

High Performance Windows Illinois Market Characterization Executive Summary



Release Date

May 1, 2023

Prepared For

Commonwealth Edison Company

Prepared By

Resource Innovations

Acknowledgements

This project was developed as part of the Customer Innovation initiative within the ComEd Energy Efficiency Program under internal project number P-0716. Resource Innovations produced this report for the Customer Innovation Team with overall guidance and management from Richard Tonielli. The team acknowledges the support of ILLUME Advising. For more information on this project, contact Customer.Innovation@ComEd.com.

Legal Notice

In support of ComEd's mission as your electric utility company, ComEd engages in numerous research projects focused on improving energy efficiency opportunities for customers. This report describes one such project. It is posted only for general customer awareness. It is not technical guidance and cannot be copied in full or part or reused in any form or manner. It cannot be relied upon. We make no representation, nor by providing this example do we imply that its content is correct, accurate, complete, or useful in any manner – including the particular purpose to which it relates.

The ComEd Energy Efficiency Program is funded in compliance with state law.

1.0 EXECUTIVE SUMMARY

On behalf of Ameren, ComEd, and Nicor Gas, Resource Innovations (RI) gathered nearly six thousand residential online survey responses from around the state to characterize the current window market in Illinois. The objectives of the study included:

- Current penetration of high-performance windows
- Residential building stock, including age and last window retrofit
- Awareness and understanding of high-performance window technology and costs
- Future plans to retrofit windows and willingness to adopt advanced windows
- Consumer engagement with various market actors
- Identify barriers and opportunities to increase high-performance window adoption

Survey Findings

The key findings are summarized below (Table 1-1):

Table 1-1: Key Survey Findings

Topic	Key Findings
Awareness, Penetration, and Future Adoption of High-Performance Windows	<ul style="list-style-type: none"> • The survey population reported that 3.2 % of homes currently have high performance windows installed, while 71% have double pane and 26 percent have single pane windows. • ComEd territory had the lowest percentage of respondents with single-pane windows (23.3 %). • A little over half (51%) of respondents had not heard of triple-pane or thin triple-pane windows, though some (38%) had heard of just triple-pane windows. The awareness of triple-pane windows is higher among older respondents. • Most respondents were not at all familiar or only slightly familiar with high-performance window technology and the cost of the technology. • Most respondents who plan to replace their current windows said they were likely to install efficient windows (78%). Yet only 36% of respondents overall were either extremely likely or somewhat likely to replace their current windows with efficient windows. • Those who were uncertain if they would replace their windows with efficient windows were hesitant due to cost, uncertainty about savings, installation concerns, and aesthetics. • Those who were likely to replace their current windows with efficient windows were more likely to either be younger, have lived in their homes for one to five years or 20 years or longer, currently have single or double-pane windows with wood or vinyl framing, or report higher levels of dissatisfaction with their windows. Most indicated being likely to replace in about a year or in the next two to four years.

<p>Building Stock and Consumer Characteristics</p>	<ul style="list-style-type: none"> • Most respondents live in single family detached homes that were built between 1940 - 1979. Most participants lived in their homes for either one to five years or 20 years or longer. • Respondents with higher household income were more likely to live in newer homes. • The primary heating source of most respondents was natural gas. • Most respondents currently have double-pane, double hung windows in their homes. • Lower income respondents are more likely to have single-pane windows or storm windows. • Most respondents have more than ten windows in their home. • Of those who replaced the windows in their home, a majority did so in the past 10 to 13 years. • The most important considerations that influence a consumer to install new windows, in order of importance, is to increase energy efficiency, reduce energy costs, and improve comfort in their home.
<p>Consumer Engagement with Market Actors</p>	<ul style="list-style-type: none"> • Respondents usually reference their own online research to get information about new window technology. Market actors are not as frequented resources. • Lower income respondents are more likely to consult their utility company, while higher income respondents are more likely to consult contractors. • Respondents who said they reference their utility company also indicated a higher likelihood than other groups to take action regarding their windows.
<p>Opportunities and Challenges to Market Adoption</p>	<ul style="list-style-type: none"> • The top three reasons that prevented adoption of high efficiency windows were the upfront cost of the windows and installation, lack of familiarity with the technology, and uncertainty of the aesthetics of the windows. • Opportunities to increase familiarity with high-performance window technology would be necessary for adoption. • Lower income respondents are more likely to be dissatisfied with their windows yet may not have the funds to replace their windows. This presents an opportunity for rebate programs targeted at lower income customers.

Conclusions and Opportunities

Based on the results of the survey, the team identified potential opportunities to increase the adoption of efficient windows in Illinois.

Online/Social Media Outreach

The team observed an awareness gap about efficient windows for younger customers. As younger individuals are likely to get their information about windows through the internet, online outreach or resources would be useful to help educate this audience.

Willingness to Adopt Efficient Windows

One-third of ComEd respondents said they are willing to upgrade to high performance windows. This is the lowest percentage of respondents when analyzing the data by utility. However, ComEd territory also has the lowest percentage of respondents still with single-pane windows (23.2%). These respondents tend to skew younger, have lower awareness and knowledge of the technology, but also expect to replace

somewhat soon, and have a strong desire to improve efficiency. Though ComEd territory has the lowest percentage of respondents with single-pane windows, they constitute nearly a quarter of respondents and there is potential for a high level of adoption of high-performance windows if these customers have proper knowledge and access to the technology.

Lower Income Customer Targeting

Lower income respondents tended to be older individuals that are entering or are retirement age (50 to 70+ years old), have windows original to their homes that are a single pane and about 20% of these respondents plan to replace their windows in about a year. Due to high dissatisfaction but inability to make changes, these customers would be an ideal demographic to adopt high performance windows with a rebate program.