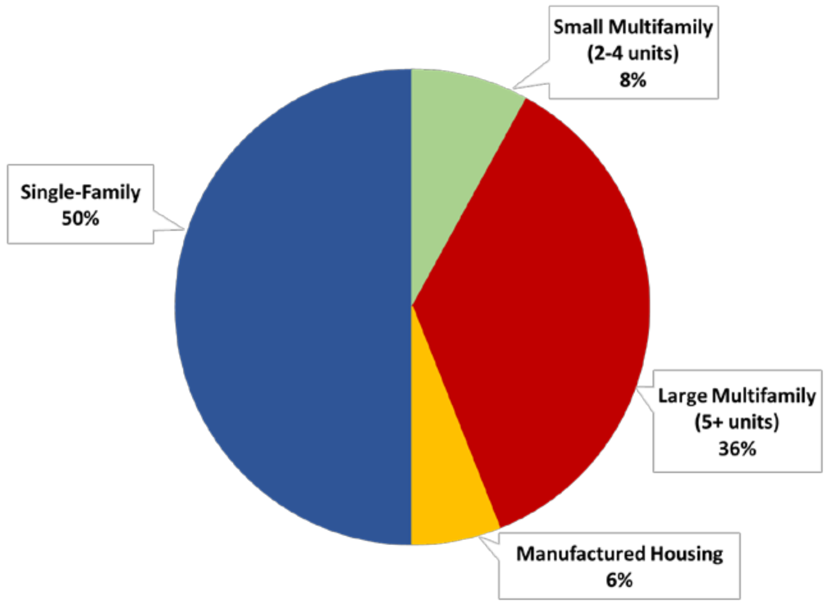
COMMERCE DEPARTMENT
DIVISION OF ENERGY RESOURCES

*Added insulation is a common energy efficiency measure implemented by low-income weatherization programs.*

# CARD project offers results on Low Income CIP

APPRISE Incorporated recently completed a CARD study on the Low Income Conservation Improvement Program (LI CIP). The study characterized the low-income population in Minnesota. Based on 2015 U.S. Census Bureau data, the research estimates that there are approximately 508,000 low-income households in Minnesota, which is about 24% of all Minnesota households. Of the low-income households, about 57% are renters and 43% are owners. Over half of low-income households in Minnesota live in single-family homes, while over one their live in large multifamily buildings with 5+ units (Figure 1).

***Figure 1: Estimated low-income households by housing type (2015 U.S. Census Bureau)***




While the characterization of Minnesota's low-income population is useful, one of the primary objectives of the study was to assess the current performance of the utility LI CIP programs and identify opportunities for increasing the efficiency and effectiveness of those programs. This is the first in a series of four articles on the study's findings. The next three articles in upcoming CIP newsletters will each highlight an existing innovative LI CIP program that could be replicated in other utility service territories as part of their CIP portfolios.

Overall, the study found that the program is meeting or exceeding most of the statutory and regulatory requirements. However, the study also identified ways in which program performance could be enhanced through additional collaboration among the utilities to share program experiences, and between the Minnesota Department of Commerce and the utilities to consider the adoption of low-income program best practices.

Minnesota Statutes 216B.241 requires each utility to spend a certain share of its three-year average residential gross operating revenue on programs that directly serve the needs of low-income customers. Commerce has issued guidance that encourages utilities to work with local community-based organizations that deliver the federally funded Weatherization Assistance Program (WAP) in their service territories to fulfill those spending requirements. However, in reviewing the utility triennial plans, Commerce has allowed the utilities to design and implement a diverse set of low-income programs to serve the low-income households in their service territories.

The response of the utilities to these requirements has been very positive. Many utilities have not only met but have exceeded their low-income spending requirement. Most utilities are working with one or more WAP service providers to extend the capacity of those providers to deliver comprehensive energy efficiency services to more households than would be possible with the available funding from the federal government. A number of utilities have gone beyond the traditional approach to low-income program services by implementing programs for large multifamily buildings, partnering with nonprofit affordable housing organizations, and developing other niche programs that are able to reach underserved low-income markets.

Table 1 shows how the utility spending compares to the spending requirements by the type of utility for the 2014 program year. The investor-owned utilities (IOUs) exceed the spending requirement with spending on programs that are dedicated to low-income households. The community-owned utilities (COUs) fulfill over 80% of their spending requirement with dedicated programs and estimate that low-income customer participation in residential programs fulfills the remainder of the requirements. A review of the utility 2017-2019 triennial plans found that the IOUs plan to continue to exceed the LI CIP spending requirements during that period.

***Table 1 – LI CIP Spending vs. Requirements in 2014***

| Utility Type | Spending Requirement | Dedicated Spending | Estimated Spending | Total Spending | Percent of Requirement |
|---|---|---|---|---|---|
| Natural Gas IOU | $4,162,920 | $5,036,022 | N/A | $5,036,022 | 121% |
| Electric IOU | $2,198,511 | $2,930,620 | N/A | $2,930,620 | 133% |
| Natural Gas COU | $83,615 | $42,823 | $227,055 | $269,878 | 323% |
| Electric COU | $2,580,345 | $2,133,699 | $1,558,646 | $3,692,345 | 143% |

The study estimates that about $3.7 million of the $8.0 million in IOU LI CIP spending is directed to WAP service providers. The $2.2 million made available by the natural gas IOUs allows the WAP service providers to server more households, while the $1.5 million in electric IOU spending helps WAP service providers to make services more comprehensive by funding additional electric measures for those households that need them. Additional funds are made available to WAP service providers by the COUs. However, since the COU reports do not always identify their LI CIP service provider, it was not possible to estimate the share of COU funding that was directed to WAP service providers.

In-depth interviews with the utilities found that they worked hard to design and implement programs that went beyond the traditional low-income weatherization program services. For example, in addition to furnishing funding to WAP service providers, CenterPoint Energy (CPE) invested in a program that works with nonprofit affordable housing organizations, a program that targets rental housing, a program that delivers heating system tune-ups, and a program that serves large multifamily buildings that are low-income. Xcel Energy has invested in a direct-install program that delivers low-cost measures to homes and a multifamily building program that delivers energy efficiency measures to apartment units. In addition, CPE and Xcel are working to ensure that their multifamily building efficiency program is serving low-income buildings by offering them higher incentives than are received by the other multifamily buildings in the program.

The study recommended that the LI CIP program can be made more effective and efficient in two ways:

1. One way to improve the utility programs would be for Commerce to be more proactive in developing policies that help utilities to better understand what program designs are allowed and which are not. That effort could go hand in hand with an information sharing forum that disseminates information about innovative programs that have been implemented to serve special populations of low-income households.
2. A second way to improve LI CIP programs would be for Commerce to work proactively with the utilities to encourage the adoption of low-income program best practices related to quality control, measurement and verification, and evaluation.

In-depth interviews with utility program managers and low-income program service providers found that there was a lack of clarity on which initiatives would be approved by Commerce and which would not. Analysis of regulatory filings found that there was some inconsistency in decisions with respect to program requirements. In addition, the study found that the Department's WAP Unit could modify the state plan submitted to the Department of Energy to give utilities and services providers more flexibility in selecting measures for installation by WAP service providers. The study identified a number of these important issues and recommended that Commerce work collaboratively with the utilities, the service providers, and other interested parties to find effective solutions.

The highest priority study recommendations, however, related to low-income program best practices.

- **Quality Control** – In many jurisdictions, the regulatory agency specifies third-party quality control procedures that ensure that funds are used properly and that low-income households are receiving good quality services. While all the utilities reported that their service providers conduct quality control inspections, it did not appear that the specific procedures were specified or that those procedures were documented in contracting agreements. Moreover, Commerce does not require third-party inspections.
- **Measurement and Verification** – In many jurisdictions, the regulatory agency requires that utilities conduct ongoing measurement and verification (M&V) activities to ensure that a high percentage of installed measures meet the conditions specified in the energy savings calculation procedures. While Commerce has invested in the development of a comprehensive Technical Reference Manual (TRM), it has not specified any M&V procedures for low-income programs that would ensure that TRM specifications are followed.
- **Evaluation** – In many jurisdictions, the regulatory agency requires that utilities conduct periodic evaluations of their programs, including needs assessment studies to verify that the programs are serving the targeted populations, process evaluations to ensure that the programs are being implemented in an efficient and effective manner, and impact evaluations that measure the energy savings from the programs using billing analysis and other technical assessment procedures. While the CARD study did furnish needs assessment information and some process evaluation research, it was not in the scope of the study to conduct an impact assessment.

The LI CIP program is meeting or exceeding the statutory and regulatory requirements. The utilities are exceeding the required spending and have invested in the design and implementation of innovative programs that serve the diverse needs of low-income households in Minnesota. The LI CIP program could be made more efficient and effective if Commerce worked collaboratively with LI CIP partners to clarify program requirements and opportunities. The LI CIP program falls short in the implementation of low-income program best practices related to quality control, measurement and verification, and evaluation. Given the generally good performance of the program, the study does not find that the program is "in crisis" because those best practices have not been implemented. Rather, it suggests that Commerce and its LI CIP partners should prioritize among those best practices and work toward implementation over the next five years.

Detailed results from this study are available in five reports:

- Low Income CIP Evaluation Study – Summary Report
- Low Income CIP Program Assessment – Process Evaluation of COU Programs
- Low Income CIP Program Assessment – Process Evaluation of IOU Programs
- Low Income CIP Spending Requirements – Regulatory and Policy Analysis for COUs
- Low Income CIP Spending Requirements – Regulatory and Policy Analysis for IOUs

In addition, a recording of the January 2018 webinar entitled "Opportunities for Making Minnesota Low-Income Programs More Effective," which summarized the results of this project, is available for viewing.

For more information contact project manager Laura Silver or CARD program administrator Mary Sue Lobenstein.