunity for a variety of approaches to reach different segments of the multifamily housing market and to provide building owners with various entry points into energy efficiency programs. A forthcoming ACEEE report will take a more in-depth look at exemplary multifamily energy efficiency programs and best practices.

Our assessment of existing utility customer-funded programs also revealed the importance of clearly marketing programs to multifamily building owners when they are eligible to participate. Determining which commercial or residential programs that building owners or renters are eligible for is not an easy task. While the focus of this paper is on programs specifically designed for the multifamily sector, utilities and program administrators could reach more multifamily owners and residents by more clearly indicating whether or not these customers are eligible for their existing programs. Better marketing and a clear point of contact for multifamily building owners could be an easy first step for program implementers that may not require approval from regulators or substantial new programs. Furthermore, in order to evaluate how well these broader programs are reaching the multifamily sector, utilities and program administrators should report program spending and participation by building type as much as possible. A full assessment of the program resources to which multifamily buildings have access was severely limited by the lack of reporting on spending at the program level and by building type for those programs which apply to multiple types of buildings. This information will better enable program administrators and third-party stakeholders to assess the extent to which programs are reaching multifamily customers.

It is important to note that all of the metropolitan areas we analyzed have a significant number of multifamily units, and utility programs in all of these areas should partner with housing and local community partners to reach these households and building owners. Our analysis considered a limited number of factors and focused exclusively on the largest multifamily housing markets. Outside the scope of this paper are important considerations including existing program implementation infrastructure that could be adapted to better target multifamily buildings and local policy factors such as building energy rating and disclosure laws which could encourage the participation of multifamily building owners (Cluett & Amann 2013). There are also considerable opportunities in smaller cities and metropolitan areas that fell outside of the 50 largest multifamily housing markets at which we looked.

Improving the energy efficiency of multifamily buildings can help building owners and their tenants save energy, but energy efficiency programs that target these savings need to be expanded in order to achieve this potential. Fortunately, there are a number of utility and statewide program administrators that are paving the way for utilities and their potential partners from the multifamily sector to achieve these energy savings.

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Appendix A: Housing Summary Tables

Table A-1: Summary of Housing Statistics by Metropolitan Area—Building Size, Tenure, and Utilities

Metropolitan Area	Multifamily Units (5 + Units)	Percent Multifamily (5 + Units)	Small Multifamily Units (2–4 units)	Percent Small Multifamily	Single-Family Households	Percent Single-Family	Percent of Multifamily Occupied by Renters	Percent of Renters with Utilities Included in Rent
New York-Northern New Jersey-Long Island	2,818,320	37.4	1,455,132	19.3	2,734,295	36.3	81.8	17.8
Los Angeles-Long Beach-Santa Ana	1,437,828	32.0	372,992	8.3	2,239,904	49.8	89.6	8.3
Miami-Fort Lauderdale-Pompano Beach	953,273	38.7	175,628	7.1	1,043,624	42.3	60.4	6.7
Chicago-Joliet-Naperville	936,293	24.7	568,427	15.0	1,971,334	51.9	72.5	9.2
Washington-Arlington-Alexandria	662,719	29.9	71,933	3.2	1,031,664	46.5	79.8	24.4
Dallas-Fort Worth-Arlington	622,931	24.8	116,635	4.6	1,596,468	63.6	97.2	9.4
Houston-Sugar Land-Baytown	591,647	25.6	88,073	3.8	1,436,834	62.1	95.3	6.8
San Francisco-Oakland-Fremont	487,807	28.0	205,942	11.8	863,544	49.5	87.2	10.7
Atlanta-Sandy Springs-Marietta	449,217	20.7	90,817	4.2	1,450,493	67.0	92.1	5.1
Boston-Cambridge-Quincy	440,215	23.4	413,033	21.9	900,288	47.8	80.3	18.8
Philadelphia-Camden-Wilmington	388,356	15.9	219,364	9.0	1,085,734	44.6	86.6	12.1
Seattle-Tacoma-Bellevue	379,306	25.9	98,393	6.7	869,529	59.4	85.5	10.1
Phoenix-Mesa-Glendale	339,587	18.8	87,688	4.9	1,156,709	64.2	91.7	10.8
San Diego-Carlsbad-San Marcos	332,190	28.5	85,722	7.4	599,371	51.4	87.5	10.2
Minneapolis-St. Paul-Bloomington	295,312	21.8	65,640	4.8	822,903	60.7	86.2	13.9
Tampa-St. Petersburg-Clearwater	291,525	21.5	79,713	5.9	751,737	55.5	76.8	7.3

Metropolitan Area	Multifamily Units (5 + Units)	Percent Multifamily (5 + Units)	Small Multifamily Units (2–4 units)	Percent Small Multifamily	Single-Family Households	Percent Single-Family	Percent of Multifamily Occupied by Renters	Percent of Renters with Utilities Included in Rent
Denver-Aurora-Broomfield	288,718	26.7	48,713	4.5	640,381	59.3	83.9	10.3
Detroit-Warren-Livonia	285,384	15.1	106,144	5.6	1,318,606	69.9	91.2	9.6
Baltimore-Towson	225,296	19.9	53,305	4.7	513,467	45.3	83.9	12.0
Las Vegas-Paradise	215,647	25.6	66,430	7.9	488,307	58.0	92.0	5.4
Orlando-Kissimmee-Sanford	213,306	22.6	42,627	4.5	562,561	59.6	89.9	4.3
Portland-Vancouver-Hillsboro	196,174	21.2	70,144	7.6	573,144	61.9	92.6	8.5
Riverside-San Bernardino-Ontario	186,899	12.4	82,890	5.5	1,036,893	69.0	95.1	5.4
Austin-Round Rock-San Marcos	182,130	25.7	48,689	6.9	419,269	59.1	96.7	4.4
Cleveland-Elyria-Mentor	172,178	18.0	100,495	10.5	621,173	65.0	92.9	12.7
St. Louis	162,761	13.2	119,961	9.7	855,973	69.2	89.5	7.9
San Jose-Sunnyvale-Santa Clara	162,633	25.0	49,175	7.6	353,142	54.3	89.8	7.9
Cincinnati-Middletown	160,028	17.4	86,982	9.5	596,666	65.0	88.5	10.3
San Antonio-New Braunfels	152,793	18.2	42,953	5.1	572,566	68.1	97.3	8.5
Columbus	149,423	18.8	77,228	9.7	488,832	61.6	94.7	6.9
Sacramento--Arden-Arcade--Roseville	146,410	16.8	63,997	7.3	589,844	67.6	96.0	4.9
Milwaukee-Waukesha-West Allis	145,545	21.7	113,540	16.9	365,375	54.5	88.6	10.0
Pittsburgh	140,862	12.8	90,897	8.2	739,105	67.1	92.6	16.2
Kansas City	135,316	15.3	54,280	6.1	617,664	69.9	96.1	9.6

Metropolitan Area	Multifamily Units (5 + Units)	Percent Multifamily (5 + Units)	Small Multifamily Units (2–4 units)	Percent Small Multifamily	Single-Family Households	Percent Single-Family	Percent of Multifamily Occupied by Renters	Percent of Renters with Utilities Included in Rent
Charlotte-Gastonia-Rock Hill	131,863	17.8	32,236	4.4	495,078	67.0	91.6	5.4
Indianapolis-Carmel	129,565	17.1	49,036	6.5	518,949	68.4	96.7	8.9
Virginia Beach-Norfolk-Newport News	123,984	18.0	45,834	6.7	423,165	61.6	91.6	10.8
Honolulu	122,254	36.3	26,315	7.8	157,814	46.8	63.4	30.3
Nashville-Davidson--Murfreesboro--Franklin	119,567	17.9	38,652	5.8	437,656	65.4	93.4	9.6
Jacksonville	116,320	19.4	30,145	5.0	373,767	62.4	86.0	7.0
Providence-New Bedford-Fall River	114,606	16.5	172,649	24.9	374,456	53.9	89.5	20.6
Hartford-West Hartford-East Hartford	95,184	18.8	79,447	15.7	302,544	59.6	84.4	11.3
Memphis	93,916	17.0	35,940	6.5	379,544	68.8	97.0	6.9
Richmond	87,398	16.4	27,061	5.1	376,184	70.7	94.3	12.3
Louisville/Jefferson County	86,944	15.5	41,123	7.3	389,303	69.5	90.3	12.4
Raleigh-Cary	84,612	18.1	20,473	4.4	295,220	63.2	94.5	5.4
Cape Coral-Fort Myers	82,629	22.3	23,080	6.2	195,415	52.6	57.7	8.5
Salt Lake City	80,417	19.6	31,254	7.6	265,511	64.6	85.9	11.7
North Port-Bradenton-Sarasota	79,847	19.9	22,438	5.6	221,456	55.2	62.5	11.0
Oklahoma City	79,676	14.8	26,116	4.8	388,315	71.9	97.9	8.8

Source: American Community Survey Three Year Estimates 2009-2011

Notes: Multifamily buildings include those with 5 or more units unless otherwise noted.

Table A-2: Heating Fuel by Housing Tenure (Percent of Households)

	Utility(Electricity or Gas)		Utility Gas		Electricity		Fuel Oil	
Metropolitan Area	Renter Occupied	Owner Occupied	Renter Occupied	Owner Occupied	Renter Occupied	Owner Occupied	Renter Occupied	Owner Occupied
Atlanta-Sandy Springs-Marietta	97	95	41	69	56	26	0	0
Austin-Round Rock-San Marcos	98	93	27	52	71	41	0	0
Baltimore-Towson	92	80	47	47	46	33	5	15
Boston-Cambridge-Quincy	77	54	52	48	25	6	19	40
Cape Coral-Fort Myers	98	98	1	1	97	97	0	0
Charlotte-Gastonia-Rock Hill	96	93	28	59	68	34	2	2
Chicago-Joliet-Naperville	97	98	76	92	20	6	0	0
Cincinnati-Middletown	94	87	48	61	46	26	2	5
Cleveland-Elyria-Mentor	95	95	73	87	22	8	1	2
Columbus	97	89	62	75	35	14	1	2
Dallas-Fort Worth-Arlington	99	97	16	50	82	47	0	0
Denver-Aurora-Broomfield	97	96	65	83	32	13	0	0
Detroit-Warren-Livonia	96	95	82	92	14	3	0	1
Hartford-West Hartford-East Hartford	71	39	44	31	27	7	25	54
Honolulu	36	41	3	2	33	39	0	0
Houston-Sugar Land-Baytown	98	96	20	61	78	36	0	0
Indianapolis-Carmel	97	92	48	67	48	25	0	1
Jacksonville	97	96	2	2	95	94	1	1

Metropolitan Area	Utility(Electricity or Gas)		Utility Gas		Electricity		Fuel Oil	
	Renter Occupied	Owner Occupied	Renter Occupied	Owner Occupied	Renter Occupied	Owner Occupied	Renter Occupied	Owner Occupied
Kansas City	97	93	57	77	40	16	0	0
Las Vegas-Paradise	99	98	50	76	49	22	0	0
Los Angeles-Long Beach-Santa Ana	91	95	60	79	31	16	0	0
Louisville/Jefferson County	95	91	48	61	47	30	0	1
Memphis	97	94	40	66	57	28	0	0
Miami-Fort Lauderdale-Pompano Beach	96	97	2	2	94	94	0	0
Milwaukee-Waukesha-West Allis	95	93	70	87	25	6	1	3
Minneapolis-St. Paul-Bloomington	93	93	65	87	29	6	1	1
Nashville-Davidson--Murfreesboro--Franklin	97	94	17	46	80	48	0	0
New York-Northern New Jersey-Long Island	69	71	57	65	12	6	27	27
North Port-Bradenton-Sarasota	98	98	3	4	95	93	0	0
Oklahoma City	97	92	44	69	53	23	0	0
Orlando-Kissimmee-Sanford	98	98	5	6	94	92	0	0
Philadelphia-Camden-Wilmington	87	75	56	62	32	13	9	20
Phoenix-Mesa-Glendale	98	98	18	35	80	64	0	0
Pittsburgh	92	87	67	79	25	8	5	9
Portland-Vancouver-Hillsboro	95	89	22	59	72	29	2	4
Providence-New Bedford-Fall River	77	51	60	47	17	4	20	44
Raleigh-Cary	94	90	17	45	77	45	1	1

Metropolitan Area	Utility(Electricity or Gas)		Utility Gas		Electricity		Fuel Oil	
	Renter Occupied	Owner Occupied	Renter Occupied	Owner Occupied	Renter Occupied	Owner Occupied	Renter Occupied	Owner Occupied
Richmond	93	84	27	28	66	56	4	9
Riverside-San Bernardino-Ontario	94	93	66	79	28	14	0	0
Sacramento--Arden-Arcade--Roseville	95	88	50	66	44	23	0	0
Salt Lake City	98	98	82	94	16	5	0	0
San Antonio-New Braunfels	98	96	22	37	76	59	0	0
San Diego-Carlsbad-San Marcos	92	91	47	70	45	21	0	0
San Francisco-Oakland-Fremont	95	97	58	80	36	17	0	0
San Jose-Sunnyvale-Santa Clara	96	96	50	79	46	17	0	0
Seattle-Tacoma-Bellevue	95	89	20	58	75	32	2	5
St. Louis	96	92	53	71	43	21	0	0
Tampa-St. Petersburg-Clearwater	99	98	3	5	96	93	0	0
Virginia Beach-Norfolk-Newport News	96	90	28	47	68	43	2	6
Washington-Arlington-Alexandria	95	90	46	56	49	34	3	6

Source: American Community Survey Three Year Estimates 2009-2012

Table A-3: Distribution of Multifamily Units by Building Age

Metropolitan Area	Units Built 2000 or Later	Percent Built 2000 or Later	Units Built 1980-1999	Percent Built 1980-1999	Units Built 1960-1979	Percent Built 1960-1979	Units Built 1940-1959	Percent Built 1940-1959	Units Built 1939 or Earlier	Percent Built 1939 or Earlier
New York-Northern New Jersey-Long Island	184110	8.5	272435	12.5	630921	29.1	244105	11.2	839390	38.7
Los Angeles-Long Beach-Santa Ana	107441	9.0	330701	27.8	539431	45.3	102855	8.6	110705	9.3
Miami-Fort Lauderdale-Pompano Beach	87372	12.7	237729	34.6	273519	39.8	76929	11.2	12191	1.8
Chicago-Joliet-Naperville	100569	12.9	160422	20.5	271765	34.8	79663	10.2	169457	21.7
Washington-Arlington-Alexandria	98367	16.9	152190	26.2	208910	35.9	87204	15.0	34798	6.0
Dallas-Fort Worth-Arlington	117042	19.1	232583	37.9	142794	23.2	115233	18.8	6628	1.1
Houston-Sugar Land-Baytown	112689	20.1	154969	27.6	176840	31.5	110726	19.8	5366	1.0
San Francisco-Oakland-Fremont	48639	11.6	91796	21.9	150052	35.8	39130	9.3	89329	21.3
Atlanta-Sandy Springs-Marietta	96580	22.7	150952	35.5	82697	19.4	87753	20.6	7501	1.8
Boston-Cambridge-Quincy	51815	12.8	79172	19.5	114661	28.3	45061	11.1	114722	28.3
Philadelphia-Camden-Wilmington	34025	10.7	74426	23.5	131098	41.3	32080	10.1	45704	14.4
Seattle-Tacoma-Bellevue	59876	16.3	130176	35.4	100543	27.3	50718	13.8	26524	7.2
Phoenix-Mesa-Glendale	58545	19.0	127169	41.2	66242	21.4	54870	17.8	2098	0.7
San Diego-Carlsbad-San Marcos	37407	12.3	104770	34.5	124322	40.9	31519	10.4	5975	2.0
Minneapolis-St. Paul-Bloomington	40550	14.6	77736	27.9	99754	35.8	31373	11.3	29063	10.4
Tampa-St. Petersburg-Clearwater	36849	15.7	92053	39.1	70709	30.1	32989	14.0	2654	1.1
Denver-Aurora-Broomfield	50818	18.1	86886	31.0	89900	32.1	41448	14.8	11191	4.0
Detroit-Warren-Livonia	23705	10.5	70492	31.1	94873	41.9	21414	9.4	16129	7.1

Metropolitan Area	Units Built 2000 or Later	Percent Built 2000 or Later	Units Built 1980-1999	Percent Built 1980-1999	Units Built 1960-1979	Percent Built 1960-1979	Units Built 1940-1959	Percent Built 1940-1959	Units Built 1939 or Earlier	Percent Built 1939 or Earlier
Baltimore-Towson	31477	15.2	68091	33.0	67026	32.5	23174	11.2	16767	8.1
Las Vegas-Paradise	42458	22.0	79621	41.2	32527	16.8	38340	19.8	227	0.1
Orlando-Kissimmee-Sanford	42394	23.5	69797	38.7	28791	16.0	38261	21.2	1194	0.7
Portland-Vancouver-Hillsboro	33256	17.2	67170	34.8	49277	25.5	29046	15.0	14467	7.5
Riverside-San Bernardino-Ontario	32794	18.3	70197	39.3	42398	23.7	31823	17.8	1575	0.9
Austin-Round Rock-San Marcos	53313	25.6	66343	31.9	35397	17.0	52294	25.1	584	0.3
Cleveland-Elyria-Mentor	9078	7.2	27583	21.8	59462	47.0	10014	7.9	20288	16.0
St. Louis	17600	12.6	40553	29.1	46975	33.7	16055	11.5	18093	13.0
San Jose-Sunnyvale-Santa Clara	24449	15.4	48506	30.5	61357	38.6	21474	13.5	3224	2.0
Cincinnati-Middletown	14634	11.5	42464	33.4	44647	35.1	11559	9.1	13816	10.9
San Antonio-New Braunfels	35465	22.6	45118	28.8	38964	24.8	35292	22.5	2016	1.3
Columbus	18376	14.2	50213	38.9	36921	28.6	17377	13.5	6248	4.8
Sacramento--Arden-Arcade--Roseville	25312	18.2	41537	29.8	44724	32.1	23789	17.1	4091	2.9
Milwaukee-Waukesha-West Allis	14802	11.9	37343	30.1	43499	35.0	10973	8.8	17516	14.1
Pittsburgh	9629	8.7	27935	25.1	44305	39.8	10214	9.2	19103	17.2
Kansas City	19631	16.0	37678	30.7	36035	29.4	19112	15.6	10127	8.3
Charlotte-Gastonia-Rock Hill	30411	23.1	50247	38.2	21460	16.3	26582	20.2	2896	2.2
Indianapolis-Carmel	16885	15.0	33915	30.1	39434	35.0	16102	14.3	6387	5.7
Virginia Beach-Norfolk-Newport News	17554	15.5	38297	33.7	38582	34.0	15739	13.9	3358	3.0
Honolulu	6893	6.7	29145	28.3	60180	58.4	5415	5.3	1355	1.3

Metropolitan Area	Units Built 2000 or Later	Percent Built 2000 or Later	Units Built 1980-1999	Percent Built 1980-1999	Units Built 1960-1979	Percent Built 1960-1979	Units Built 1940-1959	Percent Built 1940-1959	Units Built 1939 or Earlier	Percent Built 1939 or Earlier
Nashville-Davidson--Murfreesboro--Franklin	18868	16.6	41370	36.4	34764	30.6	16634	14.7	1877	1.7
Jacksonville	23985	24.3	31986	32.4	22775	23.0	18596	18.8	1492	1.5
Providence-New Bedford-Fall River	7011	7.4	21781	22.9	30428	32.0	5931	6.2	29979	31.5
Hartford-West Hartford-East Hartford	5578	7.2	22428	29.0	29354	38.0	5514	7.1	14463	18.7
Memphis	13816	17.5	27663	35.1	20295	25.8	13517	17.2	3469	4.4
Richmond	11736	15.2	22213	28.7	24317	31.4	11215	14.5	7942	10.3
Louisville/Jefferson County	11646	15.2	21990	28.7	25879	33.8	10008	13.1	7062	9.2
Raleigh-Cary	23678	26.0	33996	37.4	10428	11.5	21856	24.0	968	1.1
Cape Coral-Fort Myers	13167	28.4	17397	37.5	7041	15.2	8633	18.6	139	0.3
Salt Lake City	12195	16.8	24504	33.8	20670	28.5	10895	15.0	4308	5.9
North Port-Bradenton-Sarasota	9172	18.1	18833	37.3	15406	30.5	6628	13.1	519	1.0
Oklahoma City	9747	14.0	22584	32.5	25465	36.7	9745	14.0	1875	2.7

Source: American Community Survey Three Year Estimates 2009-2011

Notes: Includes units in buildings with 5 or more units

Appendix B: Utility Program Analysis

Table B-1: Primary Electric and Gas Utilities Analyzed by Metropolitan Area

MSA	States	Primary Electric Utilities	Primary Gas Utilities
Atlanta-Sandy Springs-Marietta	GA	Georgia Power	Atlanta Gas Light
Austin-Round Rock-San Marcos	TX	Austin Energy	Texas Gas
Baltimore-Towson	MD	Baltimore Gas and Electric	Baltimore Gas and Electric
Boston-Cambridge-Quincy	MA-NH	National Grid (Mass Electric Co), NStar	National Grid (Boston Gas) NStar
Cape Coral-Fort Myers	FL	Florida Power & Light	TECO People's Gas
Charlotte-Gastonia-Rock Hill	NC-SC	Duke Energy Carolinas	Piedmont Natural Gas
Chicago-Joliet-Naperville	IL-IN-WI	Commonwealth Edison	People's Gas
Cincinnati-Middletown	OH-KY-IN	Duke Energy Ohio & Kentucky Dayton Power & Light	Duke Energy Ohio & Kentucky
Cleveland-Elyria-Mentor	OH	First Energy (CEI)	Dominion East Ohio
Columbus	OH	AEP Ohio (Ohio Power) First Energy (Ohio Edison)	Columbia Gas Ohio
Dallas-Fort Worth-Arlington	TX	Oncor	Atmos Energy
Denver-Aurora-Broomfield	CO	Xcel	Xcel (Public Service Co of Colorado)
Detroit-Warren-Livonia	MI	DTE (Detroit Electric) Consumers Energy	DTE (MichCon) Consumers Energy
Hartford-West Hartford-East Hartford	CT	Connecticut Light and Power	Connecticut Natural Gas
Honolulu	HI	Hawaiian Electric Co	Hawaii Gas

Houston-Sugar Land-Baytown	TX	CenterPoint Energy (Reliant)	CenterPoint Energy
Indianapolis-Carmel	IN	Indianapolis Power & Light	Citizens Energy
Jacksonville	FL	JEA	TECO People's Gas
Kansas City	MO-KS	Kansas City Power & Light (MO & KS)	Missouri Gas
Las Vegas-Paradise	NV	Nevada Energy	Southwest Gas
Los Angeles-Long Beach-Santa Ana	CA	Los Angeles Department of Water and Power Southern California Edison	Southern California Gas
Louisville/Jefferson County	KY-IN	Louisville Gas & Electric Co Kentucky Utilities Co	Louisville Gas & Electric Co
Memphis	TN-MS-AR	Memphis Light, Gas & Water Entergy Mississippi	Memphis Light, Gas & Water
Miami-Fort Lauderdale-Pompano Beach	FL	Florida Power & Light	TECO People's Gas Florida City Gas
Milwaukee-Waukesha-West Allis	WI	We Energies (Wisconsin Electric Power)	We Energies (Wisconsin Electric Power)
Minneapolis-St. Paul-Bloomington	MN-WI	Xcel (Northern States Power Co)	CenterPoint Energy
Nashville-Davidson--Murfreesboro--Franklin	TN	Nashville Electric Service	Atmos Energy
New York-Northern New Jersey-Long Island	NY-NJ-PA	Consolidated Edison Long Island Power Authority Public Service Electric & Gas Company	Consolidated Edison Public Service Electric & Gas Company National Grid
North Port-Bradenton-Sarasota	FL	Florida Power & Light	TECO People's Gas
Oklahoma City	OK	Oklahoma Gas & Electric	Oklahoma Gas & Electric Oklahoma Natural Gas

Orlando-Kissimmee-Sanford	FL	Orlando Utilities Commission Progress Energy Florida Florida Power & Light	TECO Peoples Gas
Philadelphia-Camden-Wilmington	PA-NJ-DE-MD	PECO (PA) Public Service Electric & Gas Company (NJ)	Philadelphia Gas Works
Phoenix-Mesa-Glendale	AZ	Arizona Public Service	Southwest Gas
Pittsburgh	PA	Duquesne Light Company	Peoples Natural Gas
Portland-Vancouver-Hillsboro	OR-WA	Portland General Electric	NW Natural
Providence-New Bedford-Fall River	RI-MA	National Grid RI	National Grid RI
Raleigh-Cary	NC	Duke Energy Carolinas Progress Energy Carolinas	Public Service Company of North Carolina
Richmond	VA	Dominion (VEPCO)	City of Richmond Dep. Of Public Utilities
Riverside-San Bernardino-Ontario	CA	City of Riverside Public Utilities Southern California Edison	Southern California Gas
Sacramento-Arden-Arcade-Roseville	CA	Sacramento Municipal Utility District Pacific Gas & Electric	Pacific Gas & Electric
Salt Lake City	UT	PacifiCorp (Rocky Mountain Power)	Questar Gas
San Antonio-New Braunfels	TX	CPS Energy AEP Texas Central	CPS Energy
San Diego-Carlsbad-San Marcos	CA	San Diego Gas & Electric	San Diego Gas & Electric
San Francisco-Oakland-Fremont	CA	Pacific Gas & Electric	Pacific Gas & Electric
San Jose-Sunnyvale-Santa Clara	CA	Pacific Gas & Electric	Pacific Gas & Electric

Seattle-Tacoma-Bellevue	WA	Seattle City Light Puget Sound Energy	Puget Sound Energy
St. Louis	MO-IL	Ameren Missouri	Laclede Gas
Tampa-St. Petersburg-Clearwater	FL	Tampa Electric Co Progress Energy Florida	TECO Energy
Virginia Beach-Norfolk-Newport News	VA-NC	Dominion (VEPCO)	Virginia Natural Gas
Washington-Arlington-Alexandria	DC-VA-MD-WV	PEPCO (DC & MD) Dominion (VEPCO)	Washington Gas (DC, MD, VA)

Notes and Sources: Electric utilities were identified using data from the Energy Information Administration (2012) and Edison Electric Institute (2012). Gas utilities were identified using membership information from the American Gas Association (2012) and service territories identified by state utility commissions. Utilities were chosen based on their presence in the counties within each MSA and the number of residential customers (for electric utilities) as reported to EIA.

Table B-2: Summary of Spending by Utility/Program Administrator and Metropolitan Area[17]

Metro Area	Utility	Fuel	Total Energy Efficiency ($1,000s)	Total Dollars Spent per Residential Customer ($)	Residential ($1,000s)	Percent of Total Spending	Commercial ($1,000s)	Percent of Total Spending	Multi-family Specific Programs ($1,000s)	Percent of Total Spending	Multi-family Eligible Programs ($1,000s)	Percent of Total Spending	Single-Family Specific Programs ($1,000s)	Percent of Total Spending
Atlanta	Georgia Power[1]	Electric	13,571	6.62	9,393	69%	4,178	31%	n/a	n/a	9,393	69%	-	0%
	Atlanta Gas Light	Gas	-		-		-		-		-		-	
Austin	Austin Energy[2]	Electric	12819	34.47	7,606	59%	5,224	41%	1,733	14%	6,425	50%	-	0%
	Texas Gas[3]	Gas	1,791	3.07	1,197	67%	42	2%	-	0%	1,197	67%	-	0%
Baltimore	Baltimore Gas & Electric[4]	Dual	58,760	43.33	29,100	50%	27,160	46%	n/a	n/a	25,614	44%	12,843	22%
Boston	National Grid (Boston Gas)[5]	Gas	34,068	56.11	21,361	63%	8,127	24%	1,824	5%	8,779	26%	16,929	50%
	National Grid (Mass Elec Co)[6]	Electric	122,750	108.88	43,186	35%	61,957	50%	14,217	12%	16,341	13%	28,913	24%
	NSTAR Electric Company[7]	Electric	95,998	96.54	29,016	30%	56,053	58%	9,126	10%	8,489	9%	17,877	19%
	NSTAR Gas[8]	Gas	13,644	56.16	7,688	56%	4,062	30%	812	6%	4,582	34%	2,825	21%
Cape Coral-Fort Myers	Florida Power & Light[9]	Electric	119,587	29.70	95,698	80%	17,761	15%	-	0%	n/a	n/a	n/a	n/a
	TECO People's Gas[10]	Gas	6,907	22.59	5,330	77%	108	2%	-	0%	4,233	61%	1,098	16%
Charlotte	Duke Energy Carolinas[11]	Electric	43,567	27.45	23,526	54%	16,830	39%	n/a	n/a	23,138	53%	2,803	6%

[17] Spending shown in this table is by utilities throughout their statewide service territories, not necessarily within the metropolitan area. Utilities are shown are the primary electric and gas utilities serving each metropolitan area.

Metro Area	Utility	Fuel	Total Energy Efficiency ($1,000s)	Total Dollars Spent per Residential Customer ($)	Residential ($1,000s)	Percent of Total Spending	Commercial ($1,000s)	Percent of Total Spending	Multi-family Specific Programs ($1,000s)	Percent of Total Spending	Multi-family Eligible Programs ($1,000s)	Percent of Total Spending	Single-Family Specific Programs ($1,000s)	Percent of Total Spending
	Piedmont Natural Gas[12]	Gas	1,319	2.16	1,244	94%	1,204	91%	-	0%	1,204	91%	40	3%
Chicago	Commonwealth Edison[13]	Electric	104,286	30.25	27,120	26%	35,109	34%	1,273	1%	52,572	50%	2,878	3%
	People's Gas[14]	Gas	7,059	9.63	1,787	25%	2,531	36%	634	9%	-	0%	222	3%
Cincinnati	Dayton Power & Light[15]	Electric	13,980	30.73	7,313	52%	5,098	36%	-	0%	7,097	51%	215	2%
	Duke Energy Kentucky[16]	Dual	3,735	17.98	2,697	72%	666	18%	n/a	n/a	n/a	n/a	n/a	n/a
	Duke Energy Ohio[17]	Dual	25,222	29.25	14,142	56%	6,927	27%	n/a	n/a	n/a	n/a	n/a	n/a
Cleveland	First Energy (CEI)[16]	Electric	21,962	33.07	13,120	60%	4,348	20%	n/a	n/a	n/a	n/a	n/a	n/a
	Dominion East Ohio	Gas	n/a	n/a	n/a	n/a	n/a	n/a	-	0%	n/a	n/a	n/a	n/a
Columbus	AEP Ohio (Ohio Power)[18]	Electric	62,166	48.81	25,919	42%	25,050	40%	-	0%	23,265	37%	2,654	4%
	Columbia Gas Ohio[19]	Gas	13,596	17.18	12,597	93%	150	1%	-	0%	1,953	14%	11,077	81%
	First Energy (Ohio Edison)[16]	Electric	39,323	42.68	16,926	43%	13,885	35%	n/a	n/a	n/a	n/a	n/a	n/a
Dallas-Fort Worth	Atmos Energy	Gas	-	0.00	-		-		-		-		-	
	Oncor[20]	Electric	46,604	26.04	10,289	22%	20,619	44%	374	1%	7,515	16%	1,166	3%
Denver	Xcel (Public Service Company of CO)[21]	Dual	80,915	34.16	29,341	36%	36,292	45%	714	1%	11,112	14%	7,120	9%
Detroit	Consumers Energy[22]	Dual	97,293	30.88	53,529	55%	32,165	33%	6,425	7%	19,941	20%	21,777	22%

Metro Area	Utility	Fuel	Total Energy Efficiency ($1,000s)	Total Dollars Spent per Residential Customer ($)	Residential ($1,000s)	Percent of Total Spending	Commercial ($1,000s)	Percent of Total Spending	Multi-family Specific Programs ($1,000s)	Percent of Total Spending	Multi-family Eligible Programs ($1,000s)	Percent of Total Spending	Single-Family Specific Programs ($1,000s)	Percent of Total Spending
	DTE Detroit Edison[23]	Electric	47,637	24.75	27,959	59%	19,678	41%	4,682	10%	4,581	10%	16,902	35%
	DTE MichCon Gas[24]	Gas	22,479	23.78	17,751	79%	3,452	15%	365	2%	9,510	42%	5,867	26%
Hartford	Connecticut Energy Efficiency Fund[25]	Statewide Electric Program	120,055	86.25	51,715	43%	62,005	52%	n/a	n/a	106,260	89%	-	0%
	Connecticut Energy Efficiency Fund[25]	Statewide Gas Program	19,375	39.71	11,273	58%	7,391	38%	n/a	n/a	18,664	96%	-	0%
Honolulu	Hawaii Gas[26]	Gas	-	0.00	-		-	0	-		-		-	0
	Hawaii Energy[27]	Statewide Electric Program	19,974	47.84	8,988	45%	10,986	55%	271	1%	8,988	45%	-	0%
Houston	CenterPoint Energy (Reliant)[28]	Dual	28,283	21.72	8,311	29%	11,820	42%	405	1%	10,959	39%	4,587	16%
Indianapolis	Citizens Energy[29]	Gas	2,755	11.52	1,345	49%	579	21%	249	9%	1,091	40%	4	0.2%
	Indianapolis Power & Light[30]	Electric	5,290	12.72	2,750	52%	2,008	38%	510	10%	1,273	24%	967	18%
Jacksonville	JEA[16]	Electric	7,193	26.40	6,366	89%	3,394	47%	n/a	n/a	n/a	n/a	n/a	n/a
	TECO People's Gas[10]	Gas	6,907	22.59	5,330	77%	108	2%	-	0%	4,233	61%	1,098	16%
Kansas City	Kansas City Power & Light (KS)[16]	Electric	6,171	29.01	2,916	47%	3,255	53%	n/a	n/a	n/a	n/a	n/a	n/a
	Kansas City Power & Light (MO)[16]	Electric	8,854	37.03	2,863	32%	3,255	37%	n/a	n/a	n/a	n/a	n/a	n/a
	Missouri Gas[31]	Gas	n/a	n/a	n/a	n/a	n/a	n/a	-	0%	n/a	n/a	n/a	n/a

Metro Area	Utility	Fuel	Total Energy Efficiency ($1,000s)	Total Dollars Spent per Residential Customer ($)	Residential ($1,000s)	Percent of Total Spending	Commercial ($1,000s)	Percent of Total Spending	Multi-family Specific Programs ($1,000s)	Percent of Total Spending	Multi-family Eligible Programs ($1,000s)	Percent of Total Spending	Single-Family Specific Programs ($1,000s)	Percent of Total Spending
Las Vegas	Nevada Power Company[32]	Electric	23,769	32.29	12,469	52%	10,920	46%	-	0%	2,688	11%	9,781	41%
	Southwest Gas[33]	Gas	3,379	5.33	2,838	84%	382	11%	-	0%	274	8%	2,563	76%
Los Angeles	Southern California Edison[34]	Electric	382,817	89.12	76,320	20%	117,284	31%	8,350	2%	2,403	1%	22,511	6%
	Los Angeles Department of Water and Power[35]	Electric	49,529	39.13	7,828	16%	41,701	84%	-	0%	n/a	n/a	n/a	n/a
	Southern California Gas[36]	Gas	53,895	10.11	23,921	44%	6,447	12%	3,800	7%	2,982	6%	10,508	19%
Louisville-Jefferson County	Kentucky Utilities Co[16]	Electric	12,528	29.74	8,581	68%	3,947	32%	-	0%	n/a	n/a	n/a	n/a
	Louisville Gas & Electric Co[16]	Dual	9,994	15.60	6,959	70%	3,035	30%	-	0%	n/a	n/a	n/a	n/a
Memphis	Entergy Mississippi	Electric	-	0	-		-		-		-		-	
	Memphis Light, Gas & Water[37]	Electric	36,743	13.57	17,288	47%	10,915	30%	-	0%	n/a	n/a	n/a	n/a
Miami	Florida City Gas[38]	Gas	3,572	36.95	2,322	65%	281	8%	-	0%	2,315	65%	-	0%
	Florida Power & Light[9]	Electric	119,587	29.70	95,698	80%	17,761	15%	-	0%	n/a	n/a	n/a	n/a
	TECO People's Gas[10]	Gas	6,907	22.59	5,330	77%	108	2%	-	0%	4,233	61%	1,098	16%
Milwaukee	Focus on Energy[39]	Statewide Electric & Gas Program	81,373	21.60	24,302	30%	51,872	64%	n/a	n/a	n/a	n/a	n/a	n/a
Minneapolis	Centerpoint Energy[40]	Gas	18,714	25.36	12,583	67%	5,360	29%	-	0%	7,799	42%	10,280	55%

Metro Area	Utility	Fuel	Total Energy Efficiency ($1,000s)	Total Dollars Spent per Residential Customer ($)	Residential ($1,000s)	Percent of Total Spending	Commercial ($1,000s)	Percent of Total Spending	Multi-family Specific Programs ($1,000s)	Percent of Total Spending	Multi-family Eligible Programs ($1,000s)	Percent of Total Spending	Single-Family Specific Programs ($1,000s)	Percent of Total Spending
	Xcel MN (Northern States Power Co)[41]	Dual	64,906	43.41	18,370	28%	36,371	56%	-	0%	12,567	19%	9,352	14%
Nashville	Atmos Energy (TN)	Gas	-	0.00	-		-		-		-		-	
	Nashville Electric Service[42]	Electric	36,743	13.57	17,288	47%	10,915	30%	-	0%	n/a	n/a	n/a	n/a
New York	Consolidated Edison[43]	Dual	90,998	25.11	20,990	23%	70,008	77%	7,783	9%	n/a	n/a	n/a	n/a
	Long Island Power Authority[44]	Electric	46,774	46.89	25,423	54%	21,351	46%	-	0%	9,156	20%	16,267	35%
	National Grid (Keyspan Energy & Brooklyn Union Gas)[45]	Gas	15,278	10.90	6,342	42%	4,899	32%	831	5%	8,362	55%	3,048	20%
	New Jersey Clean Energy Program[46]	Statewide Electric & Gas Program	210,038	61.95	73,953	35%	107,103	51%	-	0%	56857[i]	27%	15,495	7%
	NYSERDA[47]	Statewide Electric & Gas Program	210,836	36.16	82,157	39%	106,172	50%	967	0%	n/a	n/a	n/a	n/a
	Public Service Electric & Gas Company[48]	Dual	8,305	0.02	1,344	16%	3,316	40%	1,344	16%	-	0%	-	0%
North Port-Bradenton-Sarasota	Florida Power & Light[9]	Electric	119,587	29.70	95,698	80%	17,761	15%	-	0%	n/a	n/a	n/a	n/a
	TECO People's Gas[10]	Gas	6,907	22.59	5,330	77%	108	2%	-	0%	4,233	61%	1,098	16%
Oklahoma City	Oklahoma Gas & Electric[49]	Dual	18,201	27.02	16,043	88%	1,740	10%	-	0%	8,773	48%	7,270	40%
	Oklahoma	Gas		5.78		93%		7%		0%		93%		0%

Metro Area	Utility	Fuel	Total Energy Efficiency ($1,000s)	Total Dollars Spent per Residential Customer ($)	Residential ($1,000s)	Percent of Total Spending	Commercial ($1,000s)	Percent of Total Spending	Multi-family Specific Programs ($1,000s)	Percent of Total Spending	Multi-family Eligible Programs ($1,000s)	Percent of Total Spending	Single-Family Specific Programs ($1,000s)	Percent of Total Spending
	Natural Gas[50]		4,457		4,160		297		-		4,160		-	
Orlando	Orlando Utilities Commission[16]	Electric	4,316	23.91	3,144	73%	1,172	27%	-	0%	n/a	n/a	n/a	n/a
	Progress Energy Florida[51]	Electric	32,311	22.25	21,160	65%	5,026	16%	-	0%	21,506	67%	-	0%
	TECO People's Gas[10]	Gas	6,907	22.59	5,330	77%	108	2%	-	0%	4,233	61%	1,098	16%
	Florida Power & Light[9]	Electric	119,587	29.70	95,698	80%	17,761	15%	-	0%	n/a	n/a	n/a	n/a
Philadelphia	PECO Energy[52]	Electric	67,146	47.52	29,407	44%	28,624	43%	-	0%	61,198	91%	-	0%
	Philadelphia Gas Works[53]	Gas	3,792	8.04	3,718	98%	75	2%	-	0%	3,757	99%	24	1%
	New Jersey Clean Energy Program[46]	Statewide Program	210,038	61.95	73,953	35%	107,103	51%	-	0%	56857[i]	27%	15,495	7%
	Public Service Electric & Gas Company[48]	Dual	8,305	2.43	1,344	16%	3,316	40%	1,344	16%	-	0%	-	0%
Phoenix	Arizona Public Service[54]	Electric	52,685	52.99	28,922	55%	20,906	40%	856	2%	16,423	31%	14,939	28%
	Southwest Gas[55]	Gas	2,777	2.94	2,405	87%	346	12%	-	0%	1,224	44%	997	36%
Pittsburgh	Duquesne Light Company[56]	Electric	23,812	45.37	7,554	32%	9,988	42%	-	0%	7,554	32%	-	0%
	Peoples Natural Gas[57]	Gas	224	0.92	224	100%	-	0%	-	0%	224	100%	-	0%
Portland	Energy Trust of Oregon[58]	Statewide Electric & Gas Program	120,017	66.89	49,277	41%	45,100	38%	n/a	n/a	n/a	n/a	n/a	n/a
Providence	National Grid RI[59]	Electric		78.60		42%		57%	n/a	n/a		54%		8%

Metro Area	Utility	Fuel	Total Energy Efficiency ($1,000s)	Total Dollars Spent per Residential Customer ($)	Residential ($1,000s)	Percent of Total Spending	Commercial ($1,000s)	Percent of Total Spending	Multi-family Specific Programs ($1,000s)	Percent of Total Spending	Multi-family Eligible Programs ($1,000s)	Percent of Total Spending	Single-Family Specific Programs ($1,000s)	Percent of Total Spending
			33,565		14,197		19,218				18,166		2,726	
	National Grid RI[59]	Gas	4,441	19.67	2,597	58%	1,844	42%	n/a	n/a	3,156	71%	522	12%
Raleigh	Duke Energy Carolinas[11]	Electric	43,567	27.45	23,526	54%	16,830	39%	n/a	n/a	23,138	53%	2,803	6%
	Progress Energy Carolinas[60]	Electric	24,567	22.60	15,922	65%	8,629	35%	-	0%	18,093	74%	6,473	26%
	Public Service Company of North Carolina[61]	Gas	735	1.67	639	87%	406	55%	-	0%	517	70%	232	32%
Richmond	City of Richmond Dep. Of Public Utilities	Gas	-	0.00	-		-		-		-		-	
	Dominion - Virginia Electric Power Company[62]	Electric	25,526	12.33	17,855	70%	7,671	30%	-	0%	n/a	n/a	n/a	n/a
Riverside	Southern California Edison[34]	Electric	382,817	89.12	76,320	20%	117,284	31%	8,350	2%	2,403	1%	22,511	6%
	Riverside Public Utilities[63]	Electric	6,549	68.95	5,206	79%	1,344	21%	-	0%	n/a	n/a	n/a	n/a
	Southern California Gas[36]	Gas	53,895	10.11	23,921	44%	6,447	12%	3,800	7%	2,982	6%	10,508	19%
Sacramento	Pacific Gas & Electric[64]	Dual	521,089	60.32	69,418	13%	99,467	19%	5,979	1%	9,518	2%	22,589	4%
	Sacramento Municipal Utility District[65]	Electric	30,782	58.06	14,450	47%	5,729	19%	n/a	n/a	n/a	n/a	n/a	n/a
Salt Lake City	PacifiCorp (Rocky Mountain Power)[66]	Electric	34,243	48.41	17,647	52%	8,691	25%	-	0%	17,647	52%	-	0%
	Questar Gas[67]	Gas		30.27		89%		7%		5%		44%		42%

Metro Area	Utility	Fuel	Total Energy Efficiency ($1,000s)	Total Dollars Spent per Residential Customer ($)	Residential ($1,000s)	Percent of Total Spending	Commercial ($1,000s)	Percent of Total Spending	Multi-family Specific Programs ($1,000s)	Percent of Total Spending	Multi-family Eligible Programs ($1,000s)	Percent of Total Spending	Single-Family Specific Programs ($1,000s)	Percent of Total Spending
			24,865		22,090		1,671		1,283		11,027		10,504	
	AEP Texas (Central)[68]	Electric	12,923	18.68	5,222	40%	3,941	30%	-	0%	7,924	61%	745	6%
San Antonio	CPS Energy[69]	Dual	37,405	58.18	22,788	61%	14,617	39%	-	0%	n/a	n/a	n/a	n/a
San Diego	San Diego Gas & Electric[70]	Dual	69,307	33.65	13,331	19%	21,016	30%	1,436	2%	7,161	10%	9,662	14%
San Francisco	Pacific Gas & Electric[64]	Dual	521,089	60.32	69,418	13%	99,467	19%	5,979	1%	9,518	2%	22,589	4%
San Jose	Pacific Gas & Electric[64]	Dual	521,089	60.32	69,418	13%	99,467	19%	5,979	1%	9,518	2%	22,589	4%
	Puget Sound Energy[71]	Electric	28,734	81.36	28,734	100%	39,157	136%	5,523	19%	3,447	12%	19,219	67%
Seattle	Puget Sound Energy[71]	Gas	6,399	22.13	6,399	100%	8,137	127%	534	8%	687	11%	4,429	69%
	Seattle City Light[72]	Electric	32,707	90.65	14,552	44%	14,504	44%	2,183	7%	n/a	n/a	n/a	n/a
	Ameren Missouri (Union Electric)[73]	Electric	6,883	6.65	4,044	59%	2,839	41%	-	0%	854	12%	2,808	41%
St. Louis	Laclede Gas[31]	Gas	n/a	n/a	n/a	n/a	n/a	n/a	-	0%	n/a	n/a	n/a	n/a
	Progress Energy Florida[51]	Electric	32,311	22.25	21,160	65%	5,026	16%	-	0%	21,506	67%	-	0%
Tampa	Tampa Electric Co[74]	Electric	23,549	39.52	5,266	22%	1,903	8%	-	0%	3,846	16%	3,530	15%
	TECO People's Gas[10]	Gas	6,907	22.59	5,330	77%	108	2%	-	0%	4,233	61%	1,098	16%
Virginia Beach	Dominion - Virginia Electric Power Company[62]	Electric	25,526	12.33	17,855	70%	7,671	30%	-	0%	n/a	n/a	n/a	n/a

Metro Area	Utility	Fuel	Total Energy Efficiency ($1,000s)	Total Dollars Spent per Residential Customer ($)	Residential ($1,000s)	Percent of Total Spending	Commercial ($1,000s)	Percent of Total Spending	Multi-family Specific Programs ($1,000s)	Percent of Total Spending	Multi-family Eligible Programs ($1,000s)	Percent of Total Spending	Single-Family Specific Programs ($1,000s)	Percent of Total Spending
	Virginia Natural Gas[75]	Gas	1,208	4.74	645	53%	-	0%	-	0%	526	44%	119	10%
Washington	DC Sustainable Energy Utility[76]	Statewide Electric & Gas Program	6,854	19.02	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Dominion - Virginia Electric Power Company[62]	Electric	25,526	12.33	17,855	70%	7,671	30%	-	0%	n/a	n/a	n/a	n/a
	Potomac Electric Power Company (MD)[77]	Electric	14,376	34.43	7,977	55%	6,399	45%	-	0%	8,944	62%	1,641	11%
	Washington Gas – VA[78]	Gas	n/a	n/a	n/a	n/a	n/a	n/a	-	0%	n/a	n/a	n/a	n/a
	Washington Gas - MD	Gas	-	0.00	-		-		-		-		-	

Notes and Sources: [1]Multifamily Earth Cents program costs are not reported separately (Georgia Power 2011). [2]Austin Energy reports incentives paid rather than total program costs (Austin Energy 2012). [3](TGS 2011). [4]Quick Home-Energy Check Up and Small Commercial Prescriptive Rebate program both target multifamily buildings, but spending is not reported by building type (BGE 2012). [5]Figures for Boston utilities are for 2010 program year (National Grid 2011a). [6](National Grid 2011b). [7](NSTAR Electric 2011). [8](NSTAR Gas Company 2011). [9](FL PSC 2012a). [10](FL PSC 2012d). [11]Residential Smart Saver Program, which targets multifamily building owners, is not reported by building type (Duke NC 2012). [12](Piedmont 2012). [13]Spending for Program Year 3, June 2010-May 2011 (ComEd 2011, Exhibit 1). [14](People's Gas 2011). [15](DP&L 2012, 1-6). [16](EIA 2012a). [17]Electric programs only (EIA 2012a). [18](AEP Ohio 2011, Table 6). [19](Columbia Gas of Ohio 2012). [20](Oncor 2012, Table 10). [21](Xcel 2012a, Tables 3b & 4a). [22](Consumers Energy 2012, Table 4-4). [23](Detroit Edison 2012, Exhibit A-13). [24](MichCon 2012, Exhibit A-8). [25]CEEF Multifamily Initiative provides building owners with a single point of contact to access programs, but spending is not reported by building type. Spending per residential customer is calculated using total residential electric and gas consumers for CL&P, United Illuminating, Connecticut Natural Gas, Southern Connecticut Gas Company, and Yankee Gas Services as reported to EIA for 2011 (CEEF 2012, 32). [26]Hawaii Gas serves a small number of residential customers and does not offer any energy efficiency programs. [27]Figures are budgets for program year July 2011 to June 2012 (Hawaii Energy 2012, Appendix B). Hawaiian Energy is the statewide program administrator for electric utilities. Spending per residential customer is calculated using total residential electric and gas consumers in the state of Hawaii as reported to EIA (EIA 2012a, 2012b). [28]Includes electric programs only (CenterPoint Energy Houston Electric LLC 2012, Table 11). [29](Citizens Gas 2012, 5). [30](IPL 2012, 7). [31]Spending by gas utilities is not publicly available in Missouri. [32](Nevada Power Company 2012, Table A-4). [33](SWG 2012a, Table 3).[34]Spending by California's investor-owned utilities are reported cumulatively for 2010-2011. Figures shown have been annualized (SCE 2012). [35](CMUA 2012, 112-9). [36]Spending by California's investor-owned utilities are reported cumulatively for 2010-2011. Figures shown have been annualized (SCG 2012). [37]Memphis Light Gas & Water customers participate in TVA's energy efficiency program. Spending shown is for TVA statewide as reported in the ACEEE 2012 State Energy Efficiency Scorecard (Foster et al. 2012). [38](FL PSC 2012e, 3). [39]Focus on Energy is the statewide administrator for ratepayer-funded programs. Spending shown is statewide for 2010 (Tetra Tech 2011, 8). Spending per residential customer is calculated using total residential electric and gas customers of the investor-owned utilities in the state of Wisconsin as reported to EIA (EIA 2012a, 2012b). [40](CenterPoint Energy 2012a, Section 1). [41](Xcel 2012b, Table 3). [42]Nashville Electric Service customers participate in TVA's energy efficiency program. Spending shown is for TVA statewide as reported in ACEEE's *2012 State Energy Efficiency Scorecard* (Foster et al. 2012).[43]Consolidated Edison total, residential, and commercial spending is as reported to EIA (2012a). Multifamily program spending is from the 2011 EEEPS Scorecard (Consolidated Edison 2012). [44](Opinion Dynamics Corporation 2012, Table 1). [45](National Grid 2012a, Appendix 4). [46](NJCEP 2012, Table 2). Spending per residential customer is calculated using the total residential electric customers of New Jersey's investor-owned utilities as reported to EIA (2012a). [47] NYSERDA total, residential. and commercial spending is as reported to EIA (2012a). Multifamily program spending is from the 2011 EEEPS Scorecard (NYSERDA 2012). Spending per residential customer is calculated using residential customers of New York's investor-owned electric utilities. [48](PSE&G 2012, Schedule REB-1D, 1). [49](Oklahoma Gas & Electric 2012, Table 2-2). [50](Oklahoma Natural Gas 2012, Schedule 8). [51](FL PSC 2012b, Schedule CT-2). Program Year 3 (May 2011-May 2012). [52]Spending for Program Year Three, May 2011-May 2012 (PECO Energy 2012a). [53](Philadelphia Gas Works 2012, Table 11). [54](APS 2012, Table 2). [55](SWG 2012b, Exhibit A, page 3). [56]Spending shown is for Program Year 3, June 2011 to May 2012 (Navigant Consulting 2012). [57](Peoples TWP 2012, 4). [58]Spending only reported by sector, not program (Energy Trust of Oregon 2012, 18). Spending per residential customer is calculated using the total residential customers of Portland General Electric, Pacific Power, NW Natural, and Cascade Natural Gas [59](National Grid 2012b, Tables E-1 and G-1). [60](Progress 2012, 5). [61](PSNC 2012, 2). [62]Actual spending is redacted from public documents submitted to Virginia State Corporation Commission. Figures shown are from EIA (2012a). [63](CMUA 2012, 167). [64]Figures shown have been annualized (PG&E 2012). [65](CMUA 2012, 183).[66](Rocky Mountain Power 2012, Table 2). [67](Questar Gas Company 2012, Exhibit 1-9). [68](AEP Texas 2012, Table 10). [69]Electric programs only (EIA 2012a).[70]Spending is reported cumulatively for 2010-2011. Figures shown have been annualized (SDG&E 2012). [71](Puget Sound Energy 2012, Exhibit 1). [72]Annual spending data by program not available. Spending data is from (EIA 2012a). Multifamily program spending is projected 2011 budget. [73]Spending for Program Year Three, October 2010 to September 2011 (Missouri Public Service Commission 2012, 2). [74](FL PSC 2012c, Schedule C-3). [75](Virginia Natural Gas 2012). [76]DC SEU contract was awarded in March, 2011. Spending is for the first contract year, Mar-Sep 2011 (DC SEU 2011). Customers are the total residential customers for PEPCO DC and Washington Gas DC (EIA 2012a, 2012b). [77](PEPCO Energy 2012, 84). [78]Actual program spending is redacted from public documents filed with the Virginia State Corporation Commission.

Table B-3: Summary of Existing Targeted Multifamily Programs by Metropolitan Area and Utility

Metro Area	Utility/State/3rd Party Admin	Program Name	Annual Spending 2011	Percent of Total Spending	Dollars Spent per Residential Customer
Atlanta	Georgia Power	Earth Cents Multifamily	n/a		
Austin	Austin Energy	Multi-family Power Saver Program	$1,732,515	14%	$ 4.66
Baltimore	Baltimore Gas & Electric	Quick Home Energy Check-up(QHEC)	*Spending not broken out by building type.*		$ 0.23
Baltimore Washington	Maryland Department of Housing and Community Development	Multifamily Energy Efficiency and Housing Affordability Program[1]	*Annual Spending Not Available*		
Boston	National Grid (Boston Gas)	Multi-Family Retrofit Program	$1,035,722	3%	$ 1.71
Boston	National Grid (Boston Gas)	Low Income Multifamily Retrofit (LEAN)	$788,014	2%	$ 1.30
Boston	National Grid (Mass Electric)	Multi-Family Retrofit Program	$6,424,556	5%	$ 5.70
Boston	National Grid (Mass Electric)	Multi-Family 4-8 Story New Construction Program	$121,943	0.1%	$ 0.11
Boston	National Grid (Mass Electric)	Low Income Multifamily Retrofit (LEAN)	$2,828,533	2%	$ 2.51
Boston	NSTAR Electric	Multi-Family Retrofit Program	$3,220,289	2%	$ 3.24
Boston	NSTAR Electric	Multi-Family 4-8 Story New Construction Program	$121,489	0.1%	$ 0.12
Boston	NSTAR Electric	Low Income Multifamily Retrofit (LEAN)	$5,893,802	6%	$ 5.93
Boston	NSTAR Gas	Multi-Family Retrofit Program	$811,899	6%	$ 3.34
Charlotte Raleigh	Duke Energy Carolinas	Residential Smart Saver—Property Managers	*Spending not broken out by building type.*		
Chicago	Commonwealth Edison	Multi-Family All-Electric Efficiency Upgrade	$1,272,882	1%	$ 0.37
Chicago	Commonwealth Edison	Multi-Family Home Energy Savings Program (Commercial Rebates)	*Spending not broken out by building type.*		
Chicago	Illinois Department of Commerce and Economic Opportunity (DCEO)	New Multi-Family and Gut Rehab[2]	$1,211,288	77%	
Chicago	People's Gas	Multi-Family Home Energy Savings Program	$633,800	9%	$ 0.86
Cincinnati	Duke Energy Ohio	Property Managers CFL Program	n/a		
Dallas	Oncor	ENERGY STAR Low Rise Multifamily [3]	$272,019	1%	$ 0.15
Denver	Xcel Energy	Multi-Family Weatherization	$713,795	1%	$ 0.30
Detroit	Consumers Energy	Multi-Family Direct Install	$6,425,496	7%	$2.04
Detroit	Detroit Edison	Residential Multifamily	$3,482,000	7%	$ 1.81
Detroit	Detroit Edison	Multifamily C/I Prescriptive Rebates	$1,200,000	3%	$ 0.62
Detroit	Detroit Edison	Residential Multifamily Low Income	n/a		
Detroit	MichCon Gas	Residential Multifamily	$356,000	2%	$ 0.38
Detroit	MichCon Gas	Residential Low Income Multifamily	n/a		
Hartford	Connecticut Energy Efficiency Fund (CEEF)	Multifamily Initiative	*Spending for eligible programs not available by building type*		

Metro Area	Utility/State/3rd Party Admin	Program Name	Annual Spending 2011	Percent of Total Spending	Dollars Spent per Residential Customer
Honolulu	Hawaii Energy	Energy Hero Landlord Program	$271,303	1%	$ 0.65
Houston	CenterPoint Energy (Reliant)	Multi-Family Water & Space Heating MTP	$405,157	1%	$ 0.15
Indianapolis	Indianapolis Power and Light	Multifamily Direct Install	$510,000	10%	$ 1.23
Indianapolis	Citizens Gas	Multifamily Direct Install	$248,524	9%	$ 1.04
Indianapolis	Citizens Gas	Multifamily Efficient Equipment Pilot[4]	*$117,000*	*3%*	*$ 0.49*
Los Angeles Riverside	Southern California Edison[5]	Multi-Family Residential Energy Efficiency Rebate Program (MFEER)	$8,350,447	2%	$ 1.94
Los Angeles Riverside	Southern California Gas[5]	Multifamily Energy Efficiency Rebates Program (MFEER)	$1,087,112	2%	$ 0.20
Los Angeles Riverside	Southern California Gas[5]	Multifamily Home Tune-up	$660,140	1%	$ 0.12
Los Angeles Riverside	Southern California Gas[5]	Multifamily Solar Pool Heating	$162,955	0%	$ 0.03
Los Angeles Riverside	Southern California Gas[5]	Multifamily Direct Therm Savings (Energy Smart)	$1,889,598	4%	$ 0.35
Los Angeles San Francisco Sacramento San Diego	Pacific Gas and Electric, Southern California Edison, Southern California Gas, and San Diego Gas & Electric	Energy Upgrade California Multifamily Program	n/a		
Milwaukee	Focus on Energy	Apartment and Condo Efficiency Services (ACES) Whole-Building Existing Program	n/a		
Milwaukee	Focus on Energy	Apartment and Condo Efficiency Services (ACES) New Construction	n/a		
Minneapolis	CenterPoint	Multifamily Commercial Rebates	n/a		
Minneapolis	Xcel Energy	Energy Score Cards Minnesota	*launched 2012*		
New York	Consolidated Edison	Multi-Family Energy Efficiency Program	$7,573,228	8%	$ 2
New York	Consolidated Edison	Multi-Family Low Income Program	$210,236	0.2%	$ 0.06
New York	National Grid (KeySpan Energy & Brooklyn Union Gas)	Multifamily Energy Efficiency Programs	$830,967	5%	$ 0.59
New York	NYSERDA	Multifamily Performance Program[6]	$967,271	0.5%	$0.17
New York Philadelphia	Public Service Electric & Gas Company	Residential Multi-Family Housing Program	$1,343,751	16%	$ 0.39
Phoenix	Arizona Public Service	Multifamily Energy Efficiency Program	$855,569	2%	$ 0.86
Portland	Energy Trust of Oregon	Multifamily Home Energy Solutions Program	n/a		
Providence	National Grid	EnergyWise Multifamily	n/a		
Sacramento	Sacramento Municipal Utility District/Energy Upgrade California	SMUD Home Performance Program—Multifamily	n/a		
Salt Lake City	Questar Gas	Multifamily Rebate Program[7]	$1,283,185	5%	$ 1.56
San Diego	San Diego Gas & Electric[5]	Multi-Family Residential Energy Efficiency Rebate Program (MFEER)	$1,436,056	2%	$ 0.70
San Francisco and San Jose	Pacific Gas & Electric[5]	Multi-Family Residential Energy Efficiency Rebate Program (MFEER)	$3,940,340	1%	$ 0.46
San Francisco and San Jose	Pacific Gas & Electric[5]	California Multifamily New Homes Program (CMFNH)	$2,038,429	0.4%	$ 0.24

Metro Area	Utility/State/3rd Party Admin	Program Name	Annual Spending 2011	Percent of Total Spending	Dollars Spent per Residential Customer
San Francisco	Pacific Gas & Electric	San Francisco Energy Watch Multifamily Plus (see Energy Upgrade California Multifamily)	n/a		
Seattle	Puget Sound Energy	Multifamily Existing	$5,301,895	6%	$ 3.20
Seattle	Puget Sound Energy	Multifamily New Construction	$755,022	1%	$ 0.69
Seattle	Seattle City Light	Multifamily New Construction, Built Smart	$1,135,503	3%	$ 3.15
Seattle	Seattle City Light	Common Area Lighting	$216,760	1%	$ 0.60
Seattle	Seattle City Light	Multifamily Weatherization	$627,775	2%	$ 1.74
Seattle	Seattle City Light	Mixed Use New Construction Program	$202,839	1%	$ 0.56
St. Louis	Ameren Missouri[7]	Multi-family Income Qualified[6]	$—	0%	$ —
Washington	DC Sustainable Energy Utility[8]	Quick Start Low Income Multifamily Direct Install	$2,116,580	17%	$5.87
Washington	DC Sustainable Energy Utility	Low Income Multifamily Comprehensive Program	*launched 2012*		
Washington	DC Sustainable Energy Utility	Low Income Implementation Contractor Direct Install	*launched 2012*		
Washington	Potomac Electric Power Co MD	Quick Home Energy Check-up (QHEC)	*Spending not broken out by building type.*		

Notes: Data sources provided in the notes to Table B-2 unless otherwise noted. [1] (MD DHCD 2013). [2](IL DCEO 2012) [3]Oncor program discontinued in 2012, [4] New program in 2012, budget shown [5]California IOUs report spending cumulatively for 2010-2011. Figures shown have been annualized. [6]NYSERDA customers include residential customers of all New York state investor owned utilites. [7] Separate multifamily program suspended in 2012 and folded into residential appliance, weatherization and builder rebate programs. [7]Ameren did not report any spending for the 2010-2011 program year, however, the program is proposed to continue under new a 3 year plan.[8] Figure shown is total spending in fiscal year 2012 on the three DC SEU low-income multifamily programs (DC SEU 2012). Customers used for spending per residential customer calculation are PEPCO DC and Washington Gas DC.

Table B-4: Summary of Multifamily Program Designs

Metro Area	Program	Utility/3rd Party Sponsors	Fuels	Description	Rebates/ Incentives	Direct Install	Comprehensive
Atlanta	Earth Cents Multifamily	Georgia Power	Electric	Whole-building program that provides incentives for whole-unit renovations or individual improvements to multifamily properties through contactor partnerships.	✓		✓
Austin	Multi-family Power Saver Program	Austin Energy	Electric	Provides rebates of up to $200,000 to building owners, property managers, and developers for making energy efficiency improvements to apartment and other multifamily properties. The process begins with a free energy survey.	✓		✓
Baltimore	Quick Home Energy Check-up(QHEC)	Baltimore Gas & Electric	Electric & Gas	Residential program that also specifically targets multifamily property managers. The program includes an on-site energy assessment and direct installation.		✓	
Baltimore & Washington	Multifamily Energy Efficiency and Housing Affordability Program	Maryland Department of Housing & Community Development	Electric & Gas	Provides loans and grants with flexible terms for the purchase and installation of energy efficiency improvements in affordable multifamily rental housing developments with a goal of achieving 15% energy savings.	✓		✓
Boston	LEAN Low Income Multifamily Retrofit	National Grid NStar	Electric & Gas	The program provides grant funds for cost-effective energy efficiency work to owners of affordable multifamily properties. Targets whole-building systems including heating, water heating, building envelope, lighting, appliances and ventilation.	✓		✓
Boston	Multi-Family Retrofit Program	National Grid NStar	Electric & Gas	Program is jointly operated by National Grid and NStar and provides incentives for all cost-effective applications, systems, and	✓		✓

Metro Area	Program	Utility/3rd Party Sponsors	Fuels	Description	Rebates/ Incentives	Direct Install	Comprehensive
				building shell improvements that impact gas and electric consumption.			
Boston	Multi-Family 4-8 Story New Construction Pilot Program	National Grid NStar	Electric & Gas	Statewide pilot incentive program for targeting installation of energy efficient technologies in mid-rise multifamily new construction.	✓		✓
Charlotte & Raleigh	Property Managers CFL Program	Duke Energy Carolinas	Electric	Provides free CFLs to multifamily property managers for them to install in their residents' units.	✓		
Chicago	Multi-Family "All-Electric" Efficiency Upgrade	Commonwealth Edison	Electric	Direct installation of no-cost energy efficiency products for residential customers in all-electric multifamily buildings.		✓	
Chicago	Multi-Family Home Energy Savings Program	Commonwealth Edison People's Gas	Electric & Gas	Jointly operated program by Chicago area electric and gas utilities that provides no-cost, direct install measures. The program also provides building owners information on prescriptive commercial rebates for more expensive measures.	✓	✓	
Chicago	Energy Efficient Affordable Housing Construction Program	Illinois Dept. of Commerce & Economic Opportunity	Electric & Gas	This program is funded by the Illinois Energy Efficiency Resource Standard. Provides housing developers incentives to use energy efficient building practices in the rehab or new construction of affordable housing units.	✓		
Cincinnati	Property Managers CFL Program	Duke Energy Ohio	Electric	Provides free CFLs to multifamily property managers for them to install in their residents' units.	✓		
Dallas	ENERGY STAR Low Rise Multifamily	Oncor	Electric	Program provided incentives to developers that produced individually metered ENERGY STAR certified apartment	✓		✓

Metro Area	Program	Utility/3rd Party Sponsors	Fuels	Description	Rebates/ Incentives	Direct Install	Comprehensive
				units. Discontinued in 2012 due to lack of demand.			
Denver	Multi-Family Weatherization	Xcel Energy	Electric & Gas	Provides funding for energy efficiency measures for master-metered low-income multi-family housing units and common areas. Free energy saving kits are provided for individually-metered buildings. Utility funds supplement federal weatherization grants.	✓		
Detroit	Multi-Family Direct Install	Consumers Energy	Electric & Gas	In-unit direct install of free CFLs, water pipe insulation, and low-flow water fixtures.		✓	
Detroit	Residential Multifamily	DTE (Detroit Edison & MichCon Gas)	Electric & Gas	Program provides direct install measures for dwelling units and incentives for common area lighting upgrades provided under commercial prescriptive rebate program.	✓	✓	
Detroit	Residential Multifamily Low-Income	DTE (MichCon Gas)	Gas	DTE's Energy Efficiency Assistance program for low-income customers includes direct install of no cost weatherization measures in multifamily units.		✓	
Hartford	Multifamily Initiative	Connecticut Energy Efficiency Fund	Electric & Gas	Provides owners and managers of multifamily buildings access to multiple energy efficiency programs offered through the Energy Efficiency Fund through a single point of contact.	✓		
Honolulu	Energy Hero Landlord Program	Hawaii Energy	Electric	New program for 2011/12 that offers landlords of affordable properties a comprehensive audit and technical support for energy efficiency retrofits.			✓

Metro Area	Program	Utility/3rd Party Sponsors	Fuels	Description	Rebates/ Incentives	Direct Install	Comprehensive
Houston	Multi-Family Water & Space Heating Market Transformation Program	CenterPoint Energy	Gas	Provides incentives to multifamily project developers who agree to facilitate the installation of non-electric water heating in both market rate and affordable rate multifamily projects.	✓		
Indianapolis	Multifamily Direct Install	Indianapolis Power & Light Citizens Gas	Electric & Gas	Jointly administered program to deliver and install low-flow water fixtures and CFL light bulbs in dwelling units at no cost.		✓	
Indianapolis	Multifamily Efficient Equipment Pilot	Citizens Gas	Gas	Provides incentives for the installation of high efficiency, natural gas-fueled space and water heating equipment in dwellings units within a multifamily building that are individually metered for gas.	✓		
Los Angeles, San Francisco & San Diego	Energy Upgrade California Multifamily Program	Pacific Gas & Electric Southern California Edison Southern California Gas San Diego Gas & Electric	Electric & Gas	Offers technical assistance and incentives to encourage multifamily property owners to make comprehensive energy upgrades to their properties.	✓		✓
Los Angeles, Riverside, Sacramento, San Diego, San Francisco & San Jose	Multi-Family Residential Energy Efficiency Rebate Program	Pacific Gas & Electric Southern California Edison Southern California Gas San Diego Gas & Electric	Electric & Gas	Statewide program offered by the four California investor-owned utilities. Provides prescriptive rebates for property owners and managers for lighting, HVAC, water heating, ceiling fans, insulation and appliances for both common and dwelling areas.	✓		
Los Angeles & Riverside	Multifamily Home Tune-up	Southern California Gas	Gas	No cost showerheads and aerators for property owners and managers		✓	
Los Angeles & Riverside	Multifamily Solar Pool Heating	Southern California Gas	Gas	Incentive program to encourage large apartment building owners, condominium associations, and property managers to install solar pool heating system for their	✓		

Metro Area	Program	Utility/3rd Party Sponsors	Fuels	Description	Rebates/ Incentives	Direct Install	Comprehensive
				common area swimming pools.			
Los Angeles & Riverside	Multifamily Direct Therm Savings (Energy Smart)	Southern California Gas	Gas	Provides building owners with energy efficient products and installation at no cost including faucet aerators, water-pipe insulation and low flow showerheads. Service providers also conduct onsite repair assessments of major appliances.		✓	
Milwaukee	Apartment and Condo Efficiency Services Whole-Building Existing	Focus on Energy	Electric & Gas	Comprehensive program includes free energy evaluations, incentives for the purchase and installation of equipment at existing buildings, and free installation of high-efficiency water fixtures, and CFLs.	✓	✓	✓
Milwaukee	Apartment and Condo Efficiency Services New Construction	Focus on Energy	Electric & Gas	Program facilitates the implementation of energy efficiency technologies into the design and construction of residential multifamily buildings by targeting developers, architects and contractors.	✓		✓
Minneapolis	Multifamily Commercial Rebates	CenterPoint Energy	Gas	Access to commercial rebates, custom energy analysis and technical assistance for multifamily building owners/managers.	✓		
Minneapolis	Energy Score Cards Minnesota	Xcel Energy	Electric & Gas	Two-year effort funded by Xcel and the Minnesota Department of Natural Resources to implement web-based energy and water benchmarking and tracking at multifamily buildings in Minnesota.			
New York	Multi-Family Energy Efficiency Program	Consolidated Edison	Electric & Gas	Provides free in unit measures and gas and electric prescriptive rebates. The program's primary point of entry is a building energy survey designed to provide information on eligible energy	✓	✓	

Metro Area	Program	Utility/3rd Party Sponsors	Fuels	Description	Rebates/ Incentives	Direct Install	Comprehensive
				conservation measures to the buildings' decision maker.			
New York	Multi-Family Low Income Program	Consolidated Edison	Gas	Provides funding to the New York City Housing Authority and the Westchester County public housing authorities for prescriptive rebates of up to 100% of the incremental cost of qualifying, cost-effective high efficiency gas heating equipment and weatherization.	✓		
New York	Multifamily Energy Efficiency Programs	National Grid (KeySpan Energy & Brooklyn Union Gas)	Gas	Provides technical assistance and incentives to new and existing multifamily facilities to encourage installation of energy-efficient measures. Incentives for energy assessments and for both prescriptive and custom natural gas measures for up to 50% of project costs to a maximum of $250,000.	✓		
New York	Multifamily Performance Program	NYSERDA	Electric & Gas	Provides property owners, builders, and co-op and condo boards technical assistance and per-unit incentives to improve building energy performance. Existing buildings that project at least a 20% energy reduction may also be eligible for an additional performance payment.	✓		✓
New York & Philadelphia	Residential Multi-Family Housing Program	Public Service Electric & Gas Company	Electric & Gas	Provides building owners with a free investment grade energy audit and incentives for the installation of all energy efficiency measures identified by the audit as having a payback of 15 years or less. Partnership with the New Jersey Housing & Mortgage Finance Agency to reach buildings in their portfolio.	✓		✓

Metro Area	Program	Utility/3rd Party Sponsors	Fuels	Description	Rebates/ Incentives	Direct Install	Comprehensive
Phoenix	Multifamily Energy Efficiency Program	Arizona Public Service	Electric	Program offers free in-unit measures, free energy assessments and incentives for common areas through the APS Solutions for Business program. Also provides builders incentives for new construction and major renovations meeting Home Performance with ENERGY STAR.	✓	✓	✓
Portland	Multifamily Home Energy Solutions Program	Energy Trust of Oregon	Electric & Gas	Program provides cash incentives for equipment upgrades and remodels. Also provides incentives for new construction and major renovation including design incentives for energy modeling, installation, and ENERGY STAR certification.	✓		✓
Providence	EnergyWise Multifamily	National Grid	Electric & Gas	Multifamily building owners and condo associations may participate in residential rebate and energy assessment program that provides a no-cost energy evaluation, direct installation of low cost measures and incentives for up to 50% of total project cost for weatherization and air sealing.	✓	✓	
Sacramento	Home Performance Program—Multifamily	Sacramento Municipal Utility District	Electric & Gas	Provides building owners with 1) a whole-building performance program, or 2) prescriptive rebates. The Performance Program provides technical assistance with incentives for energy assessments as well as rebates and performance-based escalating incentives.	✓		✓
Salt Lake City	Multifamily Rebate Program	Questar Gas	Gas	Rebates for weatherization and natural gas appliances. After 2011, this program was folded into Questar's residential appliance,	✓		

Metro Area	Program	Utility/3rd Party Sponsors	Fuels	Description	Rebates/ Incentives	Direct Install	Comprehensive
				weatherization and builder rebate programs.			
San Francisco, Sacramento & San Jose	California Multifamily New Homes Program (CMFNH	Pacific Gas and Electric	Electric & Gas	Encourages multifamily builders to construct homes that exceed California's T-24 energy efficiency standards by at least 15%. Facilitates energy-efficient design and construction through design assistance and cash incentives.	✓		✓
Seattle	Multifamily Existing	Puget Sound Energy	Electric & Gas	Incentives for condo and building owners for installation of energy efficient measures occurring during planned retrofit and replace upon failure. In order to participate, an energy audit must be performed by PSE.	✓		
Seattle	Multifamily New Construction	Puget Sound Energy	Electric & Gas	Program provides financial incentives, technical information and continued support throughout the construction of new multifamily buildings and packages all incentives under one grant. Complements sustainable building certification programs.	✓		✓
Seattle	Multifamily New Construction, Built Smart	Seattle City Light	Electric	Provides funding and technical assistance to multifamily building developers that meet BUILT SMART standards that exceed the highest recommendations of the State Building Code. For mixed-use buildings, BUILT SMART incentives can be combined with commercial new construction incentives.	✓		✓
Seattle	Multifamily Common Area Lighting and Weatherization	Seattle City Light	Electric	Rebate program that provides incentives for lighting upgrades in common areas and fixed rebate amounts for in-unit	✓		

Metro Area	Program	Utility/3rd Party Sponsors	Fuels	Description	Rebates/ Incentives	Direct Install	Comprehensive
				lighting. Weatherization rebates provide incentives for upgrading windows and insulation in buildings with permanently installed electric space heat.			
St. Louis	Multi-family Income Qualified	Ameren Missouri	Electric	Delivers energy savings to low-income qualified customers through direct install measures and energy efficient appliances. Incentives under the program are only provided toward income qualified dwelling units. However, building owners must install comparable energy efficiency measures in all dwelling units, both low income and market rate.		✓	
Washington	Quick Start Low Income Multifamily Direct Install	DC Sustainable Energy Utility	Electric & Gas	Serves qualified low income multifamily projects with direct installation of cost-effective energy measures. Program is now called the Low Income Implementation Contractor Direct Install.		✓	
Washington	Low Income Multifamily Comprehensive Program	DC Sustainable Energy Utility	Electric & Gas	Provides financial incentives and technical assistance to affordable housing developers and property owners who work together with the DC SEU to incorporate energy-efficient systems and measures in the new development, or substantial rehabilitation of affordable housing.	✓		✓
Washington	Quick Home Energy Check-up (QHEC)	PEPCO MD	Electric	Residential program that targets multifamily buildings through "sweeps" to conduct energy assessments and directly install measures.		✓	

Notes: For a full list of sources and spending on these programs by each utility see Appendix B, Table 2.

Appendix C: Potential Partners

Table C-1: DOE Weatherization Assistance Program and Utility Partnerships

Metropolitan Area	State	Program	Utilities	Multifamily Eligibility	Renters Eligible?	Building Owners Eligible?
Sacramento	CA	Low Income Energy Efficiency Program (LIEE)	Sacramento Municipal Utility Division	✓	✓	✓
San Diego	CA	Low Income Energy Efficiency Program (LIEE)	San Diego Gas and Electric	✓	✓	✓
San Francisco, San Jose	CA	Low Income Energy Efficiency Program (LIEE)	Pacific Gas and Electric	✓	✓	✓
Los Angeles, Riverside	CA	Energy Management Assistance Program (EMA)	Southern California Edison	✓	✓	✓
Los Angeles, Riverside	CA	Low Income Energy Efficiency Program (LIEE)	Southern California Gas	✓	✓	✓
Hartford	CT	The Home Energy Solutions—Income-Eligible Program (formerly WRAP)	Connecticut Light and Power, Connecticut Gas	✓	✓	
Tampa, Orlando	FL	Low Income Weatherization Program	Progress Energy Florida			
Indianapolis	IN	Indiana Home Weatherization	Indianapolis Power and Light, Duke Energy Indiana	✓	✓	✓
Boston	MA	Low Income Energy Affordability Network (LEAN) Multifamily Retrofit Program	NSTAR, National Grid	✓		✓
Baltimore, Washington DC	MD	Electric Universal Service Program	All regulated Maryland electric utilities	✓	✓	
Minneapolis	MN	Energy Conservation Improvement	CenterPoint Energy		✓	
Minneapolis	MN	Low-Income Weatherization Program and Home Electric Savings Program	Xcel Energy	✓	✓	

Metropolitan Area	State	Program	Utilities	Multifamily Eligibility	Renters Eligible?	Building Owners Eligible?
Las Vegas	NV	Fund for Energy Assistance and Weatherization	All regulated Nevada gas and electric utilities	✓	✓	
Columbus	OH	WarmChoice	Columbia Gas	✓	✓	
Cleveland	OH	Housewarming Program	Dominion East Ohio	✓	✓	
Cleveland, Columbus	OH	Community Connection Program	First Energy	✓[1]	✓	
Cincinnati	OH	Home Weatherization Program	Duke Energy Ohio	✓[1]	✓	
Portland	OR	OCHS Energy Conservation Helping Oregonians (ECHO) and Multi-Family Rental Programs	Portland General Electric	✓	✓	✓
Portland	OR	Oregon Low-Income Energy Efficiency Programs (OLIEE)**	Northwest Natural Gas	✓	✓	✓
Pittsburgh	PA	Low Income Usage Reduction Program (LIURP)	Peoples Gas	✓	✓	
Philadelphia	PA	Enhanced Low Income Retrofit Program (ELIRP)	Philadelphia Gas Works	✓	✓	
Philadelphia	PA	Low Income Usage Reduction Program (LIURP)	PECO	✓	✓	
Providence	RI	Appliance Management Program	National Grid RI		✓	
Seattle	WA	Weatherization Assistance	Puget Sound Energy	✓	✓	

Source: Economic Opportunity Studies 2013.

Notes: [1]Tenants in buildings up to 8 units only are eligible for Duke Energy Ohio and First Energy's programs.

Table C-2: DOE Better Buildings Neighborhood Program Partners by Metro Area

Metropolitan Area	DOE Better Buildings Neighborhood Program Partner	Multifamily Program
Atlanta-Sandy Springs-Marietta	Southeast Energy Efficiency Alliance WISE	
Austin-Round Rock-San Marcos	Austin Energy	x
Baltimore-Towson	Be Smart Maryland	x
Charlotte-Gastonia-Rock Hill	Southeast Energy Efficiency Alliance WISE	
Chicago-Joliet-Naperville	Energy Impact Illinois	x
Cincinnati-Middletown	Greater Cincinnati Energy Alliance	
Detroit-Warren-Livonia	Michigan Saves	
Hartford-West Hartford-East Hartford	Connecticut Neighbor to Neighbor Energy Challenge	
Indianapolis-Carmel	City of Indianapolis Better Buildings Program	
Jacksonville	Southeast Energy Efficiency Alliance WISE	
Kansas City	EnergyWorks KC	
Las Vegas-Paradise	Energy Fit Nevada	
Los Angeles-Long Beach-Santa Ana	Energy Upgrade California	x
Milwaukee-Waukesha-West Allis	Milwaukee Energy Efficiency (Me2)	
Nashville-Davidson--Murfreesboro--Franklin	Southeast Energy Efficiency Alliance WISE	
New York-Northern New Jersey-Long Island	NYSERDA	x
Philadelphia-Camden-Wilmington	City of Philadelphia	x
Phoenix-Mesa-Glendale	Energize Phoenix	
Portland-Vancouver-Hillsboro	Clean Energy Works	
Richmond	Richmond Region Energy Alliance	
Sacramento--Arden-Arcade--Roseville	SMUD Sacramento Better Buildings Program, Energy Upgrade California	x
San Antonio-New Braunfels	CPS Energy Savers	
San Diego-Carlsbad-San Marcos	Energy Upgrade California	
San Francisco-Oakland-Fremont	Energy Upgrade California	
San Jose-Sunnyvale-Santa Clara	Better Buildings Program San Jose	
Seattle-Tacoma-Bellevue	Seattle Community Power Works	x
Washington-Arlington-Alexandria	Be Smart Maryland	x

Source: DOE 2012b