

## **NYSERDA LOW- TO MODERATE-INCOME MARKET CHARACTERIZATION STUDY**

### ***SPECIAL TOPIC REPORT - LMI MARKET SEGMENTS***

#### **1.0 Introduction**

The Energy Affordability Policy established under the REV includes a commitment to give low-income households greater access to clean energy and to the state's energy efficiency programs. The Clean Energy Fund Order requires NYSERDA to invest \$234 million over three years in the Low- to Moderate-Income Market segment. NYSERDA's Clean Energy Fund implementation plan includes plans to invest in standard offer programs and market development initiatives.

The LMI Market is made of different population segments each of which requires a somewhat different type of standard offer programs and each of which has to overcome different types of market barriers with market development initiatives. One purpose of the LMI Market Characterization Study is to develop information on the composition and size of each market segment so that investment strategies can be better aligned with the needs of the LMI market. This section of the report furnishes a recommended market segmentation strategy and furnishes detailed profiles of each market segment.

#### **2.0 Proposed Segmentation Strategy**

The market segment strategy proposed for this study uses the dimensions of income, ownership status, and housing unit type as the primary segmentation variables. Each market segment is then characterized in terms of their most important demographic and geographic dimensions. The specific dimensions include:

- **Income** - The statistics presented in this report show the importance of income as a segmentation variable. In addition, low-income households are income-eligible for energy efficiency programs that pay for the entire cost of the installation of measures.
- **Ownership Status** - From a programmatic perspective, ownership status affects all aspects of program design and implementation. Working directly with the owner and occupant of the housing unit means that there is one decision-maker for the program or market initiative to engage. When the owner and occupant are different parties, the program implementation and/or market initiative becomes substantially more complex.
- **Housing Unit Type** - There are several different ways that housing unit type becomes relevant. First, the installation of energy efficiency measures can be quite different for different types of housing units. Second, most single family homes and mobile homes are owner-occupied, while most multifamily buildings (2-4 units and 5+ units) are occupied

by renters. Third, while single family homes and mobile homes usually have the advantage that the program or marketing initiative can address one set of decision-makers, multifamily buildings have the advantage that, when a program or marketing initiative is effective in engaging a building owner, the program is serving a larger number of housing units with a single energy efficiency project.

Table 2.1 shows the recommended segmentation approach and the number of households represented by each segment.

**Table 2.1 - LMI Market Segments by Owner Status, Income Group, and Housing Unit Type**

Housing Unit Type	Renter		Owner	
	Low Income	Moderate Income	Low Income	Moderate Income
Large Multifamily	984,695 (28%)	338,226 (10%)	129,878 (4%)	
Small Multifamily	634,153 (18%)	232,127 (6%)	591,389 (17%)	492,518 (14%)
Single Family				
Mobile Homes	108,169 (3%)			

Source: ACS (2013-2015)

### 3.0 Detailed Information on LMI Market Segments

This section of the report describes these market segments, furnishes key statistics for households in the segments, and identifies the existing programs that can serve those market segments.

#### 3.1 Segment #1 - Low-Income Renters in Large Multifamily Buildings

*Primary Reason for Targeting:* This market segment includes more than one-fourth of all LMI households. New York State has been a national leader in the development of large multifamily energy efficiency technology.

*Advantages:* Large multifamily buildings are good targets for energy efficiency because it is comparatively easy to identify which buildings have energy savings potential by examining energy usage records and getting information on building mechanical systems for buildings with building-level heating and water heating equipment. In addition, it is often possible to assess unit-level opportunities by inspecting the energy using equipment for a small number of units in the building since all units tend to have the same vintage equipment.

*Challenges:* WAP and EmPower require that the building be certified as a "low-income" building. That requires tenants to furnish income information which can present a barrier to participation. [Note: WAP can furnish building-level equipment if two-thirds of the building is income-eligible,

but can only deliver unit-level efficiency measures to income-eligible households. EmPower only serves individual units within the building that are income-eligible.] The MPP program only requires that 25 percent of units are expected to be occupied by LMI household. All programs also require some investment by the building owner.

*Segment Profile:* The following statistics characterizes this market segment.

- Geography: 74% in New York City
- Demographics: 57% are older households (40+) without children / 31% have children
- Average Shelter Burden: 64% of income
- Percent with Affordable Shelter Burden (30% or Less): 19% of households

This segment has significant shelter burden affordability issues and should be high priority from that perspective. [Note: Since moderate-income households rent in many of the same buildings as low-income households, these programs also would serve some moderate-income households.]

**3.2 Segment #2 - Moderate-Income Renters in Large Multifamily Buildings**

*Primary Reason for Targeting:* This market segment includes 10 percent of LMI households. New York State has been a national leader in the development of large multifamily energy efficiency technology. Often affordable housing includes both low-income and Moderate-Income Households.

*Advantages:* In addition to the advantages for multifamily buildings outlined in Section 3.1, there is a large population of affordable multifamily buildings that can be identified from public records and would demonstrate the building’s eligibility for MPP.

*Challenges:* The NYSERDA MPP program requires owner investment. Some Moderate-Income Households live in buildings that do not have a majority of households that are in the LMI population. But, the MPP only requires that 25 percent of the units are expected to be occupied by LMI households.

*Segment Profile:* The following statistics characterizes this market segment.

- Geography: 75% in New York City
- Demographics: 56% are older households (40+) without children / 22% have children
- Average Shelter Burden: 33% of income
- Percent with Affordable Shelter Burden (30% or Less): 47% of households

In this segment tenants have a more affordable shelter burden than tenants in Segment #1 and so might be willing to contribute to the cost of the in-unit energy efficiency investments.

**3.3 Segment #3 - Low-Income Owners of Single Family Homes and Small Multifamily Buildings**

*Primary Reason for Targeting:* This market segment includes 17 percent of LMI households. The WAP and EmPower programs have developed effective procedures for delivering energy efficiency services to this population. Owner-occupied small multi-family buildings should be included because the client has direct control over the property.

*Advantages:* The LIHEAP program and utility discount programs can furnish direct referrals. The new LIHEAP Performance Management data system should reduce the costs of obtaining energy usage data for targeting. Statistics presented in the LMI Special Report on Financial Capacity show that most owners have access to banking resources and equity in their homes.

*Challenges:* Household who do not participate in LIHEAP would need to be income-certified to access WAP/EmPower or Assisted Home Performance. Many low-income homes need structural upgrades to participate in the programs.

*Segment Profile:* The following characterizes this market segment.

- Geography: 60% in Upstate / 16% in Long Island
- Demographics: 69% are older households (40+) without children / 28% have children
- Average Energy Burden: 15% of income
- Average Shelter Burden: 66% of income
- Percent with Affordable Shelter Burden (30% or Less): 25% of households
- Average Home Equity Value: About \$200,000 statewide average / \$100,000 Upstate and \$300,000 in NYC metropolitan area [Note: Data only available for NYC, Buffalo, and Rochester]

This segment has significant energy and shelter burden affordability issues and should be high priority from that perspective. Most low-income homeowners have home equity that could be used to secure financing if structural upgrades are needed.

**3.4 Segment #4 - Moderate-Income Owners of Single Family and Small Multifamily Homes**

*Primary Reason for Targeting:* This market segment includes 14 percent of LMI households. The Assistance Home Performance program has developed effective procedures for delivering energy efficiency services to this population. Owner-occupied, small multi-family buildings should be included because the client has direct control over the property.

*Advantages:* Statistics show that many of these households have an affordable shelter burden and could invest in their homes to increase energy efficiency, safety, and comfort. Statistics show that most of these households have access to banking resources and equity in their homes.

*Challenges:* It is difficult to market to this population because they usually are not participating in low-income programs.

*Segment Profile:* The following characterizes the low-income owner-occupied single family market segment.

- Geography: 52% in Upstate / 26% in Long Island
- Demographics: 70% are older households (40+) without children / 27% have children
- Average Energy Burden: 8% of income
- Average Shelter Burden: 37% of income
- Percent with Affordable Shelter Burden (30% or Less): 49% of households
- Average Home Equity Value: About \$200,000 statewide average / \$100,000 Upstate and \$300,000 in NYC metropolitan area [Note: Data only available for NYC, Buffalo, and Rochester]

Many of these households can afford to make investments in their homes if they can be show the benefits to the program.

**3.5 Segment #5 - Low-Income Renters in Single Family and Small Multifamily Homes**

*Primary Reason for Targeting:* This market segment includes 18 percent of LMI households. These households have substantial energy burdens and shelter burdens.

*Advantages:* The LIHEAP program and utility discount programs can furnish direct referrals for low-income households. The new LIHEAP Performance Management data system should reduce the costs of obtaining energy usage data for targeting.

*Challenges:* The WAP and EmPower programs face major challenges is engaging the owners of single family and small multifamily rental units. Some new procedure for engaging building owners would be needed to effectively serve this market.

*Segment Profile:* The following characterizes this market segment.

- Geography: 53% in Upstate / 40% NYC
- Demographics: 76% are non-elderly (< 60) / 48% have children
- Average Energy Burden: 12% of income
- Average Shelter Burden: 64% of income
- Percent with Affordable Shelter Burden (30% or Less): 12% of households

This segment has significant energy and shelter burden affordability issues and should be high priority from that perspective. However, they are expected to be very difficult to engage in programs.

**3.6 Segment #6 - Moderate-Income Renters in Single Family and Small Multifamily Homes**

*Primary Reason for Targeting:* This market segment includes 6 percent of LMI households. These households have more affordable energy burdens and shelter burdens.

*Advantages:* Many moderate-income households could afford to pay slightly more for their rent if their energy bills were reduced.

*Challenges:* The Assisted Home Performance program faces major challenges is engaging the owners of single family and small multifamily rental units. Some new procedure for engaging building owners would be needed to effectively serve this market.

*Segment Profile:* The following characterizes this market segment.

- Geography: 45% in Upstate / 42% NYC
- Demographics: 76% are non-elderly (<60) / 34% have children
- Average Energy Burden: 5% of income
- Average Shelter Burden: 32% of income
- Percent with Affordable Shelter Burden (30% or Less): 49% of households

Although this segment has lower energy and shelter burden affordability issues, households may not be motivated to request investment by building owner. They are expected to be very difficult to engage in programs because the building owner would need to pay at least one-half of the cost of energy efficiency upgrades.

**3.7 Segment #7 - Owners and Renters in Mobile Homes**

*Primary Reason for Targeting:* Many of the lowest income households live in mobile homes.

*Advantages:* Many mobile homes are clustered in mobile home parks where most of the households are low- to moderate-income. That could reduce acquisition costs for either programs or marketers.

*Challenges:* Weatherization of mobile homes requires special skills. Because of low average usage, average savings per home are lower than for other housing unit types.

*Segment Profile:* The following characterizes this market segment.

- Geography: 92% in Upstate

- Demographics: 63% are older households (40+) with no children / 30% have children
- Average Energy Burden: 12% of income
- Average Shelter Burden: 31% of income
- Percent with Affordable Shelter Burden (30% or Less): 49% of households

This segment should be comparatively easy to identify and engage. However, it requires special skills to achieve cost-effective savings. This segment is only 3 percent of the LMI Market.

### **3.8 Segment #8 - Owners in Large Multifamily Buildings**

*Primary Reason for Targeting:* Previous programs have not effectively addressed this market sector.

*Advantages:* These households are owners (most likely condominiums or cooperatives) and can influence decisions by ownership groups to engage in energy efficiency programs.

*Challenges:* These households may not be participating in LIHEAP or utility discount programs and may be difficult to identify and engage. These households may live in buildings where most of the households are not low- to moderate-income.

*Segment Profile:* The following characterizes this market segment.

- Geography: 74% in NYC
- Demographics: 79% are older households (40+) without children / 14% have children
- Average Shelter Burden: 39% of income
- Percent with Affordable Shelter Burden (30% or Less): 48% of households

This segment may be difficult to identify and engage.

## **4.0 Policy Implications**

The recommended LMI market segmentation strategy divides the LMI population into eight distinct segments that each need a somewhat different set of program approaches and marketing strategies. Within each segment, the analysis has identified the dominant geographic, demographic, and financial characteristics of the population that need to be understood to effectively engage those market segments.

Four of the market segments represent a large share of the market for which NYSERDA, NYSHSR, and other service providers have made significant market progress.

- Low-Income Large Multifamily Renters - This is the largest single market segment - 28 percent of LMI households. It is already served by the WAP, EmPower, and MPP

programs. The main challenge in this market is to engage building owners. Recent research also has discussed the benefits of ensuring that tenants are given an understanding of installed measures and their own opportunities for energy saving.

- Moderate-Income Large Multifamily Renters - This is a significant share of the LMI market - 10 percent of LMI households. Some of these households are served by WAP, since buildings served by those programs are allowed to have some households that are not low-income. However, it is not clear what share of these households are currently served by existing programs and this may represent a significant new opportunity.
- Low-Income Owners of Single Family Homes (1-4 units) - This is the third largest market segment - 17 percent of LMI households. The WAP, EmPower, and REAP programs have good models for serving these households.
- Moderate-Income Owners of Single Family Homes (1-4 units) - This is another large market segment - 14 percent of LMI households. The Assisted Home Performance model appears to be an effective way to serve these households.

Together these four market segments cover about 70 percent of the LMI market. There are established programs that cover these markets. However, additional research is likely to uncover ways to reach demographic groups that have not been well-served and to identify ways to make effective use of the financial capacity of homeowners in these segments.

The segmentation analysis identified two market segments that are likely to be more challenging to engage in LMI energy efficiency initiatives.

- Low-Income Single Family and Small Multifamily Renters - This is the second largest market segment - 18 percent of LMI households. WAP and EmPower will pay for a large share of upgrades.<sup>1</sup> However, since the owner will need to make some contribution and the renter usually pays the energy bill, it is difficult to engage owners. This is likely to be the largest unmet need in the LMI Market.
- Moderate-Income Single Family and Small Multifamily Renters - This is a smaller market segment - 6 percent of LMI households. Assisted Home Performance pays for one-half of energy investment costs. However, since the owner will need to pay for the cost of upgrades and the renter usually pays the energy bill, it is difficult to engage owners. This is another unmet need in the LMI Market, but is not as large as the low-income segment.

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<sup>1</sup> The NYSERDA EmPower NY program will provide direct install measures to tenants at no cost, but requires landlord approval and contribution for substantial energy efficiency improvements such as insulation and air sealing.



These two market segments are about one-fourth of the total LMI Market and are likely to be largely unserved by existing programs. Research would be needed to identify successful approaches for engaging this market.

Mobile home households are a relatively small segment of the LMI population, only 3 percent of LMI households. Low income energy efficiency programs do serve this market. However, research shows that energy savings often are not sufficient to make measure installation cost-effective. One new strategy that might be successful in this market is to try to reduce acquisition costs and measure installation costs by treating mobile home neighborhoods.

The LMI condo or coop owners in large multifamily buildings make up only 4 percent of the LMI Market. It is likely that these households live in buildings with non-LMI households. While outreach to such households that are LIHEAP recipients is appropriate, it is not clear that there is an effective strategy for reaching these households.