

LIHEAP Performance Measures Report

For Fiscal Year 2016



**U.S. DEPARTMENT OF
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Office of Community Services
Division of Energy Assistance
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LIHEAP Performance Measures Report For Fiscal Year 2016

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List of Acronyms and Abbreviations

ACF	HHS's Administration for Children and Families
ASEC	CPS Annual Social and Economic Supplement
Btu	British thermal unit
CDD	Cooling Degree Day
CPI	Consumer Price Index
CPS	Current Population Survey
DEA	OCS's Division of Energy Assistance
DOE	U.S. Department of Energy
EIA	DOE's Energy Information Administration
FY	Federal Fiscal Year / Fiscal Year
GPRA	Government Performance and Results Act of 1993 (Public Law 103-62)
HDD	Heating Degree Day
HHS	U.S. Department of Health and Human Services
LIHEAP	Low Income Home Energy Assistance Program
NEADA	National Energy Assistance Directors' Association
NEUAC	National Energy and Utility Affordability Coalition
OCS	ACF's Office of Community Services
PMIWG	LIHEAP Performance Measures Implementation Work Group
RECS	Residential Energy Consumption Survey

Executive Summary

The Low Income Home Energy Assistance Program (LIHEAP) is administered at the federal level by the U.S. Department of Health and Human Services (HHS) Administration for Children and Families (ACF). The Government Performance and Results Act of 1993 (GPRA) focuses on program results to provide Congress with objective information on the achievement of statutory objectives or program goals. The resulting performance data are to be used in making decisions on budget and appropriation levels.

ACF's budget justification for Congress, which contains the LIHEAP performance plan, takes into account the fact that the federal government does not provide LIHEAP assistance to the public. Instead, the federal government provides funds to states, federal- or state-recognized Indian tribes and tribal organizations, and insular areas to administer LIHEAP at the local level. The LIHEAP performance plan also takes into account the fact that LIHEAP is a block grant whereby LIHEAP grantees have broad flexibility to design their programs, within very broad federal guidelines, to meet the needs of their citizens.

This report presents statistics for LIHEAP performance measurement at the national and regional levels for state grantees (50 states plus the District of Columbia, referred to as "states" throughout this report). The primary information source for the data on performance measurement is the *LIHEAP Household Report for FY 2016*. This survey collects data from the states on the number of households served by the LIHEAP program, as well as demographic and income characteristics of assisted households, and is conducted annually by HHS. Data reported by grantees are combined with estimates of the federally income eligible population from the U.S. Census Bureau's Current Population Survey (CPS) Annual Social and Economic Supplement (ASEC) to measure targeting performance on key program metrics.¹ Additional analyses of LIHEAP assisted households are made using data from the Residential Energy Consumption Survey (RECS), fielded by the Energy Information Administration (EAI) of the U.S. Department of Energy (DOE).

LIHEAP program goals and performance goals

In federal fiscal year (FY) 2016, about 15 percent of federally income eligible households received assistance with their heating costs. Given that limitation, the LIHEAP statute requires LIHEAP grantees to provide, in a timely manner, that the highest level of assistance will be furnished to those households that have the lowest incomes and the highest energy costs or needs in relation to income, taking into account family size. The LIHEAP statute identifies two groups of low income households as having the highest needs:

- *Vulnerable Households*: Vulnerable households are those with at least one member that is a young child, an individual with disabilities, or a frail older individual.
- *High-Burden households*: High-burden households are those with the lowest incomes and highest home energy costs.

Based on the national LIHEAP program goals, ACF has focused its annual performance goals and measurement on targeting income eligible vulnerable households. Subject to the availability of data, ACF also is interested in the performance of LIHEAP with respect to targeting households with the highest home energy burden.

Targeting Index performance measures

Performance goals must be measurable in order to determine if the goals are being achieved. ACF has developed a set of performance measures (i.e., targeting indexes) that show the extent to which LIHEAP

¹ Federally income-eligible population refers to households with income at or below the greater of 150 percent of HHS poverty guidelines (HHSPG) or 60 percent of state median income, depending on household size.

meets its performance goals. These measures show LIHEAP's performance in targeting vulnerable and high-burden households:

- The *reciprocity targeting index* quantifies targeting with respect to receipt of LIHEAP benefits.
- The *benefit targeting index* quantifies targeting with respect to the level of LIHEAP benefits.
- The *burden reduction targeting index* quantifies targeting with respect to the burden reduction resulting from LIHEAP benefits.

The development of these indexes facilitates tracking of reciprocity, benefit, and burden reduction performance for vulnerable and high-burden households. Using these indexes, ACF established the following LIHEAP performance measures

- Increase the reciprocity targeting index score of LIHEAP households having at least one member 60 years or older.
- Maintain the reciprocity targeting index score of LIHEAP households having at least one member five years or younger.

Beginning in FY 2016, grantees were required to collect data on LIHEAP benefit targeting and burden reduction targeting and report on these data to HHS. Grantees will be able to use these data to assess the status of their programs. These are Developmental Measures that will be reviewed by HHS and grantees to assess their value in documenting the performance of the LIHEAP program.

Outcome performance measures

ACF seeks to improve the way in which it measures LIHEAP's performance. The indicators that ACF uses to measure LIHEAP's performance, the young child and elderly reciprocity targeting indexes, serve only as proxies for LIHEAP's outcomes. ACF intended these proxies to be replaced by more outcome-focused measures.

In June 2008, ACF established the LIHEAP Performance Measures Planning Work Group, consisting of state LIHEAP directors and ACF staff. The Work Group drafted a set of potential LIHEAP performance measures that could be useful to both the states and ACF.

In April 2010, ACF established a follow-up group, the LIHEAP Performance Measures Implementation Work Group (PMIWG), consisting of state LIHEAP directors and ACF staff. The PMIWG will be active through at least September 2017 in evaluating grantees' ability to collect and report on newly established measures and also establishing definitions relating to the new measures.

Performance measurement research

ACF has funded several studies to develop a better understanding of LIHEAP targeting performance measurement. Two of these studies recommended that ACF consider making changes in the performance measurement plan for LIHEAP.

- Validation Study – The performance measurement validation study examined the available data sources for estimating the targeting indexes required by the performance measurement plan for LIHEAP and identified the data sources that furnished the most reliable data.²

² *LIHEAP Targeting Performance Measurement Statistics: GPRA Validation of Estimation Procedures*, September 2004, prepared by APPRISE Incorporated under PSC Order No. 043Y00471301D. http://www.acf.hhs.gov/sites/default/files/ocs/gpra_validation_report_final.pdf

- Energy Burden Study – The energy burden evaluation study used the 2001 RECS LIHEAP Supplement to measure the baseline performance of LIHEAP in serving high-burden households and to examine the competing demands associated with targeting vulnerable and high-burden households.³

ACF has implemented the recommendations from the Validation Study. Beginning in FY 2016, ACF began implementing the recommendations from the Energy Burden Study by requiring state grantees and the District of Columbia to furnish data on the energy burden of LIHEAP recipient households as part of their annual LIHEAP reports.

Performance measurement statistics

HHS's [Fiscal Year 2017 Annual Performance Report and Performance Plan](#) furnished measurements of targeting performance nationally. The performance report showed the national LIHEAP target scores for FY 2016, and national LIHEAP target scores and performance results for prior years. Table 1 below shows that in FY 2016, nationally, the LIHEAP program exceeded its target scores for assisting income eligible households with at least one elderly member (60 years old and over) and for assisting income eligible households with at least one young child (5 years old or younger). The results also show that in FY 2016, nationally, the LIHEAP program more effectively targeted assistance to income eligible households with at least one young child than it did income eligible households with at least one elderly member.

Table 1. LIHEAP reciprocity targeting performance measures for FY 2016

Performance measurement statistic	Target	Result
Increase the reciprocity targeting index score for LIHEAP recipient households having at least one elderly member	81	86
Increase the reciprocity targeting index score for LIHEAP recipient households having at least one young child	107	108

³ *LIHEAP Energy Burden Evaluation Study*, July 2005, Report prepared by APPRISE Incorporated under PSC Order No. 043Y00471301D. http://www.acf.hhs.gov/sites/default/files/ocs/study_july_05.doc

I. Introduction

The Low Income Home Energy Assistance Program (LIHEAP) is authorized by Title XXVI of the Omnibus Budget Reconciliation Act of 1981 (OBRA), Public Law 97-35, as amended. The Administration for Children and Families (ACF) within the U.S. Department of Health and Human Services (HHS) administers LIHEAP at the federal level. ACF awards annual LIHEAP block grants to assist eligible low income households in meeting their home energy costs. ACF issues such grants to the 50 states and the District of Columbia, certain Indian tribes and tribal organizations, and certain U.S. insular areas.

In 1994, Congress amended the purpose of LIHEAP to clarify that LIHEAP is “to assist low income households, particularly those with the lowest incomes, that pay a high proportion of household income for home energy, primarily in meeting their immediate home energy needs” (The Human Services Amendments of 1994, P.L. 103-252, Sec. 302). Congress further indicated that LIHEAP grantees need to reassess their LIHEAP benefit structures to ensure that they are actually targeting those low income households that have the highest energy costs or needs. The Energy Policy Act of 2005 (P.L. 109-58) reauthorized LIHEAP through Fiscal Year (FY) 2007 without substantive changes. LIHEAP’s reauthorization is currently pending.

For LIHEAP grantees to reassess their LIHEAP benefit structures, they need performance statistics on LIHEAP applicants and eligible households. In addition, they need technical assistance in how to make use of the performance statistics in planning and implementing changes to their programs.

The *LIHEAP Performance Measures Report for FY 2016* focuses on ACF’s approach to LIHEAP performance measurement. It describes performance measurement procedures and furnishes baseline data on targeting performance for LIHEAP over time. Previously, this report was published as part of the *LIHEAP Home Energy Notebook*, which included additional sections on the latest national and regional data on home energy consumption, expenditures, and burden; low income home energy trends and trends in LIHEAP for the period 1979 to present; characteristics of the low income population in each state; and special studies of important issues related to LIHEAP and low income home energy needs. Beginning with data for FY 2015, the individual sections of the *LIHEAP Home Energy Notebook* have been published separately in an effort to make the data available to LIHEAP grantees in a more timely fashion.

The performance measurement data presented in this report were derived from the following sources:

- State annual *LIHEAP Household Report* – ACF set a goal for the states to submit their final *LIHEAP Household Report for Federal Fiscal Year (FFY) 2016* by December 16, 2016. Each *LIHEAP Household Report* needs to be received, reviewed, processed, and compared against data from each state’s *LIHEAP Grantee Survey* that was conducted in January 2017 as part of the *LIHEAP Performance Data Form for Federal Fiscal Year (FFY) 2016*. The data on the number of LIHEAP households assisted in FY 2016 will be included in the *LIHEAP Report to Congress* for FY 2016.
- CPS ASEC – The Current Population Survey (CPS) is a national household sample survey that is conducted monthly by the Bureau of the Census. The CPS Annual Social and Economic Supplement (ASEC) includes data that allow the user to characterize household demographic characteristics. The CPS ASEC is the best source of annual national data for estimating the number of income eligible households and the number of income eligible vulnerable households. The CPS ASEC data used to prepare performance statistics for FY 2016 were published in October 2016.
- RECS – The Energy Information Administration’s (EIA’s) Residential Energy Consumption Survey (RECS) is a national household sample survey that is conducted approximately once every

LIHEAP Performance Measures Report for FY 2016: I. Introduction

four years. However, the most recent RECS was conducted in 2009.⁴ The 2001 RECS data were used for baseline measurement of targeting performance for high energy burden households and can track longer-term changes in performance over time (2001 to 2009). The RECS currently cannot furnish annual updates on LIHEAP targeting performance for high energy burden households.

⁴ Preliminary data from the 2015 RECS were published by the Energy Information Administration (EIA) in June 2017. However, consumption and expenditures data from the 2015 RECS will not be available until January 2018, at the earliest.

II. Federal LIHEAP Targeting Performance

The Government Performance and Results Act of 1993 (GPRA), as amended, focuses on program results to provide Congress with objective information on the achievement of statutory objectives or program goals. The resulting performance data are to be used in making decisions on budget and appropriation levels.

ACF's budget justification for Congress, which contains the LIHEAP performance plan, takes into account the fact that the federal government does not provide LIHEAP assistance to the public. Instead, the federal government provides funds to states, certain federal- or state-recognized Indian tribes and tribal organizations, and insular areas to administer LIHEAP at the local level. The LIHEAP performance plan also takes into account the fact that LIHEAP is a block grant whereby LIHEAP grantees have broad flexibility to design their programs, within very broad federal guidelines, to meet the needs of their citizens.

This report describes ACF's approach to LIHEAP performance measurement and discusses the findings from ACF-funded research on performance measurement for LIHEAP, including:

- LIHEAP Performance Plan – Review of national LIHEAP program goals, national LIHEAP performance goals, and LIHEAP performance measures.
- Performance Measurement Research – Discussion of the findings from a study to assess the validity of performance measurement estimation procedures and from an evaluation of the performance of LIHEAP with respect to serving the lowest-income households with the highest energy burdens.
- LIHEAP Performance Statistics – Statistics that document the performance of LIHEAP in serving low income vulnerable and high-burden households.

LIHEAP program goals and performance goals

LIHEAP is not an entitlement program. Therefore, the program's grantees are unable to serve all of the households that are income eligible under the federal maximum income eligibility standard. In FY 2016, about 15 percent of income eligible households received assistance with their heating costs through heating and/or winter/year-round crisis assistance. Given that limitation, the LIHEAP statute requires LIHEAP grantees to provide, in a timely manner, that the highest level of assistance will be furnished to those households that have the lowest incomes and the highest energy costs or needs in relation to income, taking into account family size. The LIHEAP statute identifies two groups of low income households as having the highest home energy needs:

- *Vulnerable Households*: Vulnerable households are those with at least one member that is a young child, an individual with disabilities, or a frail older individual. The statute does not define the terms "young children," "individuals with disabilities," and "frail older individuals." The primary concern is that such households face serious health risks if they do not have adequate heating or cooling in their homes. Health risks can include death from hypothermia or hyperthermia, and increased susceptibility to other health conditions such as stroke and heart attacks.
- *High-Burden Households*: High-burden households are those with the lowest incomes and highest home energy costs. The primary concern is that such households will face safety risks in trying to heat or cool their homes if they cannot pay their heating or cooling bills. Safety risks can include the use of makeshift heating sources or inoperative/faulty heating or cooling equipment that can lead to indoor fires, sickness, or asphyxiation.

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The authorizing legislation requires states to design outreach procedures that target LIHEAP reciprocity to income eligible vulnerable and high-burden households, and to design benefit computation procedures that target higher LIHEAP benefits to higher burden households.

Based on the authorizing legislation, LIHEAP's goal is to provide LIHEAP assistance to vulnerable households and high-energy burden households whose health and/or safety are endangered by living in homes without sufficient heating or cooling.

Based on the national LIHEAP program goals, ACF has focused its annual performance goals on targeting the availability of LIHEAP heating assistance to vulnerable low income households. Subject to the availability of data, ACF also is interested in the performance of LIHEAP with respect to targeting benefits to the highest-burden households.

Targeting index performance measures

Performance goals must be measurable in order to determine if the goals are being achieved. ACF has developed a set of developmental performance measures (i.e., targeting indexes) that show the extent to which LIHEAP meets its performance goals. These measures, which are presented below, show LIHEAP's performance in targeting vulnerable and high-burden households:

- The **reciprocity targeting index** quantifies reciprocity targeting performance. The index is computed for a specific group of households by dividing the percent of LIHEAP recipient households that are members of the target group by the percent of all income eligible households that are members of the target group and then multiplying the result by 100. For example, if 25 percent of LIHEAP recipients are high-burden households and 20 percent of all income eligible households are high burden, the reciprocity targeting index for high-burden households is 125 (100 times 25 divided by 20).

An index greater than 100 indicates that the target group's incidence in the LIHEAP recipient population is higher than that group's incidence in the income eligible population. An index less than 100 indicates that the target group's incidence in the LIHEAP-recipient population is lower than that group's incidence in the income eligible population.

- The **benefit targeting index** quantifies benefit targeting performance. The index is computed by dividing the mean LIHEAP benefit for a target group of recipients by the mean LIHEAP benefit for all recipient households and then multiplying the result by 100. For example, if high-burden household recipients have a mean benefit of \$250 and the mean benefit for all households is \$200, the benefit targeting index is 125 (100 times \$250 divided by \$200).

An index greater than 100 indicates that the target group is, on average, receiving more benefits than the overall recipient population. An index less than 100 indicates that the target group is, on average, receiving fewer benefits than the overall recipient population.

- The **burden reduction targeting index** quantifies burden reduction targeting performance. The index is computed by dividing the percent reduction in the median individual energy burden due to LIHEAP for a specified group of recipients by the percent reduction in the median individual energy burden due to LIHEAP for all recipients and then multiplying the result by 100.⁵ For example, if high burden recipients have their median individual energy burden reduced by 25

⁵In general, the mean (or average) is preferred to the median (or midpoint), as it is more informative. The mean, which is commonly called the average, is the sum of all values divided by the number of values. The median is the value at the midpoint in the distribution of values. LIHEAP benefit reciprocity variables are not highly skewed (or distorted); therefore, mean benefits are used to compute the benefit targeting index. Energy burden variables, however, are highly skewed; thus the median energy burden, which is less affected by extreme values, is used to calculate the burden reduction index.

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percent (e.g., from 8 percent of income to 6 percent of income) and all recipient households have their median individual energy burden reduced by 20 percent (e.g., from 5 percent of income to 4 percent of income), the burden reduction targeting index is 125 (100 times 25 divided by 20).

An index greater than 100 indicates that the specified group experiences, on average, a greater median individual energy burden reduction than the overall recipient population. An index less than 100 indicates that the specified group experiences, on average, a smaller median individual energy burden reduction than the overall recipient population.

The development of these indexes facilitates tracking of reciprocity, benefit, and burden reduction performance for vulnerable and high-burden households.

- The reciprocity performance data allow for outreach initiatives to improve reciprocity targeting performance.
- The benefit and burden reduction performance data facilitate analysis of how different kinds of benefit determination procedures lead to different levels of benefit and burden reduction targeting performance.

The benefit targeting index and burden reduction targeting index are both useful measures, but they measure different aspects of benefit targeting.

- The benefit targeting index requires fewer data elements; it is a simple measure of how benefits for a particular group of recipient households compare to benefits for all recipient households.
- The burden reduction index is more comprehensive; it accounts for differences in both energy costs and benefit levels for the group of recipient households compared to energy costs and benefit levels for all recipient households.

The baseline data serve as a starting point against which the degree of change in LIHEAP targeting can be measured, analyzed, and attributed to federal performance enhancement initiatives. The baseline data also provide a roadmap from which ACF can set realistic reciprocity performance targets (a quantitative statement of the degree of desired change) for those parts of the country in which targeting performance can be improved.

ACF's annual LIHEAP performance measures are:

- Increase the reciprocity targeting index score of LIHEAP households having at least one member 60 years or older.
- Maintain the reciprocity targeting index score of LIHEAP households having at least one member five years or younger.

Currently, there are no annual measures for the benefit targeting or burden reduction targeting indexes, nationally, because the data that enter into these indexes are not available annually. The baseline value for the burden reduction targeting index was computed for 2001 using the Residential Energy Consumption Survey (RECS) LIHEAP Supplement. This index can be updated only as often as the RECS occurs, which is generally every four years. The last update to this index came from the 2009 RECS data.

Beginning in FY 2016, state grantees and the District of Columbia were required to collect data on LIHEAP benefit targeting and burden reduction targeting and report on these data to HHS. Grantees will be able to use these data to assess the status of their programs using the benefit targeting index and burden reduction

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targeting index. These are developmental measures that will be reviewed by HHS and grantees to assess their value in documenting the performance of the LIHEAP program.

Outcome performance measures

ACF seeks to improve the way in which it measures LIHEAP's performance. LIHEAP supports Objective B of HHS's Goal 3: Promote economic and social well-being for individuals, families, and communities. However, the indicators that ACF uses to measure LIHEAP's performance, the young child and elderly reciprocity targeting indexes, serve only as proxies for LIHEAP's outcomes. ACF intended these proxies to be replaced by more outcome-focused measures.

In June 2008, ACF established the LIHEAP Performance Measures Planning Work Group, consisting of State LIHEAP Directors and ACF staff. The Work Group developed a logic model which identifies the long-term goal of LIHEAP as providing LIHEAP recipients with continuous, safe, and affordable home energy service. The Work Group completed its work in January 2010 when it drafted a set of over 36 potential LIHEAP performance measures that could be useful to both the States and ACF. These draft measures are grouped into one of four tiers by type of LIHEAP assistance. Performance measures in tiers 1-3 are to be State-reported based on each State's ability to collect increasingly complex data. Tier 4 data are to be collected at the federal level.

In April 2010, ACF established a follow-up group, the LIHEAP Performance Measures Implementation Work Group (PMIWG), consisting of State LIHEAP Directors and ACF staff. The PMIWG works with stakeholders to evaluate grantees' ability to collect and report on newly established measures and also establishes definitions relating to the new measures. Some of the Work Group activities have included:

- Conducting a LIHEAP Performance Measures Needs Assessment Survey.
- Development of LIHEAP Process Guides on LIHEAP Performance Measurement Best Practices and training materials to make use of LIHEAP Performance Measures data.
- Making presentations about LIHEAP Performance Measures at LIHEAP National Training conferences, National Energy Assistance Directors' Association (NEADA) meetings, and National Energy and Utility Affordability Coalition (NEUAC) conferences.
- Communicating the latest developments of LIHEAP Performance Measures through periodic informal communications among grantees.
- Contributing to the development and enhancement of the LIHEAP Performance Measurement Website.
- Working with ACF's Office of Community Services (OCS) to develop four new developmental LIHEAP Performance Measures that were approved by OMB in November 2014.
- These four new developmental LIHEAP Performance Measures include: 1) the benefit targeting index for high-burden LIHEAP recipient households; 2) the burden reduction targeting index for high-burden LIHEAP recipient households; 3) the number of LIHEAP recipient households for which LIHEAP restored home energy service; and 4) the number of LIHEAP recipient households for which LIHEAP prevented loss of home energy service.
- Serving as mentors on Performance Measures for other grantees that are working their way through the process.

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The PMIWG will be active at least through September 2017. During the period from October 2012 through September 2017, they have been meeting monthly by teleconference (ten times per year) and in-person (twice each year), and have participated in very active sub-committee meetings.

Performance measurement research

ACF has funded several studies to develop a better understanding of LIHEAP targeting performance measurement. Two of these studies recommended that ACF consider making changes in the performance measurement plan for LIHEAP.

- Validation Study – The performance measurement validation study examined the available data sources for estimating the targeting indexes required by the performance measurement plan for LIHEAP and identified the data sources that furnished the most reliable data.⁶
- Energy Burden Study – The energy burden evaluation study used the 2001 RECS LIHEAP Supplement to measure the baseline performance of LIHEAP in serving high-burden households and to examine the competing demands associated with targeting vulnerable and high-burden households.⁷

Performance measurement data sources

The ACF performance measurement plan for LIHEAP requires the development of reciprocity targeting indexes for elderly households (i.e., households having at least one member age 60 years or older), young-child households (i.e., households having at least one member age 5 years or younger), and high-burden households (i.e., households having an energy burden that exceeds an energy burden threshold). Data elements needed to compute the reciprocity targeting indexes are:

- The target group's income eligible population – The number of elderly, young child, and high-burden households that are income eligible for LIHEAP.
- Target group recipients – The number of elderly, young child, and high-burden households that are LIHEAP heating recipients.
- The income eligible population – The number of all LIHEAP income eligible households.
- LIHEAP heating recipients – The number of all LIHEAP heating assistance recipients.

The performance measurement validation study and the energy burden study identified the most reliable data sources for the required data elements. The studies found that a number of different data sources were needed to furnish the most reliable data for the computation of targeting indexes, including:

- The income eligible population – According to the U.S. Census Bureau, the CPS ASEC furnishes the most reliable national estimates of the number of income eligible households.⁸

⁶ *LIHEAP Targeting Performance Measurement Statistics: GPRA Validation of Estimation Procedures*, September 2004, prepared by APPRISE Incorporated under PSC Order No. 043Y00471301D.

http://www.acf.hhs.gov/sites/default/files/ocs/gpra_validation_report_final.pdf

⁷ *LIHEAP Energy Burden Evaluation Study*, July 2005, prepared by APPRISE Incorporated under PSC Order No. 043Y00471301D. http://www.acf.hhs.gov/sites/default/files/ocs/study_july_05.doc

⁸ "Income: Guidance for Data Users – Which Source to Use." U.S. Census Bureau. Revised March 1, 2016. <http://www.census.gov/topics/income-poverty/income/guidance/data-sources.html>.

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- Income eligible vulnerable households – The CPS ASEC furnishes the most reliable estimates of the number of income eligible vulnerable households (i.e., elderly households and young-child households).
- LIHEAP heating assistance recipients – The annual *LIHEAP Household Report* furnished by state LIHEAP administrators to ACF furnish the most reliable estimates of the number of heating assistance recipient households in each state.
- Vulnerable household LIHEAP heating assistance recipients – The annual *LIHEAP Household Report* furnished by state LIHEAP administrators to ACF furnish the most reliable estimates of the number of vulnerable heating assistance recipient households in each state.
- Income eligible high-burden households – The RECS furnishes the most reliable estimates of the number of income eligible high-burden households.
- High burden LIHEAP heating assistance recipients – The RECS LIHEAP Supplement furnishes the most reliable estimates of the number of high burden recipient households.

The following data sources are used in reporting on LIHEAP targeting performance for this report:

- State annual *LIHEAP Household Report* – ACF set a goal for the states to submit their final *LIHEAP Household Report for Federal Fiscal Year (FFY) 2016* by December 16, 2016. Each *LIHEAP Household Report* needs to be received, reviewed, processed, and compared against data from each state's *LIHEAP Grantee Survey* that was conducted in January 2017 as part of the *LIHEAP Performance Data Form for Federal Fiscal Year (FFY) 2016*. The data on the number of LIHEAP households assisted in FY 2016 will be included in the *LIHEAP Report to Congress* for FY 2016.
- CPS ASEC – The CPS ASEC is a national household sample survey that is conducted monthly by the Bureau of the Census. The CPS ASEC includes data that allow one to characterize household demographic characteristics. The CPS ASEC is the best source of annual national data for estimating the number of income eligible households and the number of income eligible vulnerable households. The CPS ASEC data needed to prepare performance statistics for FY 2016 were available in October 2016.
- The RECS – The EIA's RECS is a national household sample survey that is conducted approximately once every four years. However, the most recent survey for which the necessary data is available was conducted in 2009. The RECS data were used in 2001 for baseline measurement of targeting performance for high energy burden households and can track longer-term changes in performance over time (2001 to 2009). The RECS currently cannot furnish annual updates on LIHEAP targeting performance for high energy burden households.

Targeting performance for high-burden households

With the available data, the annual reporting of LIHEAP reciprocity targeting index scores includes updates for vulnerable households but not for high energy burden households. To develop a better understanding of the value of targeting performance data for high energy burden households, ACF commissioned the *LIHEAP Energy Burden Evaluation Study* (2005). The purposes of that study included:

- Targeting – Measure the extent to which LIHEAP is serving the lowest income households that have the highest energy burdens.

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- Performance goals – Assessment of the importance of the performance goal of increasing the percent of LIHEAP recipient households having the lowest incomes and the highest energy costs.
- Measurement – Identification of procedures that can be used to measure performance of LIHEAP with respect to the goal of increasing the percentage, among LIHEAP recipient households, of those households with the lowest incomes and the highest energy costs (i.e. high energy burden households).

The study furnished the following information to ACF with respect to targeting of high energy burden households.⁹

- Targeting – The study found that, for FY 2001, the reciprocity targeting index for high home energy burden households was 170, indicating that households with a high home energy burden were served at a significantly higher rate than were other income-eligible households. The study furnished a baseline statistic from which changes in targeting to high energy burden households can be compared.
- Performance goals – The study demonstrated that it is important to include a goal of targeting high energy burden households in the performance plan for LIHEAP. The LIHEAP statute gives equal status to the goals of targeting vulnerable households and high energy burden households. Performance goals that are limited to targeting of elderly and young-child households encourage LIHEAP grantees to give preference to low burden vulnerable households over high-burden households that do not have a vulnerable household member.
- Measurement – The study identified options for collecting annual data on high energy burden recipient households.

In addition, the *LIHEAP Energy Burden Evaluation Study* (2005) examined two other performance indicators – the benefit targeting index and the burden reduction targeting index. The study furnished baseline measures for these indicators and discussed the value and challenges of including those benefit and burden reduction targeting indicators in the performance plan for LIHEAP. These indexes were updated for FY 2005 and FY 2010 using the 2005 and 2009 RECS.

Performance measurement statistics

Table 2-1a and Table 2-1b show the LIHEAP reciprocity targeting performance measures from FY 2003 through FY 2016. The first column shows the fiscal year. The second column shows the performance targets (to be reached), and the third column shows the targeting index scores that were achieved. FY 2003 was the baseline year for both measures.

For measure 1A, the baseline targeting index score of 79 indicates that LIHEAP recipient households with an elderly member were not being effectively targeted with LIHEAP benefits within the income eligible population of households with elderly members in FY 2003. From FY 2004 to FY 2011, the targeting index

⁹ The study developed an operational definition of “high burden,” though the statute offers no such definition. The study’s definition is used here. This study defined high energy burden as the “energy share” of severe housing (shelter) burden. Severe housing burden is considered by some researchers to be 50% of income. (See Cushing N. Dolbear. 2001. “Housing Affordability: Challenge and Context.” *Cityscape: A Journal of Policy Development and Research*, (5)2:111-130. A Publication of the U.S. Department of Housing and Urban Development, Office of Policy Development and Research.) The median total residential energy costs for households at or below 150 percent of the HHS’s Poverty Guidelines are 21.8 percent of housing costs. This study defined a residential energy burden of 10.9 percent of income as a high burden, moderate energy burden as costs at or above 6.5 percent of income but less than 10.9 percent of income, and low energy burden as costs less than 6.5 percent of income. Heating and cooling expenditures comprise 39.3 percent of total residential energy expenditures for all households. Therefore, high home energy burden is defined for purposes of this study as heating and cooling costs that exceed 4.3 percent of income. Moderate home energy burden is defined as heating and cooling costs above 2.6 percent of income but less than 4.3 percent of income.

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scores for households with an elderly member fluctuated between 74 and 79. In FY 2012, the targeting index score for households with an elderly member increased to 83, exceeding both the target and the baseline targeting index score for that year. In FY 2013, the targeting index score for households with an elderly member increased to 84, exceeding the baseline targeting index score but falling short of the fiscal year target of 85. In FY 2014, the targeting index score for households with an elderly member decreased to 80, exceeding the baseline targeting index score but falling short of the fiscal year target of 84. In FY 2015, the targeting index score for households with an elderly member increased to 81, exceeding both the baseline targeting index score of 79 and fiscal year target score of 80. In FY 2016, the targeting index score for households with an elderly member increased to 86, exceeding both the baseline targeting index score of 79 and fiscal year target score of 81.

For measure 1B, the baseline targeting index score of 122 indicates that LIHEAP recipient households with a young child member were being effectively targeted with LIHEAP benefits within the income eligible population of households with young children in FY 2003. From FY 2004 to FY 2011, targeting index scores for households with a young child fluctuated between 110 and 122. However, in FY 2012, the targeting index score for households with a young child decreased to 114, which fell short of the fiscal year target and the baseline targeting index score. In FY 2013, the targeting index score for households with a young child increased to 117, exceeding the fiscal year target of 116 but falling short of the baseline targeting index score. In FY 2014, the targeting index score for households with a young child decreased to 112, falling short of both the fiscal year target of 117 and baseline targeting index score. In FY 2015, the targeting index score for households with a young child decreased to 107, falling short of both the fiscal year target score of 112 and baseline targeting index score. In FY 2016, the targeting index score for households with a young child increased to 108, exceeding the fiscal year target of 107 but falling short of the baseline targeting index score.

Table 2-1a. LIHEAP reciprocity targeting performance measure 1A: Increase the reciprocity targeting index score of LIHEAP households having at least one member 60 years or older (reported for FY 2003 – FY 2016)

Fiscal Year	Target	Result
FY 16	81	86
FY 15	80	81
FY 14	84	80
FY 13	85	84
FY 12	80	83
FY 11	75	78
FY 10	78	74
FY 09	96	76
FY 08	96	76
FY 07	94	78
FY 06	92	77
FY 05	84	79
FY 04	82	78
FY 03	Baseline	79

SOURCE: HHS Administrative Data — such data for FY 2016 are preliminary; thus the actual figures may differ.

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Table 2-1b. LIHEAP reciprocity targeting performance measure 1A: Increase the reciprocity targeting index score of LIHEAP households having at least one member five years or younger (reported for FY 2003 – FY 2016)

Fiscal Year	Target	Result
FY 16	107	108
FY 15	112	107
FY 14	117	112
FY 13	116	117
FY 12	124	114
FY 11	110	122
FY 10	110	118
FY 09	122	117
FY 08	122	110
FY 07	122	110
FY 06	122	112
FY 05	122	113
FY 04	122	115
FY 03	Baseline	122

SOURCE: HHS Administrative Data — such data for FY 2016 are preliminary; thus the actual figures may differ.

As noted above, the *LIHEAP Energy Burden Evaluation Study* developed baseline statistics on high energy burden household targeting. That study recommended that measurement of targeting to high energy burden households is important since LIHEAP’s statutory mandate is to serve the households “with the lowest incomes, that pay a high proportion of household income for home energy, primarily in meeting their immediate home energy needs.”

Table 2-2 shows the national and regional reciprocity targeting indexes for high home energy burden households for FY 2001, FY 2005, and FY 2010. The 2001 RECS, the 2001 RECS LIHEAP Supplement, the 2005 RECS, and the 2009 RECS were used to develop these statistics. These statistics demonstrate that, except for the Northeast region in FY 2005 and FY 2010, LIHEAP was targeting high-burden households.¹⁰ However, FY 2010 targeting index scores indicate a significant decrease in targeting high-burden households compared to the FY 2001 baseline scores.

¹⁰ The RECS LIHEAP Supplement was first introduced into the RECS in 2001. Because the design was experimental, no variance models were developed for the data file. As a result, it is difficult to develop a precise estimate of variances for statistics developed from the RECS LIHEAP Supplement. Preliminary analysis indicates that the FY 2001 targeting indexes in Table 2-2 are statistically different from 100 while the FY 2001 targeting indexes shown in Tables 2-3 and 2-4 are not statistically different from 100. Therefore, the null hypothesis that high burden households and households that are not high burden are served at the same rate can be rejected, while the null hypothesis that LIHEAP benefits and burden reduction are the same for high burden households and households that are not high burden cannot be rejected. The FY 2005 and FY 2010 targeting indexes in Table 2-2 and 2-4 are statistically different from 100 at the national level but not at the regional level, while the targeting indexes shown in Tables 2-3 are not statistically different from 100 at either regional or national level.

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Table 2-2. LIHEAP reciprocity targeting index of high-burden households by region for FY 2001 from the 2001 RECS and the 2001 RECS LIHEAP Supplement, for FY 2005 from the 2005 RECS, and for FY 2010 from the 2009 RECS.

Region	FY 2001	FY 2005	FY 2010
Northeast	163	99	92
Midwest	132	116	112
South	155	119	101
West	293	184	112
United States	170	122	112

The energy burden evaluation study also furnished estimates of the benefit and burden reduction targeting indexes for FY 2001. These indexes were updated for FY 2005 and FY 2010 using the 2005 and 2009 RECS data. Benefit and burden reduction targeting are not part of the performance plan for LIHEAP. However, the study concluded that those indexes were consistent with the statutory mandate to furnish the highest benefits “to those households which have the lowest incomes and the highest energy costs or needs in relation to income.”

Table 2-3 shows national and regional benefit targeting indexes and Table 2-4 shows national and regional burden reduction targeting indexes. In FY 2001, at the national level and in all regions, high-burden households received slightly higher average benefits than did households that did not have high burdens. The benefit targeting index scores for FY 2001 and FY 2010 were similar to one another and they were slightly higher at the national level and in most regions than those in FY 2005. However, Table 2-4 shows that at the national level and in all regions, high-burden households experienced lower burden reductions than did households that did not have a high burden. From FY 2001 to FY 2005, burden reduction index scores decreased for all regions. From FY 2005 to FY 2010, burden reduction index scores increased for all regions but not to the level of FY 2001 baseline scores.

Table 2-3. LIHEAP benefit targeting index of high-burden households by region for FY 2001 from the 2001 RECS and the 2001 RECS LIHEAP Supplement, for FY 2005 from the 2005 RECS, and for FY 2010 from the 2009 RECS

Region	FY 2001	FY 2005	FY 2010
Northeast	103	104	105
Midwest	108	104	107
South	110	81	102
West	124	119	109
United States	109	101	108

Table 2-4. LIHEAP burden reduction targeting of high-burden households by region for FY 2001 from the 2001 RECS and the 2001 RECS LIHEAP Supplement, for FY 2005 from the 2005 RECS, and for FY 2010 from the 2009 RECS

Region	FY 2001	FY 2005	FY 2010
Northeast	96	74	93
Midwest	93	70	90
South	98	84	89
West	86	60	68
United States	94	71	82

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Uses of LIHEAP performance data

Performance targeting index data can be useful for both LIHEAP grantees and ACF, as described below.

LIHEAP grantee use of targeting indexes

Individual LIHEAP grantees can use the reciprocity targeting indexes to examine the effectiveness of their outreach to households with vulnerable members.¹¹

- In absolute terms, if a given group has a reciprocity targeting index over 100, then that group's incidence in the LIHEAP-recipient population is higher than that group's incidence in the income eligible population.
- In relative terms, if a given group has a higher reciprocity targeting index than another group, then the given group has been targeted relative to the other group. For example, if the index for elderly households is 90 and the index for non-vulnerable households is 75, then elderly households are targeted at a higher rate than non-vulnerable households are.

Individual LIHEAP grantees can use the benefit and burden reduction targeting indexes to examine the effectiveness of their benefit determination procedures in serving households with vulnerable members and households with high energy burdens.¹²

- In absolute terms, if a given group has a benefit or burden reduction targeting index greater than 100, then that group has a higher average benefit (benefit targeting index) or experiences a greater median burden reduction (burden reduction index) than the recipient population has or experiences. If a group has a benefit or burden reduction targeting index less than 100, then that group has a lower average benefit (benefit targeting index) or experiences a smaller median burden reduction (burden reduction index) than the recipient population has or experiences.
- In relative terms, if a given group has a higher benefit or burden reduction targeting index than another group, then the given group has been targeted relative to the other group. For example, if the benefit targeting index for elderly households is 90 and the benefit targeting index for non-vulnerable households is 75, then elderly households have higher average benefits than non-vulnerable households. Likewise, if the burden reduction targeting index for elderly households is 90 and the burden reduction targeting index for non-vulnerable households is 75, then elderly households have a greater percentage reduction in median energy burden.

Grantees can use the targeting measures to gauge their current targeting performance and to track changes in targeting performance over time.

ACF's use of targeting indexes

ACF uses national and regional targeting indexes to examine the targeting performance of LIHEAP and to measure changes in performance over time. In so doing, ACF has found that the national reciprocity targeting indexes indicate that elderly households face difficulty in enrolling in LIHEAP as compared to young-child households. A review of the literature indicates that other federal social programs also have

¹¹ LIHEAP grantees have the ability to create these reciprocity targeting indexes using recipient counts from the states' *LIHEAP Household Report* and the federally and/or state income eligible population estimates provided by ACF in the *Low Income Home Energy Data* report (previously, Appendix B of the *LIHEAP Home Energy Notebook*). For FY 2006 and 2007, ACF released information on the rankings of the states in terms of reciprocity targeting indexes. In addition, ACF funded a study that classified states' targeting performance in FY 2007 through FY 2010 in five broad categories. That study is available in Section V of the *LIHEAP Home Energy Notebook for FY 2011*: https://www.acf.hhs.gov/sites/default/files/ocs/fy2011_hen_final.pdf

¹² LIHEAP grantees have the benefit data needed to create benefit targeting indexes. If they calculate household energy burdens for their recipients, LIHEAP grantees can also create burden reduction indexes.

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limited success in serving eligible elderly households, especially in comparison to households with young children. Program participation barriers appear to be most significant when elderly households have not made previous use of public assistance programs. For this reason, ACF is an active federal partner with the National Center for Outreach and Benefit Enrollment that is funded by the Administration on Aging. LIHEAP is one of five federal benefit programs for which the Center is seeking to develop innovative ways to increase enrollment of the elderly.

ACF is continuing to examine the reliability and validity of targeting indexes in making the following comparisons:

- ACF can compare reciprocity targeting measures among groups of households and identify which groups are not effectively targeted by LIHEAP. For example, if the national LIHEAP reciprocity targeting index for elderly households is 85, and the national LIHEAP reciprocity targeting index for households with young children is 110, then households with young children are targeted at a higher level than are elderly households. ACF might conclude from these statistics that a greater share of the technical assistance efforts should be allocated to increasing targeting to elderly households.
- ACF can compare reciprocity targeting measures among areas of the country to assess which areas are in greatest need of technical assistance and to determine the type of technical assistance that is required. For example, if the reciprocity targeting index for elderly households in the New England Census Division is 75, while the reciprocity indexes for elderly households in all other divisions are over 100, then elderly households are targeted at a lower level in New England than in other parts of the country. ACF might conclude from these statistics that a greater share of the technical assistance efforts should be allocated to increasing targeting to elderly households among one or more grantees in New England.
- ACF can compare national targeting measures over time to measure changes in targeting performance. For example, if the targeting indicator for elderly households was 75 in one fiscal year and was 85 in a later fiscal year, then it would demonstrate that LIHEAP targeted elderly households at a higher level over time.

Targeting performance measurement issues

As presented above, targeting indexes are statistical tools that allow ACF to examine targeting across groups of households, across regions of the country, and over time. It is reasonable to expect that the greatest increases in targeting performance can be realized by supporting the targeting efforts for those areas of the country that are currently serving targeted households at the lowest rate.

A major challenge in executing the LIHEAP performance plan is in finding an effective way to gather the data that enter into vulnerable and high burden targeting indexes in a timely way. ACF has found the timeliness of such collection to be challenging, e.g., the *LIHEAP Household Report's* early deadlines. In addition, the RECS' relative infrequency presents an ongoing challenge, and new data collection requirements beginning in FY 2016 for grantees to assess energy burden and other program metrics in their states are developmental in nature.

For FY 2011, ACF required states to report for the first time on the *LIHEAP Household Report* an unduplicated count of households receiving all types of LIHEAP benefits. This data is to allow ACF to indicate the targeting of all types of LIHEAP benefits, rather than just the targeting of heating benefits. However, there were two of states that still were unable to report these unduplicated counts for FY 2016. ACF is working with such states to have a system in place to report these data.