

INCOME ELIGIBLE NEEDS ASSESSMENT EXECUTIVE SUMMARY



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I.0 EXECUTIVE SUMMARY

The ComEd Energy Efficiency Program has been providing free weatherization and related energy efficiency improvements to income eligible customers through its Home Energy Upgrades offering since 2018. That year, the Future Energy Jobs Act transferred responsibility for these services to Illinois' utilities. Households with incomes below 80 percent of area median income qualify for services. To inform the future direction of its income eligible offerings, ComEd contracted with Evergreen Economics to conduct a needs assessment of eligible customers with higher levels of usage.

This needs assessment combined analysis of system-wide residential account data, a quantitative survey of 293 eligible households and follow-up in-home visits and interviews with 35 strategically selected survey respondents. Goals of the study were to better understand income eligible high energy users, including any barriers that limit their use of the ComEd Energy Efficiency Program and causes of high usage that may not be fully addressed by the program. High users are defined as those consuming 11,000 kWh per year, which equals the 80th percentile of annual consumption by ComEd's residential customers. Results are based on analysis and field work conducted in 2019, prior to the COVID-19 pandemic.

Population Overview

If national trends are mirrored in northern Illinois, a third or more of ComEd's three million residential accounts may be income eligible. Modeling of households likely to be income eligible indicates that eligible households live in both single- and multi-family homes in substantial numbers, typically use less electricity than residential customers overall (even when housing type differences are taken into account) and make up a disproportionately smaller share of high users than their peers with greater incomes. Nevertheless, at least 10 percent of income eligible households (mostly owners or renters of single-family homes) count as high users. These ComEd customers face higher bills and typically have increased efficiency opportunities than other income eligible households.

Causes of High Usage

The survey of high users, follow-up interviews and site visits found multiple contributors to high usage with substantial variation across households. The most common and likely impactful contributors are:

- Electric space and water heating, including frequent use of electric space heaters that complement natural gas furnaces;
- Building envelope deficiencies, such as insufficient insulation or high air infiltration;
- Use of multiple (and often older) refrigerators and freezers;

- In-home practices and household behaviors, including high winter and low summer thermostat settings.

Use of electric space or water heating (in lieu of other fuel types) contributed to high electric usage for 32 percent of eligible high users surveyed, while 38 percent of those with natural gas or propane furnaces reported frequent uses of supplemental electric space heating to achieve desired temperatures, overcome heating system limitations or compensate for heat loss due to envelope issues.

Sixty-four percent of eligible high users believed their insulation was insufficient, reported high air infiltration (and often corroborated during in-person visits), or both. Households' efforts to reduce air infiltration themselves range from make-shift use of clothes stuffed into cavity openings to more thorough and effective do-it-yourself weatherization efforts such as using plastic film over windows in winter.

Second refrigerators and freezers were common, and 19 percent of eligible high users reported having three or more such appliances. Many of these devices were older, sometimes purchased used, and likely inefficient by current standards.

Interviewees indicated that multiple refrigerators and freezers help them make ends meet by facilitating once-a-month shopping visits or purchasing when items are on sale, as well as supporting large households or additional family members who live nearby.

While leaky homes can make it challenging to maintain comfort, it was noted that 85 percent of eligible high users reported exceeding U.S. Department of Energy-recommended settings by three degrees in winter or summer. The median heating temperatures set by those with a thermostat was 72 degrees, and the median cooling temperature set by those with any kind of air conditioning was 70 degrees.

While electricity-using medical equipment was also identified in 22 percent of eligible high users, it was less clear how often these devices are meaningful electricity users.

Financial Need and Balancing Priorities

Nearly all eligible high users (94 percent) said it was important or very important to them to reduce energy costs and just under half (44 percent) reported that energy bills are often or nearly always difficult to pay. Self-reported efforts to reduce energy costs tended to focus turning equipment off or using it less, but interviews also clearly highlighted conscious choices households make about balancing costs and comfort.

Households visited ranged in the trade-offs they make from living in dark rooms and being conservative about using efficient lights to opting to set the thermostat at

80 degrees to compensate for drafts and to avoid the need for household members to wear socks in winter.

Program Awareness

Eligible high users are moderately aware of relevant ComEd Energy Efficiency Program offerings for income eligible and residential customers. Awareness of the Home Energy Upgrades offering or free weatherization services was at 25 percent, while an additional 34 percent reported some name recognition (without knowing what it provides). In comparison, awareness of the Low Income Home Energy Assistance Program (LIHEAP) was substantially higher at 55 percent.

Customer Profiles

To illustrate the variety of eligible high users encountered and describe these customers more comprehensively, four illustrative customer profiles were created for this report, including:

- Single-parent households that are sensitive to energy costs;
- Elderly couples concerned about costs and wary of offerings;
- Families managing various medical needs; and
- Thrifty energy savers trying do-it-yourself approaches to cutting consumption.

Program Opportunities

The circumstances researchers encountered suggest several ways ComEd could enhance its offerings and services to income eligible high users, including:

- **Increasing high user participation in the Home Energy Upgrades offering**—Home Energy Upgrades would ameliorate several of the causes of high usage among some eligible customers, but awareness and consideration of the offering appears to be modest among these customers. Targeted outreach to high users who are likely to be income eligible—through home assessment reports or cross-marketing with LIHEAP and the Percentage of Income Payment Plan (PIPP)—could increase awareness. Because many high users rent single-family homes, ease of access and clarity about how renters can participate is important.
- **Modifying offerings available through Home Energy Upgrades** to address common circumstances in homes with high use that are not currently covered by the offering. Specifically, it could be useful to allow replacements of multiple refrigerators or freezers that are used regularly. ComEd could also consider screening for, tracking and allowing custom measures for medical equipment as a way of further understanding the role medical equipment contributes to high usage.

- **Complementing Home Energy Upgrades with ancillary services.** Potentially useful approaches include a “weatherization light” service that addresses obvious quick fixes in homes with high use or a seasonal home update service that helps high users (especially those with window air conditioners) winterize their homes in the fall and prepare for cooling season in the spring. Expanded energy education efforts for high users could support efforts by do-it-yourselfers and target behavioral contributors to high usage identified in this study. Home assessment reports offer a convenient way of providing energy education if the reports can be customized for households that are income eligible or face similar circumstances (even if their eligibility is unknown or incomes fall above eligibility thresholds).

Other considerations for the ComEd income eligible offering include (1) increasing the built-in incentives for PIPP participants to conserve and (2) exploring data mining of consumption patterns to identify and target high-using households based on the apparent causes of their elevated usage. If causes of high usage can be identified prior to a home audit, households with patterns that suggest envelope-related deficiencies could be prioritized for outreach and Home Energy Upgrades, while households with likely behavioral opportunities could be provided feedback on ways to reduce their bills and interested customers could be offered telephone- or web-based coaching.

Program Options During a Pandemic

Program activities in Illinois are currently impacted by the COVID-19 pandemic and ComEd and service providers are adjusting their approaches. While research was completed prior to the pandemic and resulting lockdowns, please be aware of the following considerations and implications of this study for pandemic-era energy efficiency program responses:

- Economic slowdowns and stay-at-home orders will increase the number of households eligible for means-tested offering, households’ electricity consumption and the number of homes our study would classify as high users, at least temporarily.
- Serving customers with physical upgrades of their homes may be delayed and cause backlogs. When home upgrades are possible again, ComEd could:
 - Maximize energy savings by prioritizing households with high usage;
 - Maximize benefits to customers by prioritizing households with high bills that have experienced job losses or reductions in income; or

- Maximize perceived fairness by serving customers in the order in which they requested services.
- **Some program opportunities identified in this study are feasible even while in-home visits are on hold. They are:**
 - **Tailoring home assessment reports** sent to households that are likely to qualify for income eligible services to increase awareness of the offering.
 - **Identifying causes of high usage through data mining** and communicating customer-specific results and applicable energy- and cost-saving practices to account holders (via home assessment reports or other modes).
 - **Marketing and offering telephone- or web-based conservation advice to interested households on PIPP, LIHEAP or in arrears** to help them reduce costs through energy-saving steps they can take now. Ideally, advice would be informed by an examination of usage patterns or deeper data mining. Examples include maintaining appropriate temperature settings and identifying and filling accessible sources of air infiltration. Facilitating support could include video instructions and coupons or deliveries of relevant supplies, such as weather-stripping materials.