NYSERDA LOW- TO MODERATE-INCOME MARKET CHARACTERIZATION STUDY
SPECIAL TOPIC REPORT - FINANCIAL CAPACITY

1.0 Introduction

The purpose of this Special Topic Report is to furnish detailed information on the financial capacity of low- to moderate-income (LMI) households. The Special Topic Report furnishes information on:

- Shelter Burden - What share of LMI household income is spent on housing costs, including energy?
- Banking Resources - To what extent do LMI households have access to bank accounts and other sources of credit?
- Home Equity - How many LMI households have equity in their homes that could be used to reduce borrowing costs for investments in energy efficiency?

This information will help policymakers, program managers, and other interested parties to get a better understanding of the capacity of LMI households to engage with and potentially participate in clean energy initiatives. This Special Topic Report is designed to supplement the information on Financial Capacity presented in the NYSERDA Low-to Moderate-Income Market Characterization Report.

1.1 Policies Affecting LMI Households

As part of the Reforming the Energy Vision (REV) initiative New York State established an Energy Affordability Policy that set the goal of limiting the average energy burden for low-income utility customers (i.e., households with income at or below 200 percent of the HHS poverty guideline) to an average of no more than 6 percent of income. That policy includes a commitment to give low-income households greater access to clean energy and to the state's energy efficiency and assistance programs.[1] NYSERDA will spend a minimum of $234 million over three years on clean energy programs for LMI households, including the EmPower NY and Assisted Home Performance programs, along with other initiatives.

[1] See press release from 5-19-16 at ... https://www.governor.ny.gov/news/governor-cuomo-announces-new-energy-affordability-policy-deliver-relief-nearly-2-million-low

1.2 LMI Participation in Energy Efficiency Programs

There is a general perception that LMI households will only be able to participate in energy efficiency programs if NYSERDA or other state agencies pay for the cost of service delivery. However, as will be demonstrated in this special topic report, many LMI households have sufficient financial capacity to make investments in their homes. It is important for policymakers to understand which LMI households have the financial capacity to make those investments, and under what circumstances.

The Assisted Home Performance program is intended to assist moderate-income households (i.e., households with incomes above 200% of poverty but at or below 80% of the greater of state median income (SMI) and area median income (AMI) in making energy efficiency upgrades to their homes. That program pays 50 percent of the cost of energy efficiency upgrades and makes financing available to qualified households. For this market segment, this analysis of financial capacity identifies what types of households have the financial capacity to take advantage of this program opportunity.

Some LMI energy efficiency programs - EmPower NY and Weatherization Assistance Program (WAP) - are designed to pay the full cost of energy efficiency upgrades for qualified low-income households (i.e., households with verified income at or below 200 percent of the HHS Poverty Guideline). For those households, having financial capacity is not required for program participation. However, to participate in the WAP and/or EmPower programs a household sometimes will need to make home repairs before their home can be treated. That is one reason why this Special Topic Report examines the financial capacity of low-income households; it looks at what share of low-income households could make such investments.

One other way in which the financial capacity of low-income households is relevant is that some households might prefer to participate in the Assisted Home Performance program even though they are income-eligible for WAP and EmPower. Under the WAP and EmPower rules, households must agree to allow installation of all measures that are judged to be cost-effective and to have those measures installed by the contractor selected by the WAP or EmPower program. With the Assisted Home Performance program, the household has more control over what measures are installed, and can select from a list of certified Home Performance contractors. From that perspective, low-income households who have the financial capacity might choose to participate in Assisted Home Performance rather than WAP or EmPower.

1.3 Data Sources

This analysis uses data from three surveys conducted by the Federal government; the American Community Survey (ACS), the Current Population Survey (CPS), and the American Housing Survey (AHS).

- The ACS is conducted annually by the U.S. Bureau of the Census. It collects self-reported data on household demographics, housing unit characteristics, housing costs, and energy expenditures. This analysis used the 2013, 2014, and 2015 data files and examined records for households who are residents of New York State.
- The CPS is conducted annually by the U.S. Bureau of the Census. It collects in-depth information on household demographics and income. One of the special survey modules includes information on the household's access to banking resources. This analysis used the special module from June 2015 and examined records for households who are residents of New York State.
- The AHS is conducted once every two years by the U.S. Bureau of the Census. It collects in-depth information on households and the housing units that they occupy, including information on equity in their homes. This analysis used the 2013 survey data file and examined households who are residents of the Northeast Census Region of the US since state-level data are not available. The analysis also uses the special metropolitan area files for the New York City metropolitan area (2013), the Buffalo metropolitan area (2011), and the Rochester metropolitan area (2013).

These three data sources furnish good-quality information to assess the financial capacity of households as defined for this study.

2.0 Financial Capacity Summary Statistics

The financial capacity statistics developed for this study included shelter burden, access to banking resources, and home equity. These three measures furnish different types of information about a household's financial capacity.

2.1 Shelter Burden

Shelter burden is a statistic that is used by analysts at the Department of Housing and Urban Development (HUD) to understand the extent to which households have affordable housing. Just as NYS has implemented a policy that defines 6 percent of income as an affordable energy burden, housing experts generally consider that households should spend no more than 30 percent of their income on the cost of housing, including energy costs. In addition, it is common practice in the real estate industry to use the 30 percent of income "rule of thumb" when considering whether a household can afford their rent or mortgage.

The components of shelter burden differ for homeowners and renters.

- Owners - For owners, shelter burden includes the household's mortgage payments, taxes, insurance, energy bills, water/sewer bills, and other types of costs or fees (e.g., condominium fees, mobile home park fees). Shelter burden also includes the costs of home equity loans.
- Renters - For renters, shelter burden includes the household's rent payments, energy bills, water/sewer bills, and other types of costs or fees if they are passed on to the renter by the owner.

The ACS asks respondents to report on the cost of each of these items. The survey questions are designed to ensure that there is no double counting (e.g., owners are asked whether their mortgage payment includes taxes and/or insurance payments) and that the respondent only reports on items that his or her household pays.

Table 2.1 shows average shelter costs, average income, and average shelter burden for NYS households. It shows that the average shelter burden for LMI households is 47.6 percent, compared to 15.7 percent for non-LMI households. On average, LMI households have shelter burdens that exceeds the affordability standard of 30 percent. The average non-LMI household has a shelter burden that is lower than the 30 percent affordability limit.

Table 2.1 - Average Shelter Burden for New York State Households by Income Group

Household Group	Average Shelter Bill	Average Income	Average Shelter Burden
LMI Households	$13,769	$28,923	47.6%
Non-LMI Households	$22,605	$143,671	15.7%
All Households	$18,355	$88,472	20.7%

Source: ACS (2013-2015)

Table 2.2 shows the distribution of shelter burden for households by income group. In total, 30 percent of LMI households have shelter burden less than 30 percent of income. At the other end of the spectrum, more than four in ten LMI households spend more than 50 percent of their income on shelter costs; some housing experts consider shelter burden of greater than 50 percent of income to be "severe" shelter burden. The table shows that 85 percent of non-LMI households have shelter burden below 30 percent of income.

Table 2.2 - Shelter Burden Distribution for New York State Households by Income Group

Shelter Burden	Percent of LMI Households	Percent of Non-LMI Households	Percent of All Households
Less than 20%	12%	62%	38%
20% to Less than 30%	18%	24%	21%
30% to Less than 40%	16%	9%	12%
40% to Less than 50%	11%	3%	7%
50% or More	43%	2%	22%
All Households	100%	100%	100%

Source: 2013-2015 ACS

2.2 Other Financial Capacity Indicators

Two other financial capacity indicators available from public data sources also show significant differences between LMI and non-LMI households, access to banking and home equity.

The banking indicator is categorized in the following way:

- Unbanked - Does not have a bank account.
- Underbanked - Has a banking account, but uses nontraditional lending sources (e.g., payday loans, pawn shops).
- Fully Banked - Has a banking account and does not use nontraditional lending sources.

Table 2.3 shows that 15 percent of LMI households are unbanked, while only 1 percent of non-LMI households have that status. The table also shows that about one-half of LMI households are fully banked. A significant share (18 percent) of non-LMI households are underbanked in that they make use of nontraditional lending sources.

Table 2.3 - Banking Status for New York State Households by Income Group

Household Group	Unbanked	Underbanked	Fully Banked	Unknown
LMI Households	15%	30%	48%	7%
Non-LMI Households	1%	18%	73%	8%
All Households	8%	24%	61%	7%

Source: 2015 CPS

Table 2.4 furnishes information on home equity for LMI and non-LMI households for the Mid-Atlantic Census Region (NY, NJ, and PA). The table shows that 48 percent of LMI households are owners and that 45 percent of LMI households are owners who have equity in their homes. Since there are about 3.5 million LMI households, that means that there are about 1.6 million households that are owners with equity in their homes that averages almost $200,000. Among non-LMI households, 69 percent are owners that have home equity that averages over $250,000. As will be discussed later in this report, the large amount of home equity for some LMI households suggests that a significant part of the LMI market includes households that have relatively low income but are not without resources.

Table 2.4 - Home Equity Statistics for Mid-Atlantic Census Division (NY, NJ, PA) Households by Income Group

Household Group	Percent Owners	Percent Owners with Equity	Average Equity
LMI Households	48%	45%	$194,800
Non-LMI Households	74%	69%	$264,530
All Households	62%	58%	$224,796

Source: 2013 AHS

3.0 Shelter Burden Factor Analysis

Shelter burden for LMI households varies considerably by a number of different factors, including:

- Income
- Owner/Renter Status
- Housing Unit Type
- Geography

These differences can be expected to have a major impact on both the need for energy efficiency services - to reduce energy burden and, by extension, shelter burden - and the ability of LMI households to participate in energy efficiency and clean energy programs.

Table 3.1 shows the average income, shelter expenditures, and shelter burden for LMI households by income group. Households with incomes of less than $10,000 have average shelter expenditures of $11,095 and an average shelter burden of over 200 percent of income. [Note: The ACS income statistics do not include in-kind benefits, or funds contributed by others to the household, nor do income statistics include withdrawals from assets to cover current costs.] By comparison, LMI households who have income between $30,000 and $40,000 have average income of $35,504 - over six times the income for the lowest income group - but have shelter expenditures that are only about 25 percent higher. As a result, their average shelter burden is 40.1 percent.

Table 3.1 - Average Shelter Burden for LMI Households by Income Group

Income Group	Percent of LMI Households	Average Shelter Expenditures	Average Income	Average Shelter Burden
Less than $10,000	16%	$11,095	$5,151	215.4%
$10,000 -< $20,000	21%	$11,065	$14,805	74.7%
$20,000 -< $30,000	19%	$12,811	$24,703	51.9%
$30,000 -< $40,000	17%	$13,834	$34,504	40.1%
$40,000 -< $50,000	13%	$15,707	$44,322	35.4%
$50,000 or More	14%	$20,192	$61,415	32.9%
All LMI Households	100%	$13,769	$28,923	47.6%

Source: ACS (2013-2015)

Home ownership status also affects shelter burden for LMI households. Homeowners tend to have responsibility for more types of housing costs (e.g., taxes and insurance), but at the same time some homeowners may own their home outright and may no longer be paying a mortgage. Table 3.2 compares the average expenditures and shelter burden for owners and renters for each of the listed income groups. At each income level, shelter expenditures and burden is higher for owners than for renters. However, for the overall LMI population, renters have lower average expenditures ($12,600) but have a higher average burden because their average income is lower.

Table 3.2 - Shelter Burden for LMI Households by Owner/Renter Status and Income Group

Income Group	Owners		Renters	
	Expenditures	Burden	Expenditures	Burden
Less than $10,000	$14,165	330.5%	$10,314	192.0%
$10,000 -< $20,000	$12,039	78.9%	$10,676	73.0%
$20,000 -< $30,000	$13,025	52.3%	$12,677	51.6%
$30,000 -< $40,000	$13,917	40.2%	$13,768	40.0%
$40,000 -< $50,000	$16,533	37.2%	$15,016	33.9%
$50,000 or More	$22,861	36.6%	$17,036	28.3%
All LMI Households	$15,710	45.8%	$12,600	49.0%

Source: ACS (2013-2015)

Housing unit type affects shelter burden for LMI households, as well. Table 3.3 compares the average shelter burden by housing unit type for each of the listed income groups. At each income level, shelter burden is higher for single family homes and small multifamily homes than for other types of housing.

Table 3.3 - Shelter Burden for LMI Households by Housing Unit Type and Income Group

Income Group	Single Family	Small Multifamily (2-4)	Large Multifamily (5+)	Mobile Homes
Less than $10,000	316.4%	250.9%	179.7%	126.9%
$10,000 -< $20,000	81.8%	82.2%	69.5%	50.0%
$20,000 -< $30,000	53.8%	55.6%	49.7%	33.2%
$30,000 -< $40,000	40.8%	42.6%	39.4%	24.2%
$40,000 -< $50,000	37.9%	38.0%	32.4%	21.3%
$50,000 or More	35.7%	34.7%	26.5%	18.1%
All LMI Households	46.3%	51.2%	48.3%	31.1%

Source: ACS (2013-2015)

In New York State, geography also is a significant factor in shelter burden differentials. Table 3.4 shows how shelter expenditures, income, and shelter burden vary for the state's economic development regions. In most of Upstate New York, average shelter burden is in the range of 34 to 39 percent of income. In the New York Metropolitan areas (Mid-Hudson, New York City, and Long Island) average shelter burden is greater than 50 percent of income.

Table 3.4 - Shelter Burden for LMI Households by Economic Development Region

NYS Economic Development Region	Percent of LMI Households	Average Shelter Expenditures	Average Income	Average Shelter Burden
Capital District	5%	$10,938	$27,909	39.2%
Central New York	4%	$9,351	$26,526	35.3%
Finger Lakes	6%	$9,963	$26,898	37.0%
Long Island	10%	$20,854	$38,765	53.8%
Mid-Hudson	10%	$16,740	$32,590	51.4%
Mohawk Valley	3%	$8,991	$26,565	33.8%
New York City	48%	$14,527	$27,691	52.5%
North Country	2%	$9,101	$26,797	34.0%
Southern Tier	4%	$9,130	$25,816	35.4%
Western New York	8%	$8,692	$25,499	34.1%
All LMI Households	100%	$13,769	$28,923	47.6%

Source: ACS (2013-2015)

4.0 Factor Analysis for Other Financial Capacity Indicators

The factor analysis for the other financial capacity indicators is somewhat more limited for several reasons.

- Banking Status - The dataset for the banking status indicator is only available at the state level and geographic analysis cannot be conducted. And, since the focus for banking status is related to the capacity of homeowners to engage in energy efficiency upgrades, the analysis is restricted to homeowners.
- Home Equity - The data source for home equity is available for the Northeast Census Region of the US, and for three NYS metropolitan areas - New York City (including Long Island), Buffalo, and Rochester. Because of the design of the AHS, there is some sub-state information, but no statewide information. In addition, the home equity analysis is relevant only to homeowners.

The key factors examined for the other financial capacity indicators include:

- Income
- Household Type
- Housing Unit Type
- Geography (Home Equity Only)

4.1 Banking Status Indicators

Table 4.1 shows how banking status varies by income for all LMI households. More than 25 percent of LMI households in the lowest income group (Less than $10,000) are unbanked. By comparison, only 6 percent of households with income of $40,000 or more are unbanked.

Table 4.1 - Banking Status for LMI Households (Owners and Renters) by Income Group

Income Group	Percent Unbanked	Percent Underbanked	Percent Fully Banked	Percent Unknown
Less than $10,000	27%	26%	38%	9%
$10,000 -< $20,000	24%	27%	42%	7%
$20,000 -< $30,000	15%	34%	44%	8%
$30,000 -< $40,000	5%	36%	54%	5%
$40,000 or More	6%	26%	61%	6%
All LMI Households	15%	30%	48%	7%

Source: 2015 CPS

Table 4.2 shows the banking status by income for LMI homeowners. Among all LMI homeowners, only 3 percent of households are unbanked.

Table 4.2 - Banking Status for LMI Households (Owners Only) by Income Group

Income Group	Percent Unbanked	Percent Underbanked	Percent Fully Banked	Percent Unknown
Less than $10,000	0%	22%	61%	17%
$10,000 -< $20,000	9%	11%	70%	11%
$20,000 -< $30,000	0%	19%	71%	10%
$30,000 -< $40,000	2%	22%	71%	6%
$40,000 or More	4%	25%	68%	4%
All LMI Households	3%	20%	69%	7%

Source: 2015 CPS

Table 4.3 shows how banking status varies by household type for LMI homeowners. About three-fourths of elderly homeowners are fully banked. Among the homeowners who are not elderly, it appears that about 60 percent are fully banked, while most of the rest are underbanked. Very few homeowners are unbanked.

Table 4.3 - Banking Status for LMI Households (Owners Only) by Household Type

Household Type	Percent Unbanked	Percent Underbanked	Percent Fully Banked	Percent Unknown
Elderly Individual	1%	10%	79%	10%
Elderly Couple	3%	15%	74%	9%
Age 40-59 - No Children	6%	30%	58%	6%
Age 40-59 - Children	4%	34%	62%	0%
Age 18-39 - No Children	0%	34%	55%	11%
Age 18-39 - Children	4%	16%	74%	6%
All LMI Households	3%	20%	69%	7%

Source: 2015 CPS

4.2 Home Equity Indicators

Table 4.4 shows that 45 percent of LMI households are homeowners who have home equity that averages $194,800. The table shows that the percent of households who are homeowners increases with income; 32 percent of LMI households with income less than $10,000 are homeowners, compared to 65 percent households with income of $50,000 or more. But, among homeowners, the average amount of home equity does not seem to relate to income level, suggesting that many of these homeowners have resources other than their annual income.

[Note: That would serve to help explain why Table 3.1 shows that some households have shelter burden more than twice their annual income.]

Table 4.4 - Home Equity for LMI Households by Income Group (Mid-Atlantic Census Division)

Income Group	Percent Homeowners	Percent with Home Equity	Average Home Equity
Less than $10,000	32%	31%	$203,417
$10,000 -< $20,000	45%	44%	$180,343
$20,000 -< $30,000	50%	48%	$208,776
$30,000 -< $40,000	58%	53%	$194,165
$40,000 -< $50,000	62%	54%	$185,071
$50,000 or More	65%	60%	$187,371
All LMI Households	48%	45%	$194,800

Source: 2013 AHS

Table 4.5 shows how home equity varies by household type for LMI households. Elderly couples have the highest rate of homeownership - 76% - and the highest average home equity - $234,256. Households with a head of household younger than 40 have the lowest rate of homeownership and those younger households who have children have the lowest average home equity.

Table 4.5 - Home Equity for LMI Households by Household Type (Mid-Atlantic Census Division)

Household Type	Percent Homeowners	Percent with Home Equity	Average Home Equity
Elderly Individual	57%	55%	$196,129
Elderly Couple	76%	74%	$234,256
Age 40-59 - No Children	42%	38%	$164,988
Age 40-59 - Children	51%	47%	$189,335
Age 18-39 - No Children	18%	17%	$190,920
Age 18-39 - Children	28%	25%	$119,274
All LMI Households	48%	45%	$194,800

Source: 2013 AHS

Table 4.6 shows how home equity varies by housing unit type for LMI households. LMI households who live in single family homes and in mobile homes have the highest homeownership rate. However, those LMI households who are owners in single family homes, small multifamily homes, and large multifamily homes all have relatively high average home equity, while households in mobile homes much lower home equity.

Table 4.6 - Home Equity for LMI Households by Housing Unit Type

Housing Unit Type	Percent Homeowners	Percent with Home Equity	Average Home Equity
Single Family	78%	73%	$203,574
Small Multifamily (2-4)	13%	12%	$191,536
Large Multifamily (5+)	7%	7%	$269,384
Mobile Home	78%	70%	$29,342
All LMI Households	48%	45%	$194,800

Source: 2013 AHS

Table 4.8 shows how home equity varies by metropolitan area for LMI households. The national AHS survey only furnishes information at the Census Division level; the tables above covered households in the states of New York, New Jersey, and Pennsylvania. However, the AHS also conduct surveys with special samples for metropolitan areas, including New York City (2013), Buffalo (2011), and Rochester (2013). Table 4.8 shows the homeownership and home equity statistics for those metropolitan areas and compares them to the Mid-Atlantic Census Division. The New York City metropolitan area has the lowest rate of homeownership for LMI households - 30% - but has the highest average home equity value - $410,820. About 45 percent of LMI households in Buffalo and Rochester are homeowners, but the average home equity value is around $100,000 in those metropolitan areas.

Table 4.8 - Home Equity for LMI Households by Metropolitan Area and Census Division

Geographic Region	Percent Homeowners	Percent with Home Equity	Average Home Equity
NYC Metro Area	30%	29%	$410,820
Buffalo Metro Area	47%	46%	$108,662
Rochester Metro Area	43%	41%	$93,894
Mid-Atlantic Census Division	48%	45%	$194,800

Source: 2011, 2013 AHS

5.0 Detailed Financial Capacity Statistics

Organizations and individuals engaged in the state's REV initiative each will be working with different income groups, varying types of buildings, and in different parts of the state. This section of the Special Topic Report furnishes additional details on how LMI financial capacity varies by some of those factors.

5.1 Financial Capacity by Income Group

The LMI Market Characterization Study furnishes statistics for three different ways of looking at financial circumstances of households - annual income, household poverty level, and LMI income group. Tables 3.1, 4.1, and 4.4 show how the financial capacity indicators vary by income group. Tables 5.1 to 5.4 furnish statistics by poverty group and tables 5.5 to 5.8 furnish statistics by LMI income group.

Table 5.1 shows average shelter burden by poverty group. Households with income at or below the HHS poverty guideline have shelter expenditures that exceed their income. The average household with income at or below 150% of poverty has "severe" shelter burden (i.e., shelter burden greater than 50 percent of income). At all poverty levels, LMI households have average shelter burden that is greater than the target for affordability (i.e., 30 percent of income).

Table 5.1 - Average Shelter Burden for LMI Households by Poverty Group

Percent of Poverty	Percent of LMI Households	Average Shelter Expenditures	Average Income	Average Shelter Burden
At or below 100%	28%	$11,866	$9,811	120.9%
101% - 150%	18%	$12,756	$22,484	56.7%
151% - 200%	16%	$13,858	$31,418	44.1%
201% or more	38%	$15,642	$45,276	34.5%
All LMI Households	100%	$13,769	$28,923	47.6%

Source: ACS (2013-2015)

Table 5.2 shows the distribution of shelter burden by poverty group. Only 9 percent of households with income below poverty have an "affordable" shelter burden; 77 percent have severe shelter burden. However, among moderate-income households (i.e., income above 200 percent of the poverty guideline) almost one-half (48%) have an affordable shelter burden, while only 18 percent have a severe shelter burden.

Table 5.2 - Distribution of Shelter Burden for LMI Households by Poverty Group

Shelter Burden	At or Below 100%	101%-150%	151%-200%	201% or More
Less than 20%	2%	8%	13%	21%
20% to Less than 30%	7%	13%	19%	27%
30% to Less than 40%	8%	15%	20%	21%
40% to Less than 50%	6%	14%	15%	13%
50% or More	77%	50%	33%	18%
All LMI Households	100%	100%	100%	100%

Source: ACS (2013-2015)

Table 5.3 shows the banking status for LMI households by poverty group. Almost one-third of households with income at or below the poverty line are unbanked while less than 10 percent of the other groups of households report that status. More than one-half of LMI households with income above 150 percent of the poverty line are fully banked.

Table 5.3 - Banking Status for LMI Households (Owners and Renters) by Poverty Group

Percent of Poverty	Percent Unbanked	Percent Underbanked	Percent Fully Banked	Percent Unknown
At or below 100%	31%	29%	34%	6%
101% - 150%	8%	35%	49%	8%
151% - 200%	6%	32%	58%	4%
201% or more	9%	26%	57%	8%
All LMI Households	15%	30%	48%	7%

Source: 2015 CPS

Table 5.4 shows the home equity for LMI homeowners by poverty group. The percentage of households who are owners increases as income as a percent of poverty increases; about one-third of LMI households with income at or below the poverty guideline are owners with equity while more than one-half of the moderate-income LMI households have equity in their homes. However, the average value of home equity does not appear to be correlated with income.

Table 5.4 - Home Equity for LMI Households by Poverty Group

Percent of Poverty	Percent Homeowners	Percent with Home Equity	Average Home Equity
At or below 100%	35%	33%	$186,050
101% - 150%	47%	45%	$192,645
151% - 200%	56%	54%	$212,684
201% or more	60%	55%	$189,776
All LMI Households	48%	45%	$194,800

Source: 2013 AHS

Table 5.5 shows average shelter burden by LMI income group. The very low income group has income at or below 130 percent of the poverty guideline. These households have the potential to receive SNAP benefits to help pay for the costs of food. The average shelter burden is 94 percent of income. For moderate-income households, the average shelter burden is much closer to the 30 percent affordability standard.

Table 5.5 - Average Shelter Burden for LMI Households by LMI Income Group

LMI Income Group	Percent of LMI Households	Average Shelter Expenditures	Average Income	Average Shelter Burden
Very Low Income	39%	$12,082	$12,859	94.0%
Low Income	28%	$13,482	$29,762	45.3%
Moderate Income	33%	$16,021	$47,389	33.8%
All LMI Households	100%	$13,769	$28,923	47.6%

Source: ACS (2013-2015)

Table 5.6 shows the distribution of shelter burden by LMI income group. More than 70 percent of very low income households have severe shelter burden, while only 11 percent have affordable shelter burden. Among moderate-income households, only 16 percent have severe shelter burden.

Table 5.6 - Distribution of Shelter Burden for LMI Households by LMI Income Group

Shelter Burden	Very Low Income	Low Income	Moderate Income	All LMI Households
Less than 20%	3%	13%	22%	12%
20% to Less than 30%	8%	18%	28%	18%
30% to Less than 40%	9%	19%	22%	16%
40% to Less than 50%	8%	15%	12%	11%
50% or More	71%	34%	16%	43%
All LMI Households	100%	100%	100%	100%

Source: ACS (2013-2015)

Table 5.7 shows the banking status for LMI households by LMI income group. More than one-fourth of very low income households are unbanked, and more than one-half are either unbanked or underbanked. Households that are low income are much less likely to be unbanked, but one-third are reported to be underbanked.

Table 5.7 - Banking Status for LMI Households (Owners and Renters) by LMI Income Group

LMI Income Group	Percent Unbanked	Percent Underbanked	Percent Fully Banked	Percent Unknown
Very Low Income	26%	30%	36%	7%
Low Income	6%	34%	55%	5%
Moderate Income	9%	24%	59%	8%
All LMI Households	15%	30%	48%	7%

Source: 2015 CPS

Table 5.8 shows the home equity for homeowners by LMI income group. About one-third of very low income households and about one-half of the other LMI income groups are homeowners with equity in their homes. The average amount of home equity is about $200,000.

Table 5.8 - Home Equity for LMI Households by LMI Income Group

LMI Income Group	Percent Homeowners	Percent with Home Equity	Average Home Equity
Very Low Income	37%	36%	$191,340
Low Income	54%	52%	$203,731
Moderate Income	61%	56%	$187,045
All LMI Households	48%	45%	$194,800

Source: 2013 AHS

5.2 Financial Capacity Statistics by Household Type

The LMI Market Characterization Study segments households into groups that relate to the household's life stage and are likely to relate to the way that the household would make financial decisions with respect to investments in their homes. Tables 5.9 to 5.12 furnish financial capacity by household type.

Table 5.9 shows average shelter burden by household type. Most types of households have average shelter burden that is close to or above the severe shelter burden limit of 50 percent of income. Elderly couples, however, have an average shelter burden of about 40 percent of income. Younger households without children have the highest average shelter burden of over 58 percent of income.

Table 5.9 - Average Shelter Burden for LMI Households by Household Type

Household Type	Percent of LMI Households	Average Shelter Expenditures	Average Income	Average Shelter Burden
Elderly Individual	22%	$10,186	$19,847	51.3%
Elderly Couple	20%	$14,291	$35,350	40.4%
40-59 Without Children	19%	$13,303	$26,166	50.8%
40-59 With Children	16%	$17,869	$37,764	47.3%
18-39 Without Children	10%	$14,469	$24,795	58.4%
18-39 With Children	13%	$14,262	$31,127	45.8%
All LMI Households	100%	$13,769	$28,923	47.6%

Source: ACS (2013-2015)

Table 5.10 shows the distribution of shelter burden by household type. The table shows that about 40 percent of LMI elderly couples have an affordable shelter burden (i.e., less than 30 percent of income), but even for that group over 30 percent have shelter burden of 50 percent or more. Over one-half of LMI households who are under 40 years old and do not have children pay more than 50 percent of their income for shelter.

Table 5.10 - Distribution of Shelter Burden for LMI Households by Household Type

Shelter Burden	Elderly		40-59		18-39		All LMI Households
	One Person	Couple	No Children	Children	No Children	Children	
Less than 20%	12%	20%	10%	11%	6%	10%	12%
20% -< 30%	18%	20%	16%	17%	15%	18%	18%
30% -< 40%	16%	17%	17%	16%	16%	16%	16%
40% -< 50%	10%	11%	11%	12%	12%	12%	11%
50% or More	43%	32%	46%	45%	52%	45%	43%
All LMI	100%	100%	100%	100%	100%	100%	100%

Source: ACS (2013-2015)

Table 5.11 shows the banking status for LMI households by household type group. Both elderly couples and elderly individual households have the highest rate of being fully banked; 10 percent or less of each group is unbanked and more than one-half of each group is fully banked.

Table 5.11 - Banking Status for LMI Households (Owners and Renters) by Household Type

Household Type	Percent Unbanked	Percent Underbanked	Percent Fully Banked	Percent Unknown
Elderly Individual	10%	22%	56%	11%
Elderly Couple	7%	24%	60%	9%
40-59 Without Children	19%	34%	42%	6%
40-59 With Children	14%	38%	43%	4%
18-39 Without Children	22%	24%	48%	7%
18-39 With Children	21%	39%	37%	3%
All LMI Households	15%	30%	48%	7%

Source: 2015 CPS

Table 5.12 shows the home equity for LMI homeowners by household type. Almost three-fourths of elderly couples have equity in their homes that averages $234,256. Younger households without children have the lowest percent of households with home equity (17%) and younger households with children have the lowest average home equity value ($119,274).

Table 5.12 - Home Equity for LMI Households by Household Type[2]

Household Type	Percent Homeowners	Percent with Home Equity	Average Home Equity
Elderly Individual	57%	55%	$196,129
Elderly Couple	76%	74%	$234,256
40-59 Without Children	42%	38%	$164,988
40-59 With Children	51%	47%	$189,335
18-39 Without Children	18%	17%	$190,920
18-39 With Children	28%	25%	$119,274
All LMI Households	48%	45%	$194,800

Source: 2013 AHS

5.3 Financial Capacity by Geography

There are significant differences in the factors contributing to energy burden in different parts of the state. The LMI Market Characterization Study uses two different regional groups for analysis of the geographic dimensions of the LMI Market. The first is based on NYS economic development regions. The second was developed by APPRISE for the project to furnish regions with more consistent populations; it consolidates regions in upstate and divides New York City into more regions that are more homogeneous in terms of housing unit types.

Table 5.13 shows how average shelter expenditures, income, and shelter burden vary by NYS Economic Development region. The Upstate regions have average shelter burden that ranges from 33.8 percent of income (Mohawk Valley) to 39.2 percent of income (Capital District). By comparison, the regions in the New York City metropolitan area all have average shelter burden over 50 percent.

[2] Note that this table is a repeat of Table 4.5. Section 4 examined the factors associated with differences in financial capacity. Section 5 furnishes systematic information by poverty group, LMI income group, household type, and geography. The table is repeated here for the convenience of the reader.

Table 5.13 - Shelter Burden for LMI Households by NYS Economic Development Region[3]

NYS Economic Development Region	Percent of LMI Households	Average Shelter Expenditures	Average Income	Average Shelter Burden
Capital District	5%	$10,938	$27,909	39.2%
Central New York	4%	$9,351	$26,526	35.3%
Finger Lakes	6%	$9,963	$26,898	37.0%
Long Island	10%	$20,854	$38,765	53.8%
Mid-Hudson	10%	$16,740	$32,590	51.4%
Mohawk Valley	3%	$8,991	$26,565	33.8%
New York City	48%	$14,527	$27,691	52.5%
North Country	2%	$9,101	$26,797	34.0%
Southern Tier	4%	$9,130	$25,816	35.4%
Western New York	8%	$8,692	$25,499	34.1%
All LMI Households	100%	$13,769	$28,923	47.6%

Source: ACS (2013-2015)

The figure below furnishes a map of the NYS Economic Development Regions.

[3] Note that this table is a repeat of Table 3.4. Section 3 examined the factors associated with differences in financial capacity. Section 5 furnishes systematic information by poverty group, LMI income group, household type, and geography. The table is repeated here for the convenience of the reader.

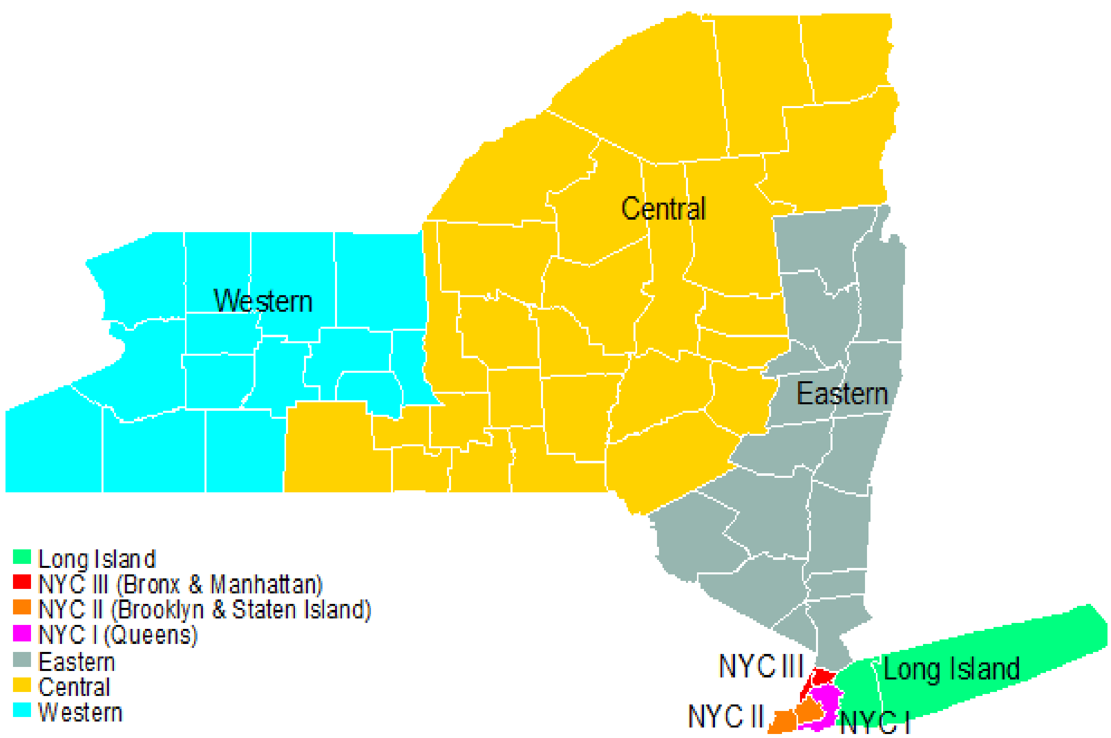
Table 5.14 shows how average shelter expenditures, income, and shelter burden vary by LMI Study Region. The table shows that, even when New York City is broken into sub-regions, the average shelter burden is over 50 percent for all of the New York City area regions.

Table 5.14 - Shelter Burden for LMI Market Characterization Study Region

LMI Study Region	Percent of LMI Households	Average Shelter Expenditures	Average Income	Average Shelter Burden
Western NYS	14%	$9,259	$26,123	35.4%
Central NYS	13%	$9,165	$26,379	34.7%
Eastern NYS	15%	$14,700	$30,945	47.5%
NYC III (Bronx/Manhattan)	19%	$13,025	$25,246	51.6%
NYC II (Brooklyn/Staten Island)	18%	$14,854	$28,037	53.0%
NYC I (Queens)	12%	$16,477	$31,152	52.9%
Long Island	10%	$20,854	$38,765	53.8%
All LMI Households	100%	$13,769	$28,923	47.6%

Source: ACS (2013-2015)

The figure below furnishes a map of the LMI Study Regions.



6.0 POLICY IMPLICATIONS

As part of the Reforming the Energy Vision initiative New York State established an Energy Affordability Policy that set the goal of limiting energy costs for low-income utility customers (i.e., households with income at or below 200 percent of the HHS poverty guideline) to an average of no more than 6 percent of income. That policy includes a commitment to giving low-income households greater access to clean energy and to the state's energy efficiency and assistance programs.[4] NYSERDA will spend a minimum of $234 million over three years on clean energy programs for LMI households, including the EmPower NY and Assisted Home Performance programs, along with other initiatives.

6.1 Financial Capacity of Moderate-Income Households

The statistics presented in this Special Topic Report are most important for organizations and individuals that are working with moderate-income households. Such households are not eligible for energy assistance (i.e., LIHEAP and utility low-income discounts) or for the energy efficiency programs that pay the full cost of installed measures (i.e., WAP and EmPower). They can participate in Assisted Home Performance which covers a significant share of the investment in energy efficiency measures. However, a household that wants to participate in that program needs to demonstrate some financial capacity to pay for the costs of installed measures that are the responsibility of the homeowner.

Some of the important statistics presented in this Special Topic Report that help to demonstrate that financial capacity includes:

- Shelter Burden - Analysts suggest that 30 percent of income is an affordable shelter burden. One-half of moderate-income households have shelter burden less than 30 percent of income, and 22 percent have shelter burden less than 20 percent of income. This suggests that a significant share of moderate income households could consider investments in energy efficiency, particularly if those investments pay off in terms of lower energy bills.
- Access to Banking - Almost 60 percent of moderate income households are fully banked; they have bank accounts and do not report using nontraditional lending sources.

[4] See press release from 5-19-16 at ... https://www.governor.ny.gov/news/governor-cuomo-announces-new-energy-affordability-policy-deliver-relief-nearly-2-million-low

- Home Equity - 56 percent of moderate income households have home equity that averages $187,045. This suggests that those households could use that equity as collateral for loans related to energy efficiency upgrades.

Those statistics show that a significant share of the moderate-income households has the capacity to invest in energy efficiency (e.g., make use of the Assisted Home Performance program) to increase the energy efficiency of their homes or to engage in other clean energy programs.

This Special Topic Report also identifies what types of households have the highest level of financial capacity and might be effectively targeted by clean energy programs.

- Elderly Homeowners - These households appear to have the greatest capacity to make investments in their homes; they have the lowest average shelter burden, the highest percent of households that are fully banked, and the greatest percent of households with equity in their homes.

- Non-Elderly Homeowners - While a lower percentage of non-elderly households are homeowners, those who are homeowners have a considerable amount of equity in their homes. And, most homeowners of all income levels are either fully banked or underbanked; very few are unbanked.

This analysis suggests that there are opportunities for engaging moderate-income households to invest in energy efficiency, particularly if some share of the costs can be offset by leveraging programs like Assisted Home Performance.

6.2 Financial Capacity of Low-Income Households

The Energy Affordability Policy focuses on reducing the energy burden of low-income households. The analysis in this Special Topic Report makes it clear that high energy burden is just one component of the high shelter burden faced by many low-income households. For low-income households with high shelter burdens, receipt of energy efficiency upgrades through programs such as WAP or EmPower could make both energy and housing more affordable.

However, the statistics also show that some low-income households have greater financial capacity than is commonly understood. Within each population segment, there are households for whom the shelter burden statistics show that some level of investment is feasible.

- Homeowners - Most low-income homeowners have shelter burdens well above the affordability target of 30 percent of income. As such, it would be difficult for them to invest in energy efficiency unless the cost of upgrades could be offset in real time by lower energy costs. However, if those types of opportunities were available, most LMI homeowners have access to banking resources and equity in their homes.

Many energy efficiency upgrades can be expected to pay for themselves over time if borrowing costs are kept to reasonable levels (i.e., monthly repayment costs do not exceed the value of monthly energy savings). Since funding levels for WAP and EmPower are not sufficient to address the needs of all low-income households, it would be appropriate to consider ways to engage low-income homeowners that can benefit from energy efficiency programs, but who are not prioritized for those programs according to current guidelines.

6.3 Coordination with LMI Housing Programs

Both low-income and moderate-income households are eligible for housing programs available through NYSHCR and local governments. One of the major barriers to investment in energy efficiency measures is that some homes have issues such as structural or electrical deficiencies that prevent the installation of measures. For example, if the home has serious moisture issues, it is not appropriate to air seal the home until the source of the moisture has been mitigated. If a house has a roof that leaks, it needs to be repaired before insulation can be added to the attic. If LMI housing programs can focus on those types of improvements, the affected homes can then be weatherized. The reductions in energy usage can help to reduce shelter burden costs and contribute to increasing the affordability of housing for LMI households.