



Window Market Insights Report: Residential Homeowners

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EXECUTIVE SUMMARY

Windows are often a weak link in a home's energy efficiency performance, and window replacement can offer future home energy savings. However, barriers like upfront cost can hinder homeowners' willingness to replace their windows. To gain further insight into how homeowners think about window replacement and what they prioritize, the Wise Window Hub (WWH), an initiative under Minnesota's Efficient Technology Accelerator (ETA), contracted with ReconMR to survey 1,031 Minnesota homeowners about window purchase decision-making. This research included investigation into windows cost significance and value propositions, drivers and inhibitors of window replacement, and awareness and interest in high-efficiency triple-pane windows.

Key findings

- **Window replacement was a commonly identified home improvement but usually limited in scope.** In the past two years, 21% of Minnesota homeowners replaced at least one window, and only 6% replaced 10 or more windows.
- **Comfort, energy bills, and upfront cost were 2–3 times more influential in window purchasing decisions compared to all other factors,** such as increased home value, sustainability, or curb appeal.
- **Recent window replacers were primarily motivated by practical concerns.** Homeowners who replaced windows within the past two years cited drafty windows or cold air infiltration (65%), wanting to reduce energy bills (53%), and difficulty opening or closing windows (44%) as the primary reasons for their purchase.
- **Cost was a concern, but those who made the investment said it was worth it.** Both homeowners who were considering and not considering new windows said that high cost was the primary reason for their inaction (52% and 45% respectively). However, 84% of those who *did* replace their windows agreed the money was well spent.
- **Triple-pane awareness was moderate across all homeowner segments.** Overall, 63% of Minnesota homeowners said they had heard of triple-pane windows. This familiarity was highest among recent window replacers (78%).
- **Over 60% of Minnesota homeowners who were offered triple-pane windows elected to install.** Although triple-pane installation rates among replacers was low (27%), more than 60% of homeowners who recalled being offered triple-pane windows chose to install them.
- **More than half of Minnesota homeowners would be willing to pay more to upgrade from a double-pane to a triple-pane window.** When given a baseline installed cost of \$1,000 for a double-pane window, over half of homeowners (58%) said they would be

willing to pay more for a triple-pane window. Furthermore, 45% of homeowners overall would be willing to pay \$200 or more and 25% would be willing to pay \$300 or more.

- **Sixty-six percent of Minnesota homeowners indicated a \$100 per window utility rebate would make them more likely to purchase a triple-pane window**, while 41% reported the same for a \$50 rebate. Additionally, 45% said a financing option to pay the cost over time would make them more likely.
- **When researching new windows, online searches were most common, but manufacturers were also a trusted information source.** General online searches were heavily utilized by both prospective window replacers and recent window buyers. However, manufacturers were also trusted, with recent window buyers in particular turning to manufacturers at nearly the same rate (42%) as online searches (41%).

Conclusions

1. **Comfort and bill savings are major drivers of new window purchases.** Homeowners at all stages of the purchase process reported indoor comfort and bill reduction as their top priorities when considering whether to replace their windows.
2. **Cost remains a major barrier to purchasing new windows.** Homeowners who are considering and not considering new windows both said that high cost is the primary reason for their inaction.
3. **Homeowners who purchase new windows see the value.** More than 80% of homeowners who replaced their windows said the investment was worth it.
4. **Many homeowners say they are willing to spend more to upgrade to triple-pane windows, especially if given help to bridge cost gaps.** More than 50% of homeowners said they would be willing to pay more to upgrade from a double-pane window to a triple-pane window, and more than 60% said a \$100 per window utility rebate would make them more likely to purchase triple-pane windows.
5. **Homeowners who are offered triple-pane windows often elect to install them.** More than 60% of homeowners who recalled being offered triple-pane windows during the sales process chose them for installation.

Future considerations

1. **Continue leveraging opportunities to address upfront cost concerns.** Keep working to reduce the upfront cost barrier at the point of decision by offering well-structured utility rebates and financing options.
2. **Focus window messaging on comfort and bill savings.** Market window replacement as a way to immediately improve comfort and lock in long-term energy savings.
3. **Reinforce that bidding triple-pane windows is worth contractors' time.** Encourage contractors to discuss triple-pane windows early and often by showing that when homeowners are presented with triple-pane windows, many elect to install them.

INTRODUCTION

Background

CEE contracted with ReconMR to conduct a homeowner study to better understand perspectives on window replacement and high-efficiency windows. This study was designed to support the Wise Window Hub's (WWH) market transformation mission under the Minnesota Efficient Technology Accelerator (ETA) by building a clear, quantitative picture of how Minnesota homeowners approach window replacement and high-efficiency upgrades. In practice, the goal was to move beyond general awareness measures and document what homeowners do, what motivates them, and what slows them down, so program and contractor strategies can be grounded in observed behaviors and stated decision criteria.

WWH Initiative

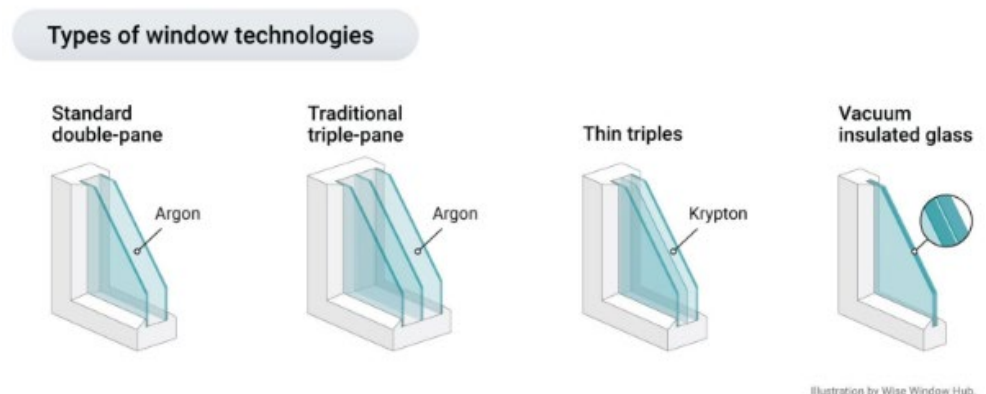
In 2023, the state of Minnesota initiated its Efficient Technology Accelerator (ETA) market transformation program, which aims to accelerate market adoption of efficient technologies. Minnesota's ETA is a partnership funded by the state's participating investor-owned utilities (IOUs) and consumer-owned utilities (COUs), administered by the Minnesota Department of Commerce, Division of Energy Resources (DER), and implemented by Center for Energy and Environment (CEE). The ETA portfolio includes the WWH initiative, which was built to influence and encourage market adoption of high-efficiency window technologies.

The goal of the WWH is to empower builders, contractors, and homeowners with the tools and knowledge they need to take advantage of the benefits and opportunities offered by high-efficiency windows like ENERGY STAR triple-pane windows. The initiative aims to provide industry professionals and homeowners with real-time updates, expert guidance, and practical resources that raise consumer awareness and interest in high-efficiency window products. By streamlining the decision-making and implementation process, the WWH makes it easier for projects to meet energy efficiency and building code requirements, encouraging market actors to incorporate these windows into their projects before they become code mandated. More information about the WWH initiative and high-efficiency window technologies can be found at <https://www.wisewindowhub.org/>.

High-efficiency window technologies

High-efficiency windows are available in the same custom shapes and sizes as baseline code windows, making them well suited for use in single-family, multifamily, and some commercial buildings. Importantly, these windows leverage efficient components such as triple-pane glazing or vacuum insulating glazing (VIG), low-emissivity (Low-e) coating, and thermally improved foam-filled frames to attain a U-Factor at or below 0.22. Differences between these technologies and standard double-pane windows can be seen in Figure 1. **For the purposes of this report and WWH initiative efforts, we define high-efficiency windows as those with a U-Factor at or below 0.22, which is typically equivalent to ENERGY STAR Northern Climate Zone Prescriptive windows and usually achieved using triple-pane glazing.**

Figure 1. Types of window technologies



Research objectives

While the team was interested in understanding how people perceive high-efficiency window products, we were also interested in perceptions and behaviors around window purchases in general. Thus, the core research objectives included the following:

1. **Measure how homeowners weigh window costs against perceived value**, including the benefit and cost tradeoffs that shape willingness to invest in higher-efficiency options. The study explicitly set out to quantify the significance of cost, identify where value propositions resonate, and clarify the conditions under which high-efficiency upgrades feel “worth it” to homeowners.
2. **Map the decision pathway** by identifying purchase drivers, trigger events, and barriers to action, and compare how these differ across key homeowner segments (recent replacers, considerers, and those not considering replacement). This includes understanding what initiates shopping behavior, what creates delays, and what pain points show up during the bid and selection process.
3. **Identify practical leverage points for market actors**, especially contractors and brands, that can simplify decisions and reduce purchase paralysis. This included testing messaging and information needs, assessing whether triple-pane is presented during bidding, and quantifying the likely impact of specific financial levers such as rebates and financing on purchase likelihood.

To investigate these research objectives, the study included a literature review and a survey of Minnesota homeowners.

Literature review

The team reviewed several professional reports and industry news articles to investigate why people buy new windows and what they worry about; a summary of these references can be found in [Appendix A. Bibliography](#).

This literature review informed the survey design, especially a MaxDiff component that prioritized specific drivers, barriers, and technological tradeoffs that define the modern window-buying journey (see [MaxDiff Approach](#)). Following this review, the broad list of product features was narrowed into a refined set of high-impact attributes such as energy cost reduction, noise attenuation, and ease of installation (Table 1). This ensured the MaxDiff attributes were grounded in documented consumer beliefs on window replacement.

Table 1. Benefits and challenges of window replacement from literature review

Benefits	Challenges
Lower Energy Usage	High Upfront Cost
Resale Value Return	Partial Cost Recovery
Federal Tax Credits	Installation Disruption
Improved Comfort	Confusing Terminology
Enhanced Curb Appeal	Installer Shortage
Noise Reduction	Sales Pressure Tactics
Better Security	Contractor Incentive Misalignment
Low Maintenance	Long Lead Times
UV Protection	Financing Usually Required
Better Air Quality	Material Selection Difficulty
More Natural Light	Climate-Specific Needs
Affordable Performance Upgrade	Installation Quality Risk
Avoids Major Renovation	Warranty Complexity
Future-Proof Performance Options	Research Time Required
Lifetime Warranties	Scheduling Challenges
	Risk of Trapping Indoor Pollutants
	Durability Concerns
	Cutting-Edge Options Remain Inaccessible
	Triple-Pane Value Debated

This list was trimmed and refined into 13 unique window purchasing drivers. This filtering process transformed industry data into a set of mutually exclusive choices, ensuring the MaxDiff results reflect realistic trade-off behaviors in the current market.

Survey methodology

This research was conducted using a multimodal survey design to ensure a representative sample of 1,031 Minnesota homeowners. Primary data collection occurred through two distinct channels: a stratified random address-based sample (ABS) and a supplemental online panel.

- For the ABS portion, 12,500 invitation letters were mailed to randomly selected homeowners across the state, which yielded 436 completed surveys for a response rate of 3.4%. This method was chosen to capture a broad cross-section of the population, including those who may not be active on digital research panels, thereby reducing self-selection bias.
- An additional 595 surveys were completed using an online panel to keep project costs down and even out representation across the state.

Data integrity was maintained through rigorous cleaning processes. Responses from both the ABS and online panel sources were compared for consistency. Since the results were found to be statistically comparable, the datasets were merged for final analysis. The total sample of 1,031 provides a margin of error of 3.1% at the 95% confidence level. A finalized survey instrument can be found in [Appendix B. Survey Instrument](#).

To identify differences in homeowner perspectives, findings were compared across key demographic variables, including Geographic Region (Twin Cities Metro vs. Greater Minnesota), Household Income (Low Income and Higher Income), and Home Characteristics (Age of Home, Home Efficiency, and Years in Home; Figure 2). Our analysis utilized cross-tabulation and comparative statistical testing to isolate divergent trends between these groups. Throughout the report, important findings that reached statistical significance at the 95% confidence level ($p < 0.05$) are specifically noted to highlight where experiences differ across the Minnesota landscape. A summary of key differences is included at the end of this report (see [Demographic Differences](#)).

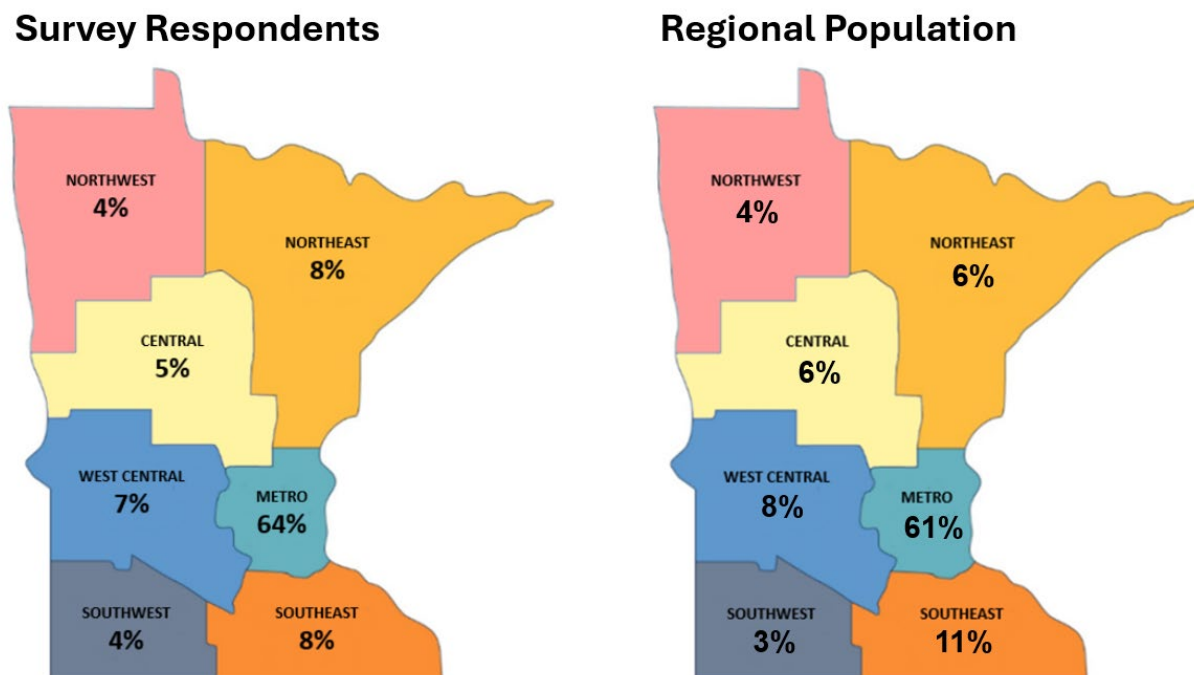
Figure 2. Demographic subgroups analyzed



Respondent distribution and demographics

Survey respondents provided their home zip code, which was then mapped to the seven Minnesota regions used by the [Clean Energy Resource Teams \(CERTs\)](#). The final sample was highly representative of the state population. About two-thirds (64%) of survey respondent homeowners came from the 11-county Twin Cities Metro region (the Metro), while the remaining 36% came from Greater MN (Figure 3). To understand how responses may have differed between those in the Metro and those in Greater MN, crosstabs were conducted.

Figure 3. Respondents by CERTs region



In addition to geography, respondents were asked for basic demographic information. Respondents were relatively evenly spread across age, household size, and household income categories. There were fewer younger respondents, but other age groups were well represented (Table 2). Many lived in two-person households (40%) or three- or more person households (42%). The proportion of respondents in the low-income (<\$50,000 annually) and high-income (>\$150,000 annually) subgroups was nearly identical.

Table 2. Respondent demographics

Age	MN Homeowners (N=1,031)
18–24	2%
25–34	11%
35–44	24%
45–54	19%
55–64	19%
65–74	18%
75 or older	6%
Prefer not to answer	1%
Number of people in household	MN Homeowners (N=1,030)
1	15%
2	40%
3	19%
4	13%
5 or more	10%
Prefer not to answer	4%
Total annual household income before taxes	MN Homeowners (N=1,031)
Less than \$50,000	17%
\$50,000–\$74,999	18%
\$75,000–\$99,999	18%
\$100,000–\$149,999	22%
\$150,000–\$199,999	8%
\$200,000 or more	10%
Prefer not to answer	7%

Note: The low-income subgroup was defined as households making less than \$50,000 annually, while the high-income subgroup was defined as households making more than \$150,000 annually.

Respondents were also asked for details about their home. Half of respondents reported approximate home values between \$200,000 and \$399,999, in line with the median sales price of homes in Minnesota in 2025 (Table 3).¹ Over one-third of respondents also reported to have homes built before 1950, aligning with building stock data showing that over 40% of Minneapolis homes were built before 1940.² Similarly, just over 30% of respondents said they have lived in their home for more than 20 years, which could be related to the age of respondents or relative stagnation of the Minnesota market.³ Finally, the majority of respondents indicated that their house was somewhat (47%) or very efficient (15%).

¹ Minnesota REALTORS. January 2026. “2025 Minnesota Annual Housing Market Report.” Available [here](#).

² Heacock. “U.S. Cities With the Largest Share of Homes Built Prior to 1940.” Available [here](#).

³ Minnesota REALTORS. January 2026. “2025 Minnesota Annual Housing Market Report.” Available [here](#).

Table 3. Respondent home characteristics

What is the approximate current value of your home?	MN Homeowners (N=1,031)
Less than \$100,000	5%
\$100,000–\$199,999	11%
\$200,000–\$299,999	26%
\$300,000–\$399,999	24%
\$400,000–\$499,999	14%
\$500,000–\$749,999	12%
\$750,000–\$999,999	4%
\$1,000,000 or more	2%
Prefer not to answer	3%
Approximately when was your home built?	MN Homeowners (N=1,031)
2020 or later	3%
2010–2019	4%
2000–2009	12%
1990–1999	9%
1980–1989	9%
1970–1979	8%
1950–1969	16%
Before 1950	37%
Don't know	2%
How long have you lived in your home?	MN Homeowners (N=1,031)
Less than 2 years	8%
2–4 years	17%
5–9 years	20%
10–14 years	12%
15–20 years	10%
Over 20 years	32%
Overall, how energy efficient would you say your home is?	MN Homeowners (N=1,031)
Very efficient	15%
Somewhat efficient	47%
Neither efficient nor inefficient	14%
Somewhat inefficient	18%
Very inefficient	4%
Don't know	1%

DETAILED FINDINGS

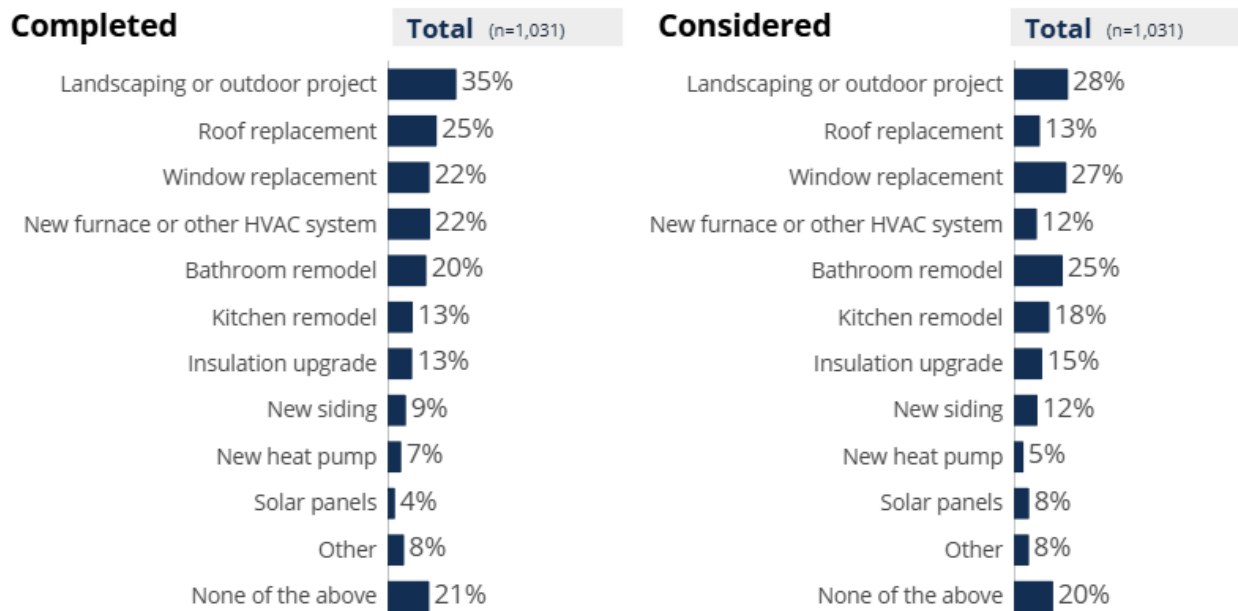
Home improvement outlook

Window replacements are just one of many home improvement projects homeowners consider, and multiple home improvement projects may happen together. To better understand how often window replacements and other home improvement projects occur, survey respondents were asked what home renovation projects they completed in the past two years and what projects they are considering completing in the next two years.

In the past two years, 35% of Minnesota homeowners said they had completed landscaping or outdoor projects, followed by roof replacement at 25% (Figure 4). Window replacement was tied with furnace or other HVAC replacement as the third-most popular completed home renovation project (22%). Looking ahead one to two years, 27% of respondents said they were considering window replacement, which places windows among the top three planned renovation projects alongside landscaping (28%) and bathroom remodel (25%).

Although these findings indicate that windows are one of the most commonly completed and considered home renovation projects, it is important to note that about 20% of respondents said they had not completed or were not considering any home improvement projects.

Figure 4. Home projects completed and considered (N=1,031)



Other mentions included water heaters, plumbing, doors, basement remodels, garage updates, and new decks. Respondents could select multiple options, so charts do not sum to 100%.

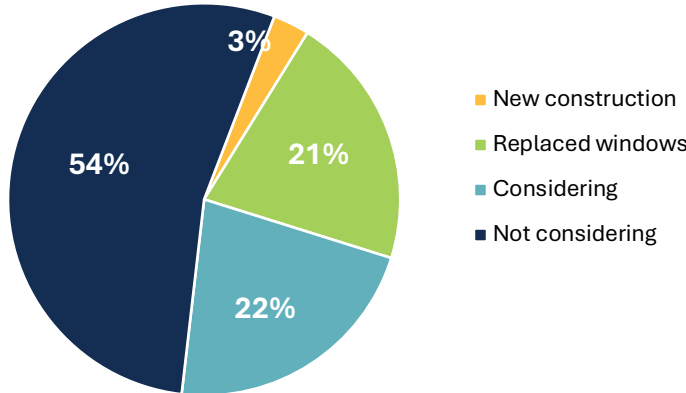
Minnesota homeowners were divided into four segments based on their past and expected window replacement experience:




- **Replacers** who have purchased and installed new windows in the past two years
- **Considerers** who are contemplating window replacement in the next two years
- **Non-Considerers** who are not contemplating window replacement in the next two years
- **New Construction** who live in a new construction home and so are not contemplating window replacement in the next two years

Across the full sample of Minnesota homeowners, 21% have replaced windows in the past two years (Replacers), 22% have not replaced their windows but are considering the project within the next two years (Considerers), 3% recently purchased a new construction home and are not considering new windows yet (New Construction), and 54% have not replaced windows and are not considering a window replacement project for the next two years (Non-Considerers, Figure 5).

Figure 5. Window replacement experiences (N=1,031)

Window Replacement Experiences (N=1,031)



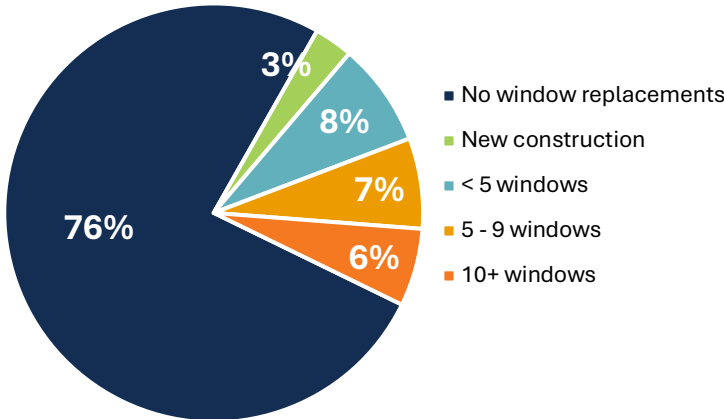
	<ul style="list-style-type: none"> ■ While past window replacement did not vary across the state, homeowners in the Metro region were less likely than those in Greater MN to be considering new windows over the next two years (19% vs. 27%).
	<ul style="list-style-type: none"> ■ Notably, low-income households (less than \$50,000 annually) were the most likely to consider a window replacement – 27% of them will consider a window replacement in the next two years, compared to only 17% of high-income households (\$150,000+).
	<ul style="list-style-type: none"> ■ Homeowners with homes built in the 80s and 90s were the most likely to have replaced their windows in the past two years (31% vs. 19% for other age homes).

Window replacement often happens incrementally

While most Minnesota homeowners said they have not replaced any windows in the past two years, survey results indicated that those who did typically replaced only some of the windows on their home (Figure 6). Over the past two years, approximately 8% of homeowners replaced fewer than 5 windows in their home, likely replacing individual broken or old windows. Another 7% replaced 5–9 windows, which may occur as part of remodeling an entire floor or side of their home, and 6% of homeowners invested in a large upgrade of their windows and replaced 10 or more windows in their home. This could indicate that homeowners hesitate to invest in a whole-home window upgrade and may prefer to replace windows as they fail or when remodeling portions of their home.

Figure 6. Number of windows replaced in the past two years (N=1,031)

Windows Replaced in Past Two Years (N=1,031)



- Homeowners who replaced 10 or more windows are likely to have lived in their homes for 5–20 years (14% vs. 10% for under 5 years and 8% for 20 or more years).
- Homeowners with homes built in the 80s and 90s are the most likely to have replaced 10 or more windows (17% vs. 9% for other age homes).

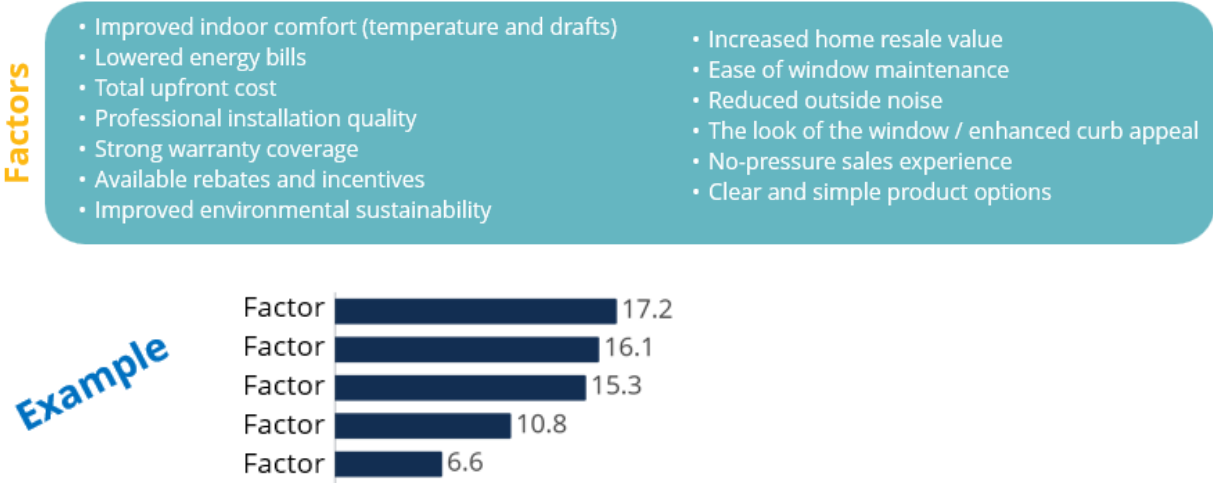
Window replacement drivers

MaxDiff approach

The survey instrument included a MaxDiff scaling exercise to assess how consumers prioritize various factors when shopping to upgrade the windows in their home. Respondents cycled through 13 pre-determined drivers (grouped in randomly composed lists of 4–5 drivers each)

related to the window buying process and were asked to identify which drivers on each list was most important and least important to them (Figure 7). This structured approach allowed for a statistically robust comparison between Replacers who have recently completed projects and Considerers who are in the planning phases.

Figure 7. Window purchasing drivers included in the MaxDiff exercise

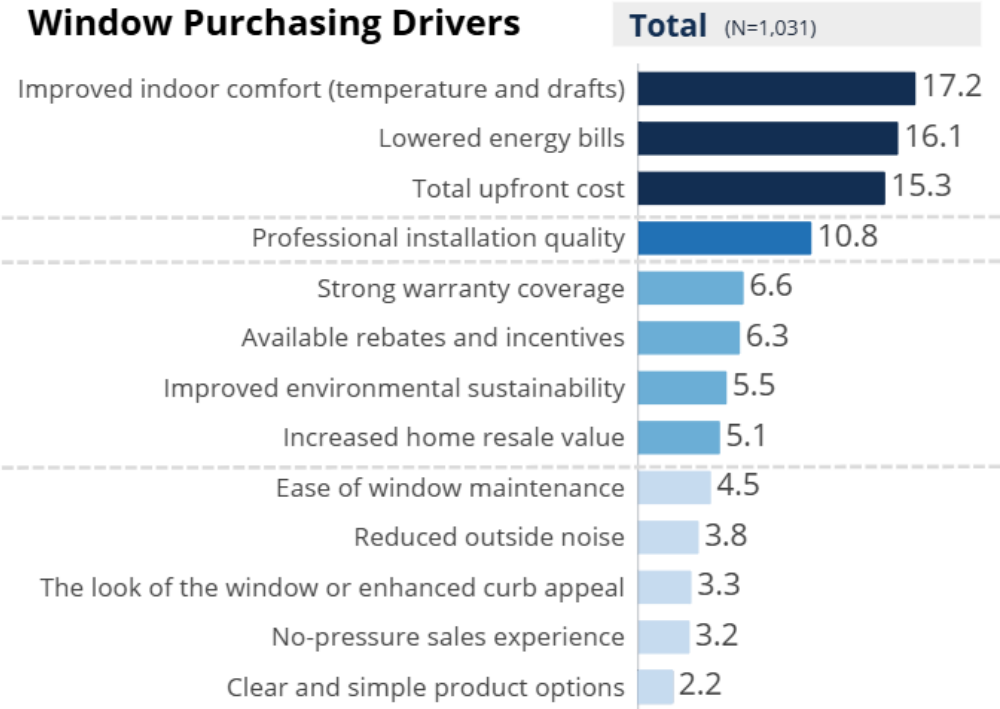


The MaxDiff scores reported in this study can be interpreted as an individual factor’s relative prioritization on the overall list of 13 window purchasing factors. For example, a factor with a reported score of 15 could be interpreted as three times more important to respondents overall than a factor with a reported score of 5, while a factor with a reported score of 6 could be interpreted as half as influential to respondents overall as one with a score of 12.

Homeowners prioritize comfort and cost when considering purchasing new windows

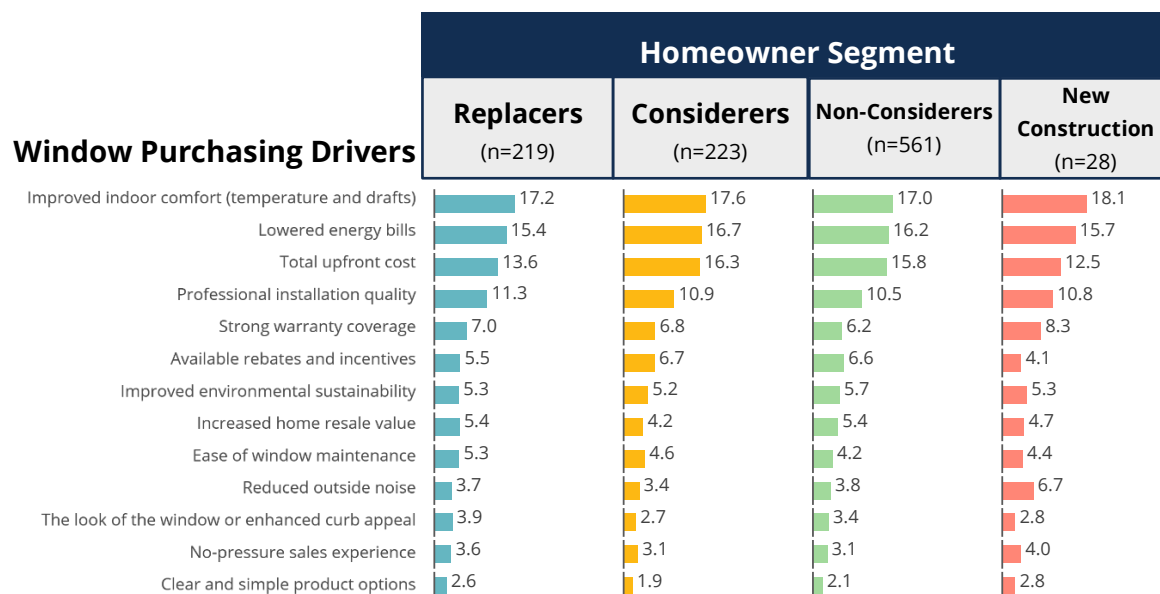
The MaxDiff exercise shows how respondents prioritize factors when considering purchasing new windows. The highest-scoring drivers were improved indoor comfort (17.2), lowered energy bills (16.1), and total upfront cost (15.3, Figure 8). A second tier followed with professional installation quality (10.8). Factors tied to the shopping experience and appearance ranked lowest, including look and curb appeal (3.3), no-pressure sales experience (3.2), and clear and simple product options (2.2). This pattern suggests most Minnesota homeowners evaluate windows as a functional investment first, with purchase process and styling as secondary considerations.

Figure 8. Homeowner window purchasing drivers (N=1,031)



Although each homeowner segment (Replacers, Considerers, Non-Considerers, New Construction) identified the same top four purchasing drivers, these segments differed in their valuation of these factors. For example, Considerers placed relatively more weight on cost and savings: upfront cost scored 16.3 among Considerers versus 13.6 among Replacers, and lowered energy bills scored 16.7 versus 15.4 (Figure 9). Replacers scored upkeep and appearance slightly higher than Considerers on several items, such as ease of window maintenance (5.3 vs. 4.6) and curb appeal (3.9 vs. 2.7). However, comfort remained the top driver across segments, with very similar scores among Replacers (17.2), Considerers (17.6), Non-Considerers (17.0), and New Construction (18.1). Overall, these results indicate that while stages of the window purchase process may affect *how much* homeowners value certain attributes, these attributes are generally important to most homeowners.

Figure 9. Homeowner window purchasing drivers, by segment (N=28–561)



- Lowered energy bills (17.7) were the most important factor for homeowners in Greater MN, while Metro homeowners rated indoor comfort (17.2) their most important factor.
 - Metro residents were also more concerned with professional installation quality (+1.1), available rebates (+1.3), and improved environmental sustainability (+2.4) compared to those in Greater MN.
 - Greater MN residents were more concerned about strong warranty coverage (+1.9) compared to Metro residents.

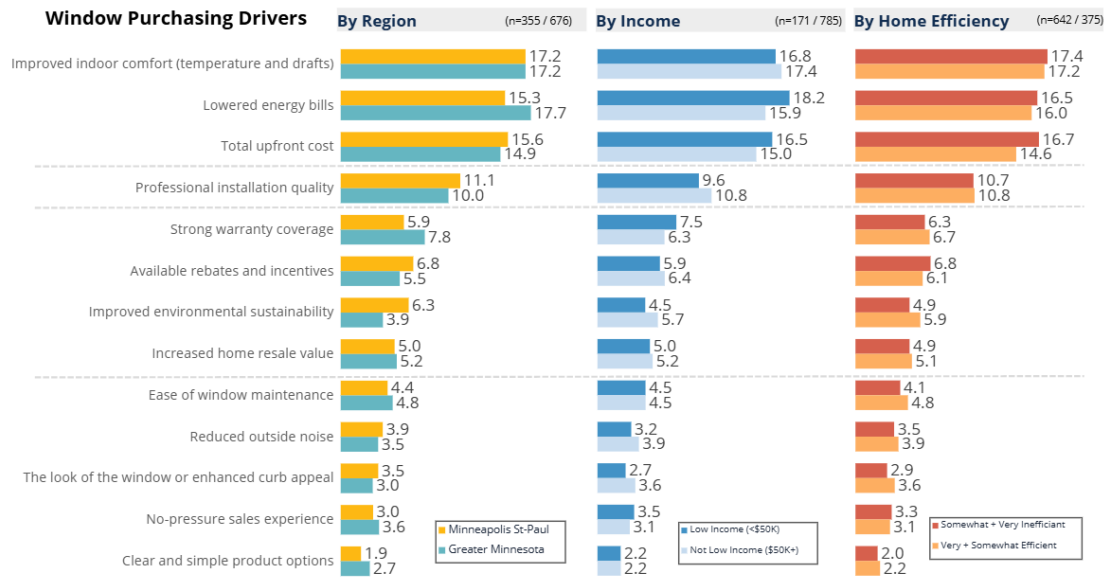


- Across income levels, the top three criteria remained the same, though lower income households were more concerned with lowered energy bills (18.2 vs. 16.1) and total upfront cost (16.5 vs. 15.0) than higher income households.



- Homeowners who did not report their home to be energy efficient were more concerned with total upfront cost (16.7) than those who reported their home to be energy efficient (14.6).

Figure 10. Homeowner window purchasing drivers, by subgroup (N=171–785)



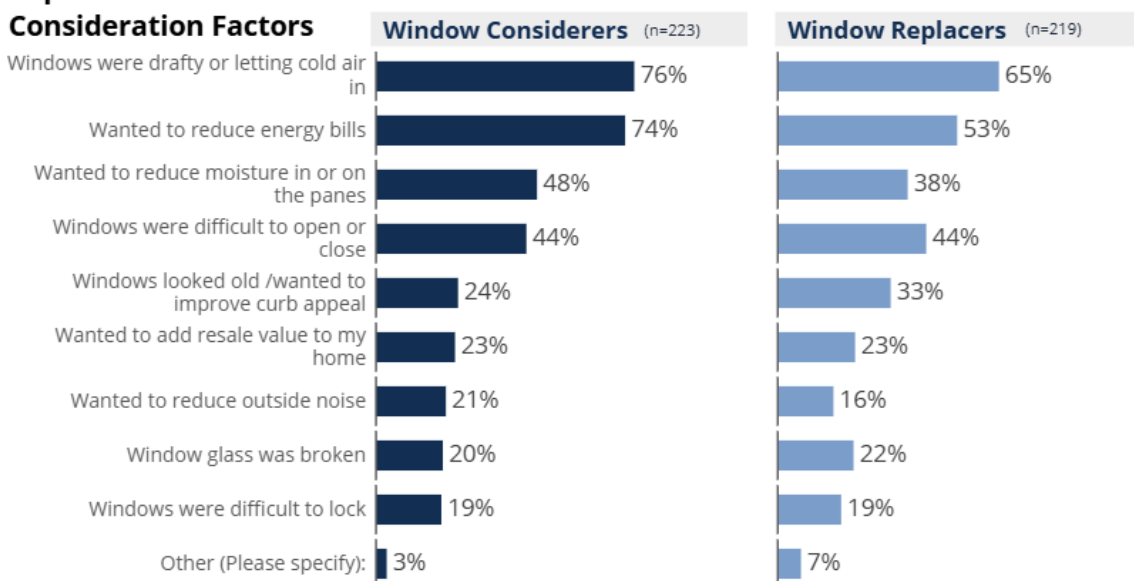
Drafts and high energy bills trigger homeowners to consider window replacement

Both Considerers and Replacers were asked to name the factors that triggered their decision to initially consider replacing their windows. Respondents reported indoor comfort and reducing energy bills as the most common factors, in line with MaxDiff results identifying drivers of window purchases (Figure 11). Homeowner concerns about drafty windows and concerns about reducing energy bills were the top two listed factors among both Considerers and Replacers, which highlights the practical triggers that push households into the market for windows.

Figure 11. Triggers for considering window replacement, Considerers vs. Replacers (N=223–219)

Replacement

Consideration Factors



Other mentions included house fire, safety upgrade, lead present, rotting frame, full house renovation, and failed gaskets. Respondents could select multiple options so charts do not sum to 100%.

Among Replacers, the most common contributors were drafty windows or cold air (65%), wanting to reduce energy bills (53%), and windows that were difficult to open or close (44%). These triggers were even more pronounced for Considerers, with draftiness rising to 76% and reducing energy bills rising to 74%, suggesting stronger motivation on the two top MaxDiff outcomes among those still in the decision process. Considerers also cited moisture or condensation reduction more often than Replacers (48% vs. 38%), while Replacers were more likely to mention improving curb appeal (33% vs. 24%).

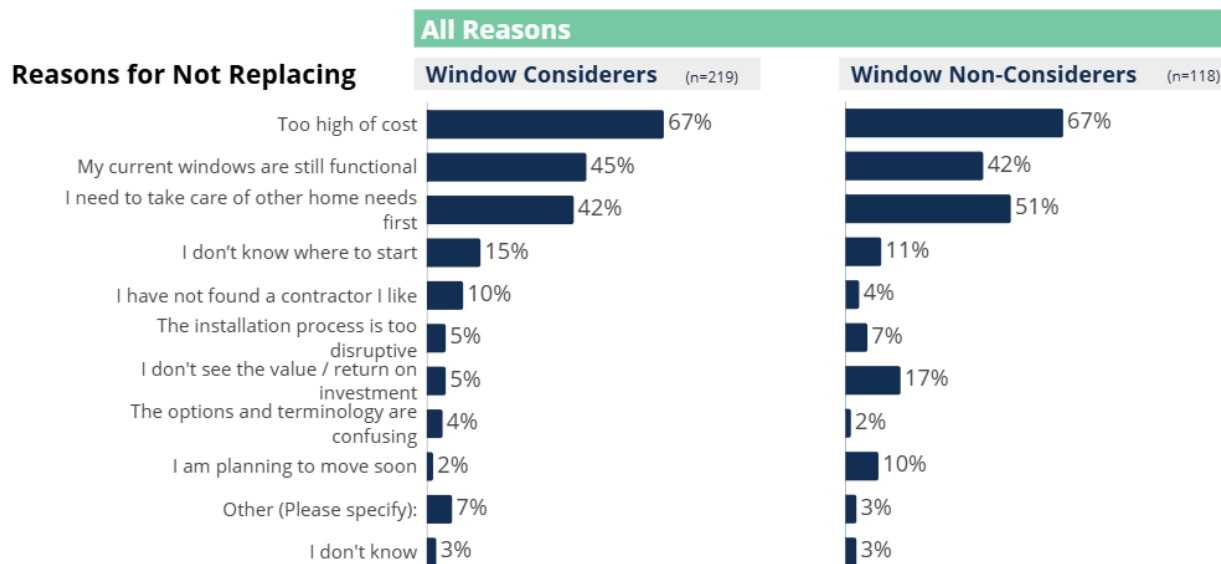
High upfront cost remains the primary barrier to window replacement

Cost was the dominant barrier for both Considerers and Non-Considerers, but it played a slightly different role for each segment. Among Considerers and Non-Considerers, 67% said cost was one reason they have not yet replaced windows (Figure 12). Among Non-Considerers, cost showed up as the top stated reason for staying out of the market: 45% selected “too high of cost” as their primary reason for not considering replacement (Figure 13). Together, these results indicate that affordability is not just a friction point, it is often the deciding factor that pauses or prevents action.

Competing household priorities was the second major barrier to window replacement, especially among Non-Considerers. Forty-two percent of Considerers said they need to address other home needs first, compared to 51% of Non-Considerers (Figure 12). This difference suggests that many Considerers have already elevated windows onto their short list but are still sequencing the project behind other repairs or upgrades. For Non-Considerers, windows more

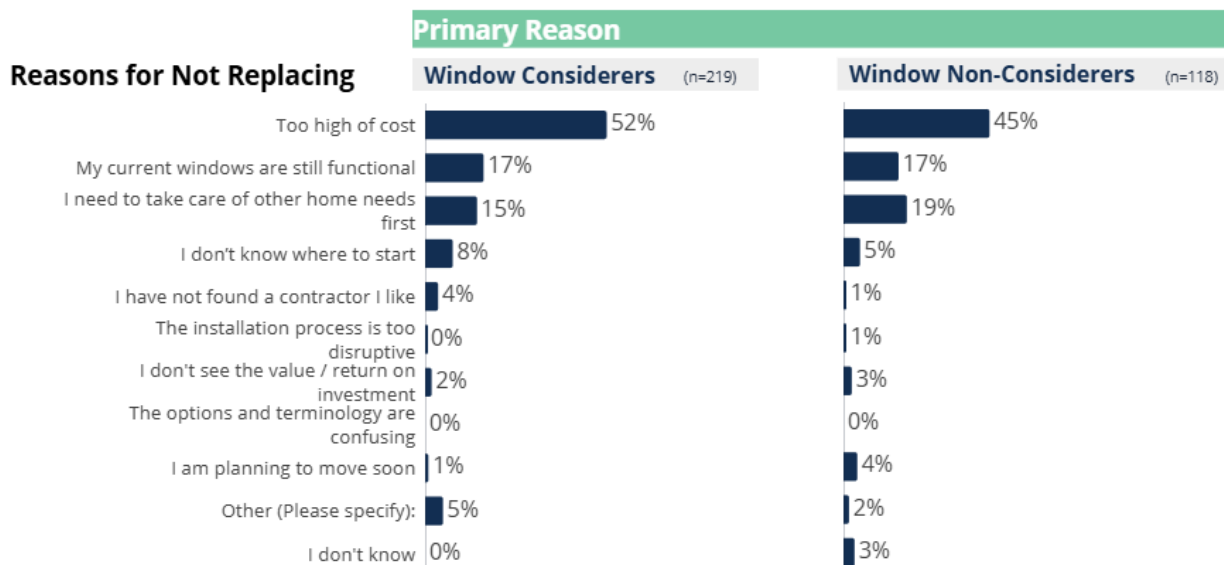
often remain a lower priority item, even when other motivators like comfort or energy savings may apply.

Figure 12. Reasons for not replacing windows, Considerers vs. Non-Considerers (N=219–118)



Other mentions included waiting on funding, not ready yet, and no time. Respondents could select multiple options so charts do not sum to 100%.

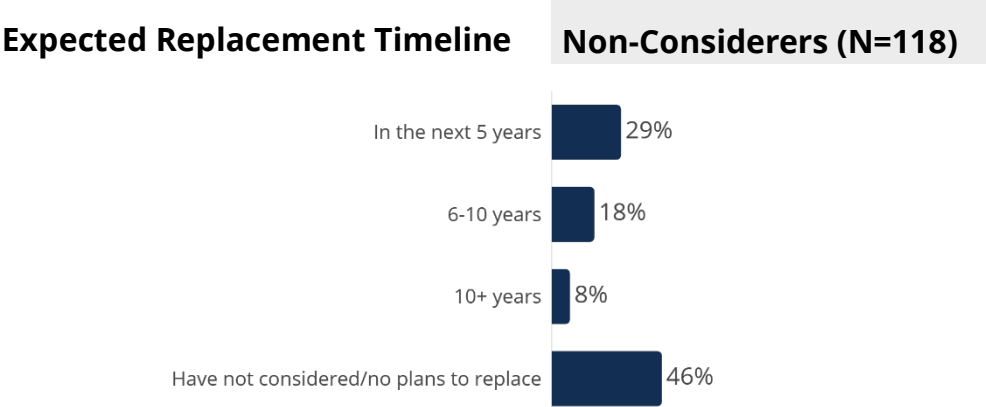
Figure 13. Primary reason for not replacing windows, Considerers vs. Non-Considerers (N=219–118)



Other mentions included waiting on funding, not ready yet, and no time. Due to rounding, charts do not sum to 100%.

Timing expectations reinforce the difference in momentum. While 29% of Non-Considerers said they expect to replace windows in the next five years, nearly half said they are not and will not consider replacement (Figure 14). This suggests many homeowners are in a passive posture that may only shift when a forcing event occurs, such as window failure, a major remodel, or a sharp change in comfort or bills.

Figure 14. Non-Considerer expected window replacement timeline (N=118)

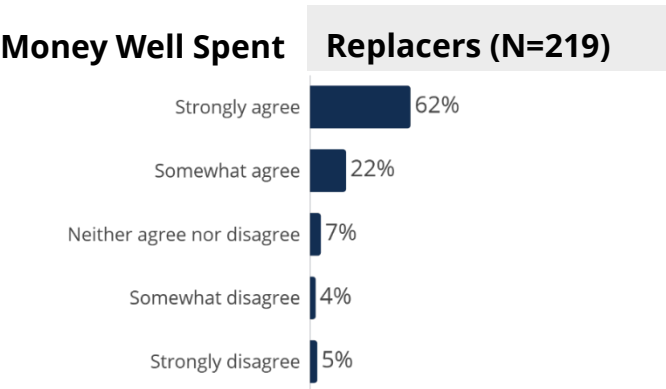


Note: Due to rounding, chart does not sum to 100%.

Most homeowners report a satisfactory window replacement process

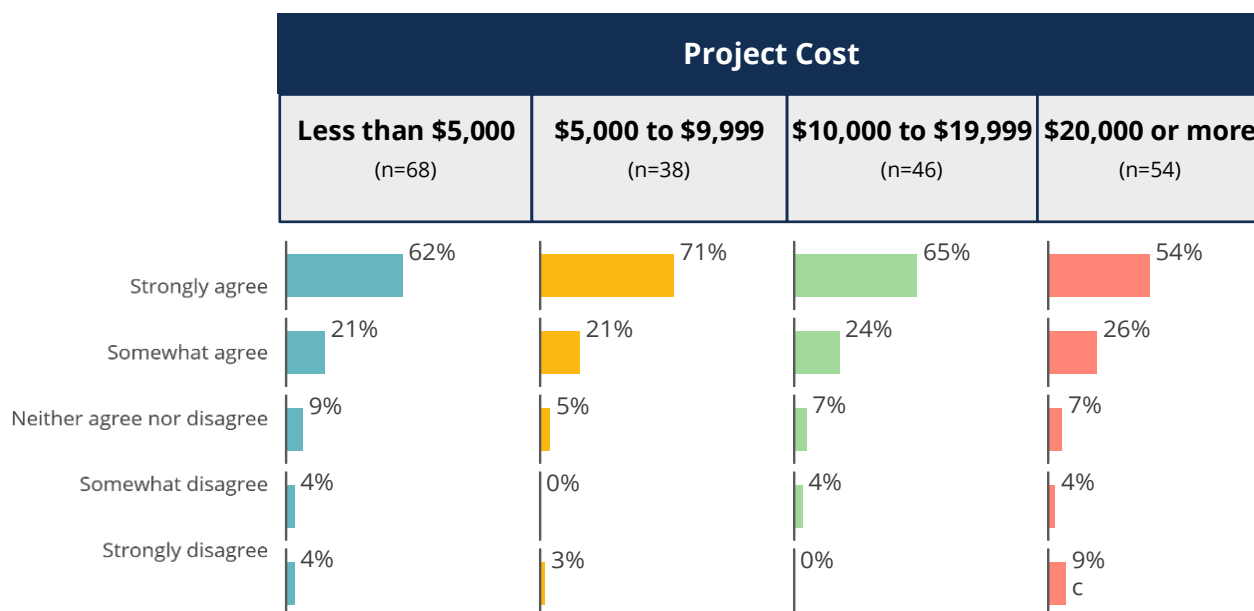
To get a sense of homeowner satisfaction after purchasing and installing new windows, Replacers were asked if they agreed that the money they spent on windows was worth it. Satisfaction was high: 62% strongly agreed the investment was worth it and another 22% somewhat agreed (Figure 15).

Figure 15. Replacer agreement that the money spent on new windows was worth it (N=219)



Regardless of the amount spent on their windows, homeowners agreed that it was worth the cost: 54% of those who spent over \$20,000 and 62% of those who spent less than \$5,000 strongly agreed that their new windows were worth the cost (Figure 16).

Figure 16. Replacer agreement that the money spent on new windows was worth it, by project cost (N=38–68)



Window installation experiences

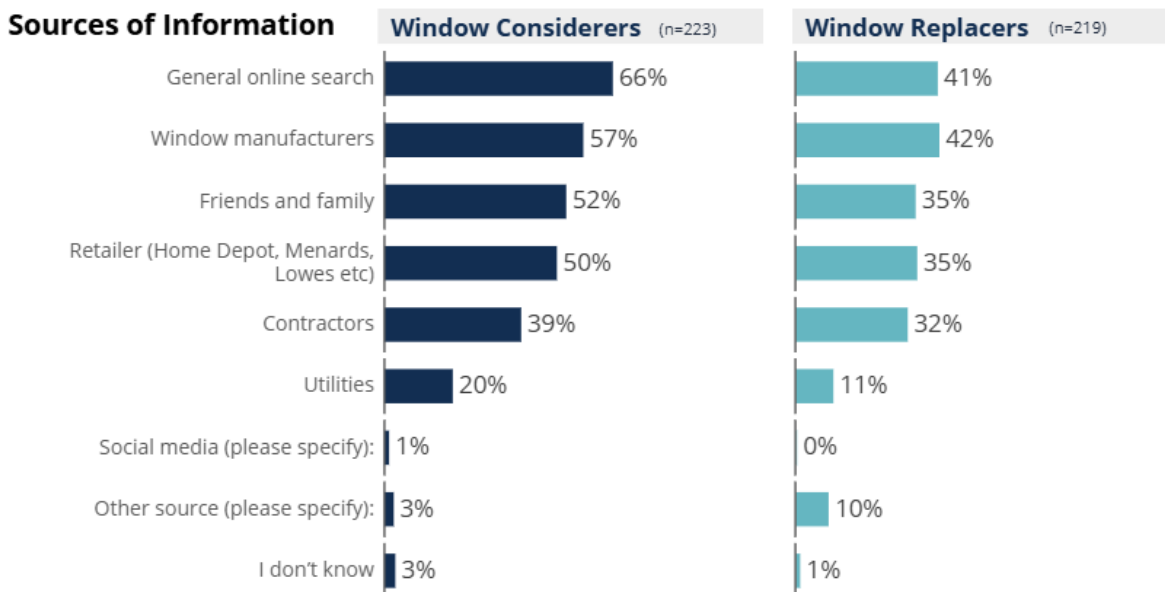
Homeowners trust a variety of sources on windows

Both Considerers and Replacers were asked to select which sources of information they relied on when considering new windows. Most Considerers said they turned to a general online search (66%), while Replacers were most likely to use window manufacturers (42%) and a general online search (41%, Figure 17).


After an online search, most Considerers said they used window manufacturers (57%), friends and family (52%), and retailers (50%). While these options were also popular with Replacers, Considerers reported them more frequently, which may indicate a desire from Considerers to see or discuss physical products in showrooms or at acquaintances' homes before committing to purchase. Additionally, Considerers were simply more likely to select each response option, or select multiple potential sources of information, indicating that they might not know where to look yet or may consider a myriad of sources before truly deciding what to consult.


About one-third of both Considerers and Replacers said they used contractors for windows information, affirming previous assumptions of contractors' pivotal role in homeowner decision-making.

Figure 17. Sources of information on windows, Considerers vs. Replacers (N=223–219)



Other mentions included Home & Garden show, door-to-door salesmen, city workers, and direct mail. Respondents could select multiple options so charts do not sum to 100%.





- Low-income homeowners tended to rely more on retailers for information on replacement (50% vs. 13% for high-income households) and use utilities when considering windows (28% vs. 6% for high-income households).
- Just 18% of low-income households used window manufacturers for information on window replacement, compared to 45% of high-income households.
- Retailers were more influential on window consideration in Greater MN (59% vs. 43% in the Metro), while contractors had more influence on window consideration in the Metro (46% vs. 30% in Greater MN).

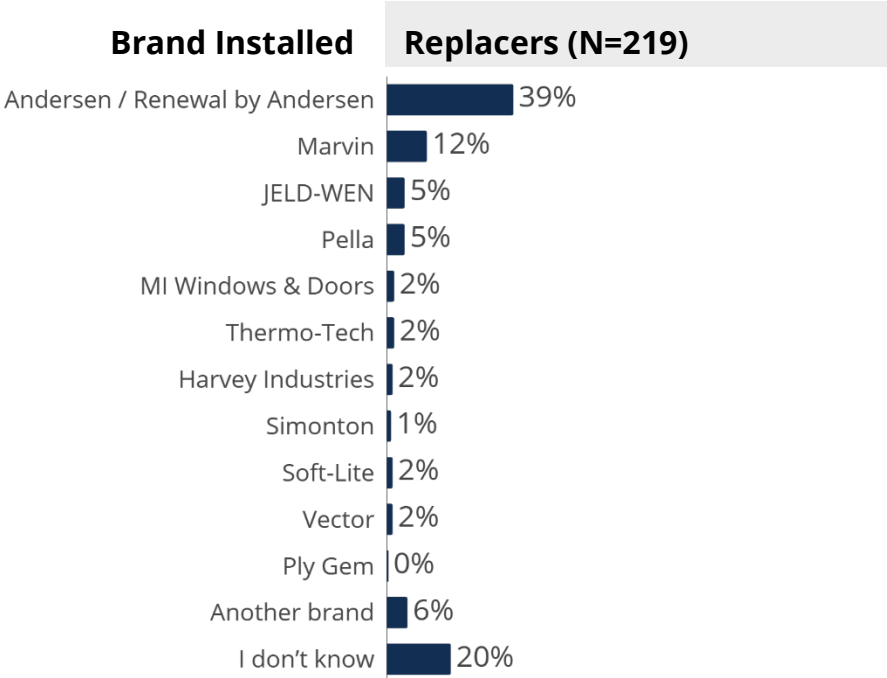
Brand recollection is dominated by a few key brands

To better understand the window market landscape in Minnesota, Replacers were asked to recall which manufacturer or brand of windows they installed. Responses indicated that the Minnesota market is dominated by a few key brands. Andersen (including Renewal by Andersen) had the highest use among survey respondents at 39%, which was 6 percentage


points higher than all other listed brands combined (Figure 18). Other brands frequently mentioned included Marvin (12%), JELD-WEN (5%), and Pella (5%).

While the name recognition of Andersen is clear, one-fifth (20%) of Replacers were not aware of or could not recall their window brand, and several other Replacers confused the name of their window contractor with their window brand. These limitations indicate that some homeowners may not pay close attention to the brand of windows they install.

Figure 18. Brand of window installed by Replacers (N=219)



Other brands mentioned included Ply Gem, Champion, City Glass, Hayfield, Richlin; additionally, some window contractors were written in as window brands. Due to rounding, chart does not sum to 100%.



- Homeowners who believe their home is energy efficient are more likely to have purchased Andersen than are those who feel their home is not energy efficient (43% vs. 27%).

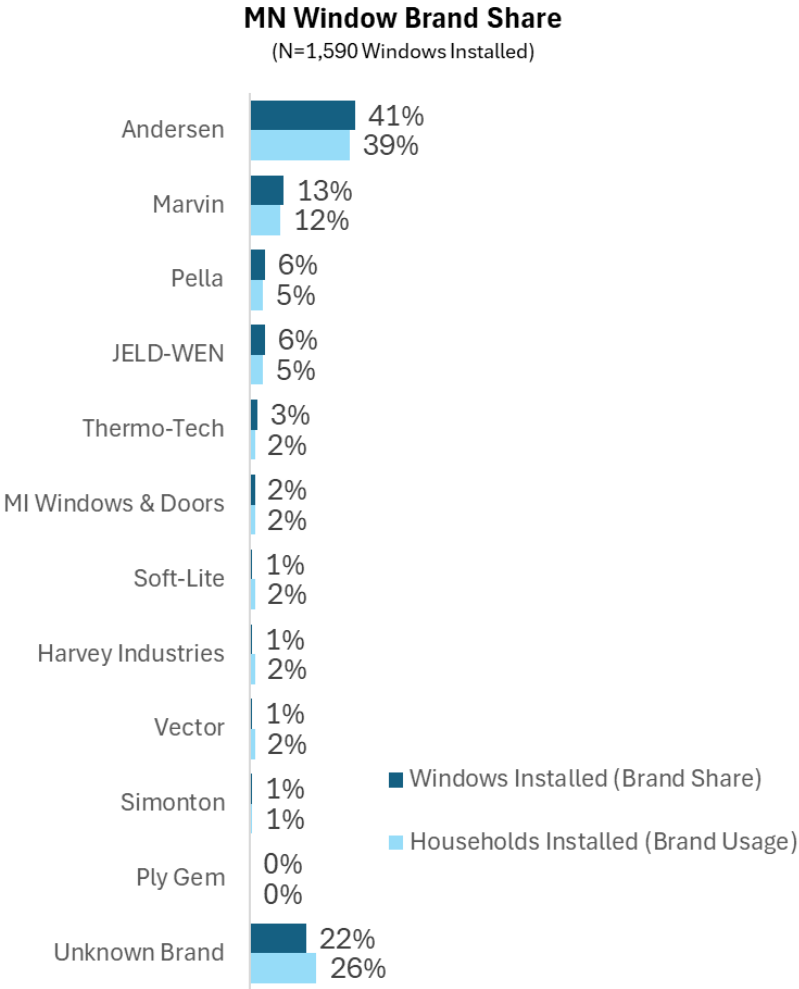
In addition to the percentage of households selecting a brand, we wanted to look at how many windows installed were associated with each brand. This serves as a better proxy for sales volume and market share and could indicate whether homes that replaced more windows were more likely to replace with a particular brand. Homeowners provided the number of windows they replaced, and all windows were assumed to be from the same brand.

Calculating window brand share by total volume of windows installed versus household adoption (brand usage) revealed no significant statistical difference in the Minnesota market. Leading brands showed nearly identical percentages across both metrics: Andersen holds 41%

of the total window share compared to 39% of household usage, and Marvin accounts for 13% of windows versus 12% of households (Figure 19). Variations for smaller brands like Pella and JELD-WEN were even more negligible, with only a 1% difference between total volume and household adoption for each. Because these fluctuations are well within the survey's 3.1% margin of error, the two methods of calculation are effectively interchangeable and yield a consistent picture of market distribution.

Finally, it is important to note that respondent recall of window brand is not a complete indicator of the Minnesota windows market overall, especially since 20% of homeowners were unaware of their window brand. These findings should be considered alongside and in addition to sales data and research from other corroborated sources to gain a true picture of market share.

Figure 19. Brand share and brand usage of windows (N=1,590)

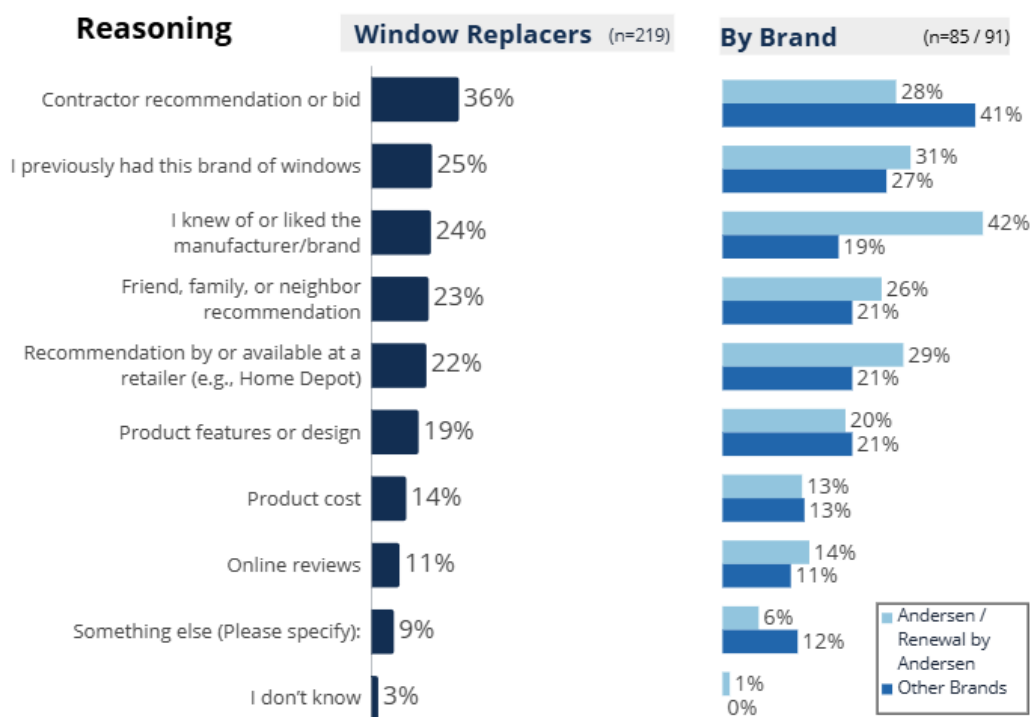


Contractors are a key influencer in window brand selection

Replacers were also asked what factors led them to choose their specific window brand. Over one-third of respondents (36%) said they chose their brand due to contractor recommendation

or bid, reinforcing the importance of contractor education in the window selection process (Figure 20). About one-quarter of respondents each said they chose their brand because they had it previously, they knew of or liked the manufacturer, it was recommended by someone they knew, or it was recommended or available at a retailer.

Figure 20. Reason for choosing window brand (N=219)



Other mentions included warranty, reputation, and supplier/builder recommendation. Respondents could select multiple options, so charts do not sum to 100%.

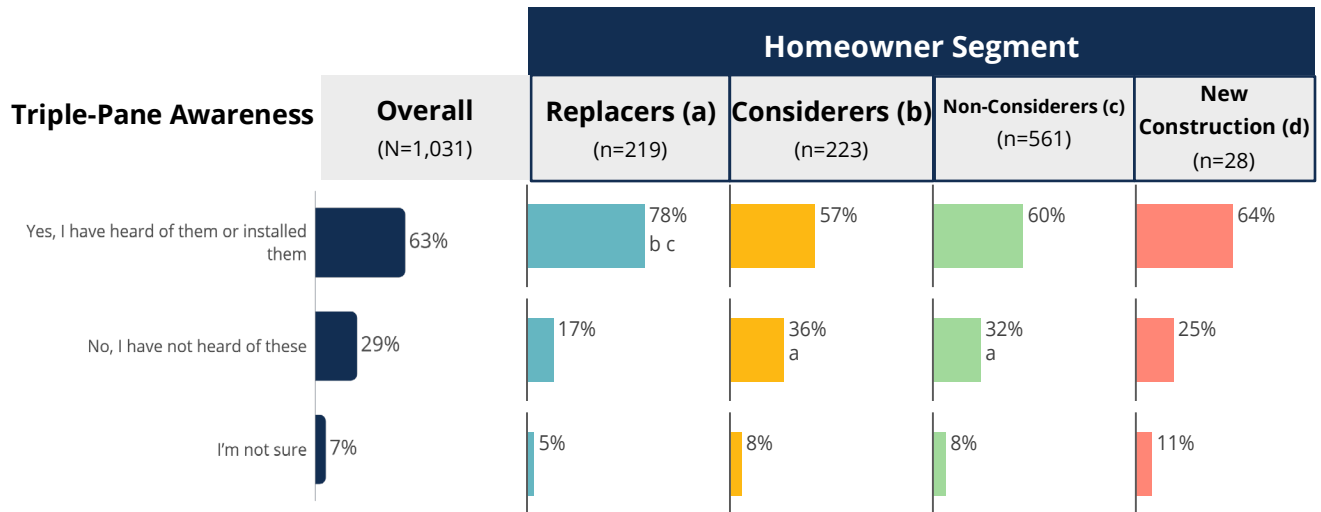
Interestingly, Replacers with Andersen windows displayed different reasons for selecting the brand compared to others. For example, Andersen buyers tended to choose that brand because of awareness and familiarity – 42% chose Andersen because they knew the brand compared to 19% for all other brands. By comparison, contractor recommendation was the most important factor for buyers of all other brands – 41% for all other brands compared to 28% for Andersen buyers.

Triple-pane interest and adoption


Awareness of triple-pane windows is moderate, but adoption remains limited

Triple-pane awareness was moderate: nearly two-thirds of homeowners (63%) reported that they have at least heard of triple-pane windows (Figure 21). Replacers showed higher familiarity at 78% and Considerers were lower at 57%, but still well above half of the segment.

Figure 21. Homeowner triple-pane awareness



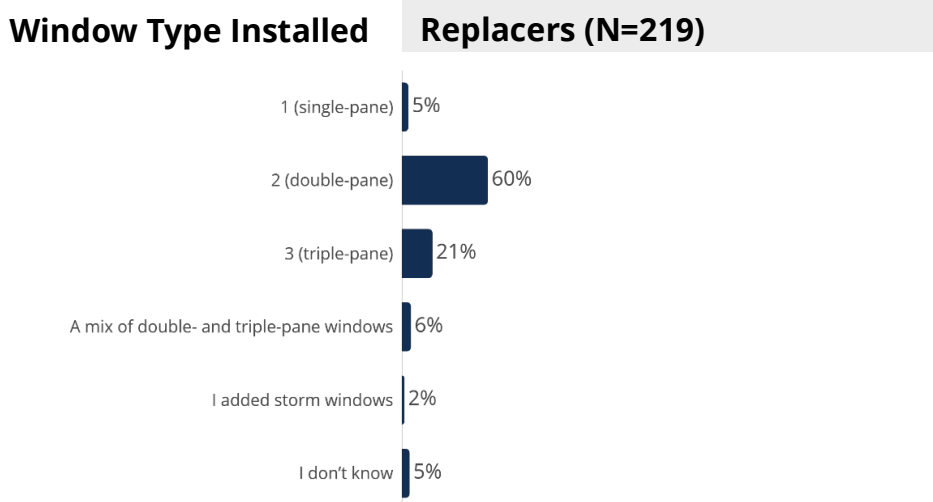
Note: Letters (a–d) indicate a significant difference between subgroups at a 95% confidence level. Due to rounding, charts do not sum to 100%.



- Awareness of triple-pane windows was higher in the Metro area (66%) than across Greater MN (58%).

Approximately 27% of Replacers reported having purchased some triple-pane windows (either all triple-pane or a mix of double- and triple-pane, Figure 22). Most often, these homeowners purchased double-pane windows – 60% purchased only double-pane and 6% purchased a mix of double- and triple-pane.

Figure 22. Type of window installed by Replacers (N=219)



Due to rounding, chart does not sum to 100%.



- Homeowners who believe their home is energy efficient were three times more likely to have purchased triple-pane windows compared to those who do not believe their home is energy efficient (25% vs. 8%).
- Triple-pane window purchases were more common among homeowners who have lived in their home for 10 or more years (29% vs. 14% who have lived fewer than 10 years in their home).
- Those who have lived fewer than 10 years in their home were more likely to have purchased double-pane windows (71% vs. 52%).

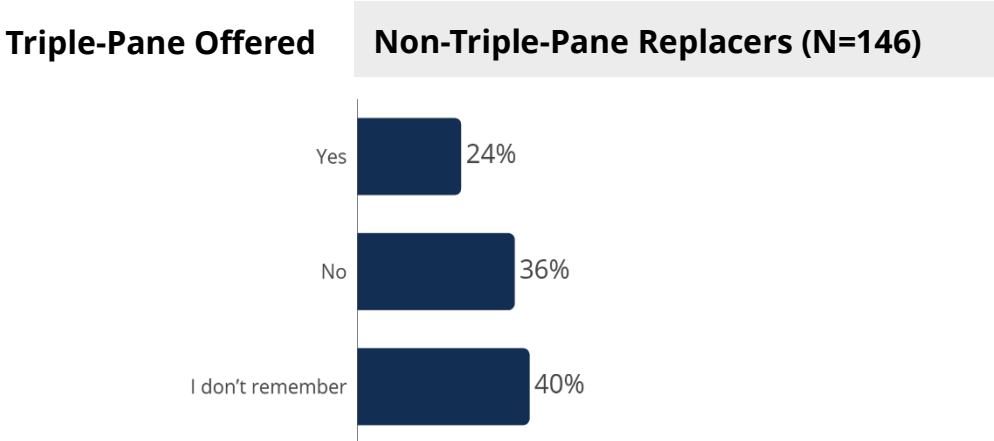
Homeowners who are offered triple-pane windows often elect to install them


Replacers who installed single-pane, double-pane, or storm windows were asked additional questions about their purchase experience to understand how, if at all, triple-pane windows factored. Of these respondents, 36% said that triple-pane windows were not provided as part of their bid compared to only 24% who said they were (Figure 23). This finding, combined with the dominance of double-pane installation previously mentioned, aligns with previous research that suggests contractors hesitate to bid triple-pane windows and believe double-pane windows sufficiently meet most customers' needs.⁴


⁴ Bruns. August 2025. "Window Market Insights Report: Residential Windows Contractors." Available [here](#).

At the same time, it's important to consider this finding in greater context. While 36% of respondents reported that triple-pane windows were not provided as an option, even more (40%) could not recall one way or the other. This relatively high lack of remembrance, combined with previous respondent confusion over window brand, could mean that respondents are over- or underreporting how frequently triple-pane windows are provided as part of standard bids.

Figure 23. Were triple-pane windows offered in your bid? (N=146)



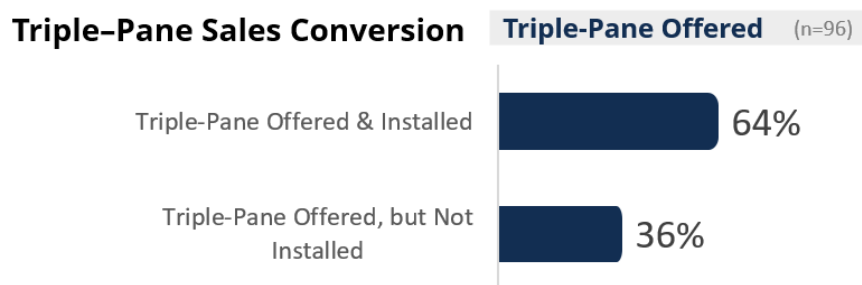




- Just 10% of low-income households recall being offered triple-pane windows, less than half the rate of high-income households (27%).
- Nearly twice as many homeowners in the Metro area recall being offered triple-pane windows compared to homeowners in Greater MN (29% vs. 16%).

To understand how often triple-pane bids translate to triple-pane sales, we combined triple-pane Replacers with non-triple-pane Replacers who recalled being offered triple-pane in their bid to determine the conversion rate of triple-pane sales. Results showed that more than 60% of those who received bids for triple-pane windows elected to install them (Figure 24). This purchase conversion rate further reinforces that slow triple-pane adoption may be due in part to contractors or retailers not presenting the product as a viable alternative and should encourage installers to see providing a triple-pane option as a worthwhile exercise.

Figure 24. Triple-pane selection among those who were offered it in their bid (N=96)



Improved insulation and efficiency are key selling points for triple-pane windows

To better understand what triggers homeowners to select triple-pane windows over other window types, we asked Replacers who installed triple-pane windows to share open-ended feedback on what led to their decision. Results were thematically analyzed.

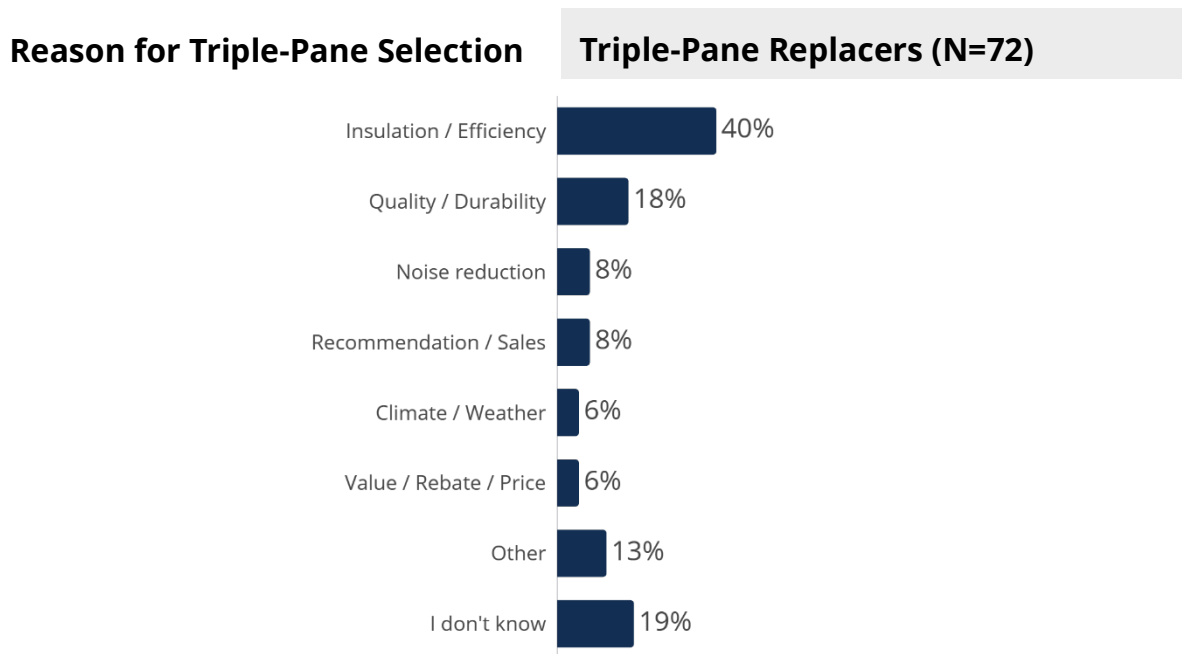
Forty percent of those who responded mentioned themes related to insulation and efficiency, such as, “It’s more efficient with conserving energy” or “Most energy efficient, provides the best protection from outside elements” (Figure 25). Another 18% mentioned themes related to quality and durability, such as, “It’s reliable for a long-term investment” and “More sustainable high quality.”

Additionally, 13% mentioned reasons that did not fit neatly into a category, including:

- “It’s what was ordered for me.”
- “I liked the benefits it came with.”
- “It was in the house originally, so we decided to go with that again.”

These survey results suggest that when approaching homeowners about triple-pane windows, contractors may find greater success with promoting the efficiency and quality of the window to improve the indoor environment, eliminate drafts, and make the home more comfortable. Additionally, 19% of survey respondents could not name a reason that they purchased triple-pane windows, which further emphasizes the importance of the contractor. In these instances, the endorsement of triple-pane windows by the contractor may have been the deciding factor since the homeowner was unable to name any specific reasons. It’s also possible that some homeowners may not actually know the type of windows installed, over-inflating the number of triple-panes reported.

Figure 25. Reason for selecting triple-pane windows (N=72)

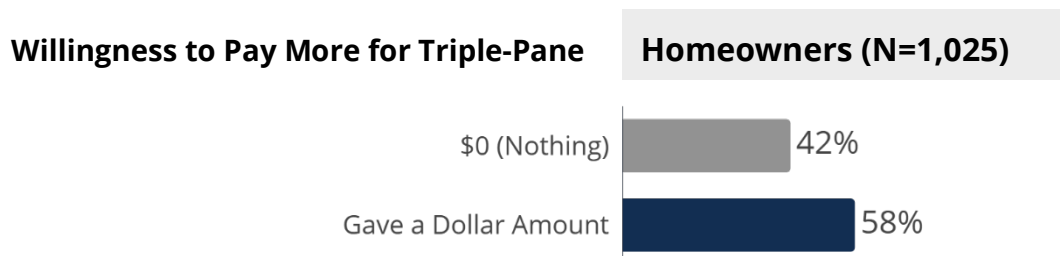


Due to rounding, chart does not sum to 100%.

Cost sensitivity is a main constraint on triple-pane adoption, with incentives and financing having a measurable impact

To understand how homeowners weigh the value of high-efficiency windows against the added cost, we asked homeowners how much more they would be willing to pay to install a triple-pane window compared to a standard double-pane window. When anchored to a \$1,000 installed double-pane window, two-fifths of homeowners (42%) said they would not pay any additional amount for triple-pane windows, suggesting that many homeowners do not see the value of high-efficiency window technologies (Figure 26).

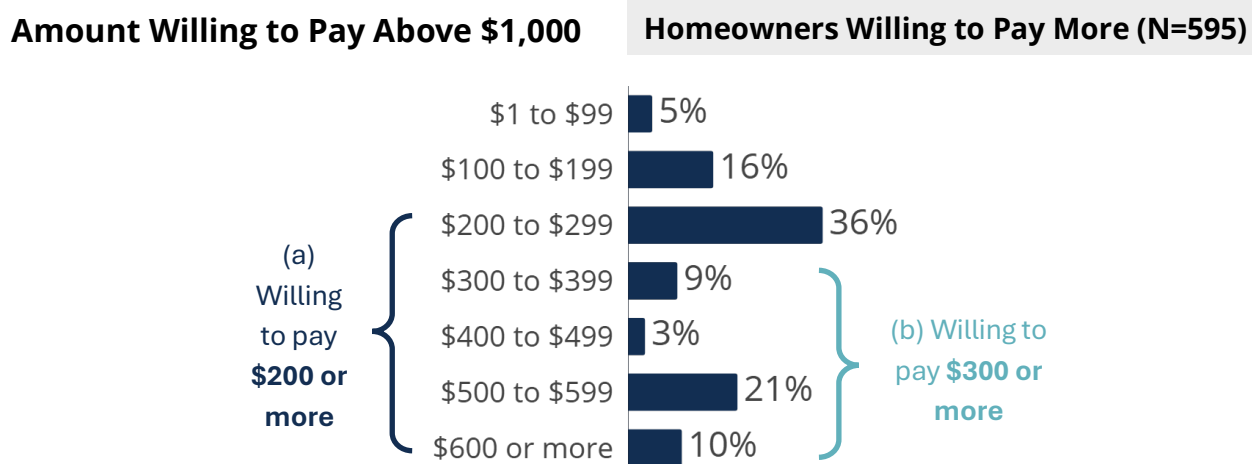
Figure 26. Homeowner willingness to pay more for triple-pane (N=1,025)

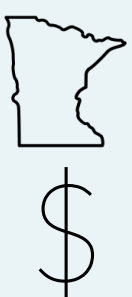


The 58% of homeowners who were willing to pay more for triple-pane provided amounts ranging from less than \$100 to more than \$600 per window (Figure 27). Of those were willing to pay more, 79% were willing to pay \$200 or more (a), and 43% were willing to pay \$300 or more (b).

When these figure were multiplied by the 58% that were willing to pay (to extrapolate to the full survey population at large), we found that 45% of homeowners overall would be willing to pay \$200 or more to upgrade from double-pane to triple-pane, and 25% of homeowners overall would be willing to pay \$300 or more.

Figure 27. Amount homeowners would be willing to pay above \$1,000 to upgrade from double-pane to triple-pane (N=595)



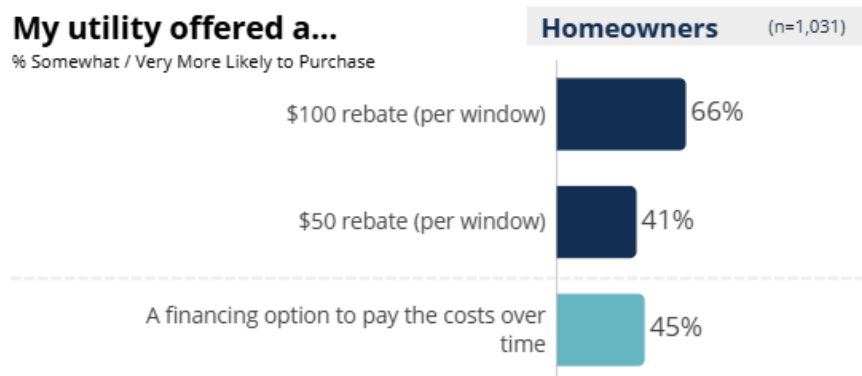


- One-half (50%) of those in Greater MN would not pay more for a triple-pane window, compared to just 38% in the Metro.
- Low-income households were the least likely to pay more for triple-pane windows, with 62% unwilling to pay a premium.

Respondents were also asked whether certain incentives would influence their interest in triple-pane windows. Homeowners were asked to rate the impact that a \$50 or \$100 utility rebate (per window) or financing options would have on their likelihood to pay an additional \$300 for a triple-pane window (when anchored to a \$1,000 installation cost for a standard double-pane window).

Overall, 66% of respondents said a \$100 rebate would make them much more or somewhat more likely to pay an additional \$300 per window while 41% said the same for a \$50 rebate (Figure 28). Offering a financing option appealed to just under half (45%) of Minnesota homeowners.

Figure 28. Likelihood to pay an additional \$300 for triple-pane if provided an incentive (N=1,031)



- A \$100 rebate had a bigger impact on high-income households than low-income households: 76% of respondents with annual household incomes of \$150,000 or more were more likely to purchase triple-pane windows with a \$100 utility rebate compared to just 54% of households with less than \$50,000 annual income.
 - A similar difference emerged for a \$50 rebate (49% for high-income households and 29% for low-income households), which may indicate these rebate amounts would not be enough to help low-income households overcome upfront cost barriers.



- Respondents who have lived in their homes for 20 or more years were the least likely to be influenced by any utility offerings. All three options had significantly more appeal to those who have been in their homes for fewer than 10 years.

DEMOGRAPHIC DIFFERENCES

Cost sensitivity is highest among low-income households, though interest in energy savings remains strong

Household income shapes both motivation and barriers to window replacement. Low-income homeowners (<\$50,000 household income annually) demonstrated strong interest in the energy-saving benefits of window replacement but faced greater financial constraints that limit adoption.

Low-income respondents placed the highest importance on lowering energy bills, with a MaxDiff score of 18.2 compared to 15.1 among high-income households (>\$150,000 household income annually). At the same time, this group showed the strongest sensitivity to upfront costs and was the least likely to pay a premium for higher-efficiency window technologies. Approximately 62% of low-income households reported that they would not pay any additional amount to upgrade from a double-pane to a triple-pane window.

Information-seeking behaviors also differed by income. Low-income homeowners relied more on retailers and utilities as sources of information when researching window replacement, while high-income households were more likely to consult manufacturers directly. Half of low-income households reported using retailers for information compared to just 13% of high-income households, and 28% reported using utility resources compared to only 6% of high-income households.

Homeowners in Greater MN prioritize energy efficiency, while Metro residents prioritize installation quality and incentives

Geographic location also influences homeowner perspectives and decision-making patterns. While the fundamental motivations for window replacement were similar statewide, the relative importance of certain benefits and purchasing considerations varied between homeowners in the Metro and those in Greater MN.

Homeowners in Greater MN placed a stronger emphasis on energy efficiency and heating and cooling cost reduction, ranking lowered energy bills as their most important decision factor (significantly higher than Metro residents). Metro residents, in contrast, showed greater concern for installation quality, available rebates, and contractor reputation.

Regional differences were also evident in adoption patterns and contractor engagement. Metro homeowners reported greater awareness of triple-pane window technology and were more likely to recall having been offered a triple-pane option during the purchase process. Approximately 29% of Metro homeowners reported being offered triple-pane windows compared to 16% of homeowners in Greater MN. This difference suggests that contractor networks in the Metro region may be more likely to carry or promote high-efficiency window technologies.

Cost sensitivity also varies by region. Homeowners in Greater MN were more likely to report that they would not pay a premium for triple-pane windows compared to Metro residents (50% vs. 38%), indicating that price sensitivity may be somewhat higher outside the Metro area.

Homes built in the 1980s and 1990s show the highest rates of recent window replacement

Characteristics of the home itself also influence replacement behavior. Homes built during the 1980s and 1990s were the most likely to have undergone window replacement in the past two years, with 31% of homeowners in these homes reporting recent replacement activity.

Length of homeownership is also associated with replacement decisions. Homeowners who have lived in their homes 5–20 years were more likely to undertake large-scale replacement projects involving 10 or more windows compared to those who have lived in their homes for shorter or longer periods. This pattern suggests that window replacement often occurs after homeowners have spent several years in a home and begin addressing longer-term maintenance and energy performance improvements.

CONCLUSIONS AND FUTURE CONSIDERATIONS

This study examined the motivations, barriers, and preferences driving window replacement among Minnesota homeowners. To synthesize key takeaways of this research, a series of conclusions and future considerations are provided.

Conclusions

1. **Comfort and bill savings are major drivers of purchasing new windows.** Comfort, energy bills, and upfront cost were 2–3 times more influential in window purchasing decisions compared to all other factors, including increased home value, sustainability, and curb appeal. When looking at initial triggers for window replacement, drafts and the desire to reduce energy bills rose to the top for homeowners who are considering or have purchased new windows, further solidifying comfort and cost as top consumer priorities.
2. **Cost remains a major barrier to purchasing new windows.** Homeowners who are considering and not considering new windows both said that high cost is the primary reason for their inaction (52% and 45% respectively). Together, these results indicate that affordability is not just a friction point, it is often the deciding factor that delays or prevents action.
3. **Homeowners who purchase new windows see the value.** More than 80% of homeowners who replaced their windows agreed the investment was worth it. Satisfaction remained high regardless of the amount spent, reinforcing that while homeowners may hesitate to replace their windows due to cost, when they pull the trigger, they don't regret it.
4. **Homeowners are willing to spend more to upgrade to triple-pane windows, especially if given help to bridge cost gaps.** For a baseline installed cost of \$1,000 for a double-pane window, more than 50% of homeowners said they would be willing to pay more for a triple-pane window. Additionally, more than 60% of homeowners said a \$100 per window utility rebate would make them more likely to purchase triple-pane windows, and 45% said the same about financing options.
5. **Homeowners who are offered triple-pane windows often elect to install them.** Although receiving a triple-pane bid without requesting it can still be difficult, more than 60% of homeowners who recalled being offered triple-pane windows during the sales process chose them for installation. This purchase conversion rate should bolster contractor confidence that providing a triple-pane option on standard bids is worthwhile.

Future considerations

The conclusions indicate that demand for triple-pane windows exists, but adoption is constrained by cost visibility, inconsistent presentation during the sales process, and limited

consumer understanding of value. The following recommendations focus on converting latent interest into action by addressing these barriers at key decision points.

1. **Continue leveraging opportunities to address upfront cost concerns.** Upfront cost remains the primary obstacle to window replacement and a key barrier for upgrading to triple-pane. However, the data shows that financial incentives can help reduce upfront cost barriers and move homeowners from consideration to action, especially when presented during the contractor quoting and decision phase. Specific suggestions include the following:
 - a. Structure utility rebates at or above the \$100 threshold, where impact significantly increases likelihood to purchase.
 - b. Offer clear, accessible financing options that spread costs over time.
 - c. Provide instant or point-of-sale incentives rather than delayed rebates.
 - d. Utilize cost calculators or consider other ways to highlight cost savings.
2. **Focus window messaging on comfort and bill savings.** While upfront cost remains a major consideration, homeowners also indicated that improved indoor comfort and lower energy bills are top priorities when considering new windows. These findings suggest marketing that emphasizes real, immediate outcomes over abstract or technical specifications may be most salient for homeowners. Specific suggestions include the following:
 - a. Highlight elimination of drafts and improved indoor comfort, particularly for those only replacing a few windows or an area of their home.
 - b. Directly connect window upgrades to lower energy bills or a way to lock in long-term savings.
3. **Reinforce that bidding triple-pane windows is worth contractors' time.** The research shows that for homeowners who recalled being offered triple-pane windows, the installation rates exceed 60%. This indicates that exposure to triple-pane windows is one of the most effective levers for growth, and that contractors influence homeowners' decision-making process. Equipping contractors to discuss triple-pane windows early and often is thus a crucial aspect of increasing triple-pane adoption. Specific suggestions include the following:
 - a. Encourage contractors to include triple-pane windows as a standard or side-by-side option in all bids.
 - b. Provide sales tools that clearly explain performance differences and long-term value.
 - c. Align contractor incentives with high-efficiency product adoption.

APPENDIX A. BIBLIOGRAPHY

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APPENDIX B. SURVEY INSTRUMENT



Introduction

Thank you for agreeing to participate in this important survey about home improvement. Your feedback will help us understand what matters to homeowners in Minnesota and help us shape programs to support homeowners like you.

The survey should take approximately 12-15 minutes to complete and will cover questions about home characteristics and updates, preferences and opinions, and some questions specifically about windows in your home.

As a thank you for your time, all qualified respondents who complete the survey will be entered into a sweepstakes drawing. Prizes include two (2) \$500 Amazon gift certificates and ten (10) \$50 Amazon gift certificates. The odds of winning are approximately 1:50 (\$50) or 1:250 (\$500).

This research is being conducted on behalf of the Efficient Technology Accelerator, a program funded by the state’s investor-owned utilities, administered by the Minnesota Department of Commerce, Division of Energy Resources, and implemented by Center for Energy and Environment (CEE). Your participation is completely voluntary and will not affect any services you receive from any of these entities. Your responses will remain anonymous, and we will compile responses into a public report.

Screening

S1. Do you currently own or rent your home?

- Own 1
- Rent 2 [\[THANK & TERM\]](#)
- Other (Please specify)..... 3 [\[THANK & TERM\]](#)

S2. Do you currently live in the state of Minnesota?

- Yes..... 1
- No 2 [\[THANK & TERM\]](#)

S3. What zip code is your primary residence in? (please enter 5-digit zip code)

[\[TEXT BOX\]](#) [\[FORCE 5 CHARACTER NUMERIC ENTRY\]](#)

S4. What type of home do you have?

- Single-family detached home 1
- Townhouse 2
- Duplex, triplex, or quadplex..... 3
- Mobile home or manufactured home..... 4
- Larger building (5+ units) 5 [\[THANK & TERM\]](#)
- Other (Please specify)..... 6 [\[THANK & TERM\]](#)
- Prefer not to answer..... 7 [\[THANK & TERM\]](#)

Renovation Experience & Segmentation

Q1. Which of the following home updates or renovation projects, if any, have you completed in the past 2 years? (Please select all that apply)

- Window replacement..... 1
- Roof replacement.....2
- Kitchen remodel3
- Bathroom remodel4
- New siding5
- New heat pump.....6
- New furnace or other HVAC system7
- Insulation upgrade8
- Landscaping or outdoor project.....9
- Solar panels10
- Other (Please specify)..... 11
- None of the above..... 12

[IF Q1≠1]

Q2. Which of the following home updates or renovation projects, if any, are you considering completing in the next 1-2 years? (Please select all that apply)

- Window replacement..... 1
- Roof replacement.....2
- Kitchen remodel3
- Bathroom remodel4
- New siding5
- New heat pump.....6
- New furnace or other HVAC system7
- Insulation upgrade8
- Landscaping or outdoor project.....9
- Solar panels10
- Other (Please specify)..... 11
- None of the above..... 12

Q3. Approximately when was your home built?

- 2020 or later..... 1
- 2010 – 2019..... 2
- 2000 – 2009..... 3
- 1990 – 1999..... 4
- 1980 – 1989..... 5
- 1970 – 1979..... 6
- 1950 – 1969..... 7
- Before 1950 8
- Don't know 9



[IF Q3=1; OTHERWISE SKIP TO INTRO BEFORE Q6]

Q4. Is your home a new build/new construction (i.e., you are the first owner)?

- Yes..... 1
- No 2
- Prefer not to answer..... 3

[IF Q4=1]

Q5. How involved were you in the decision-making process for your home’s energy efficient items (e.g., windows, HVAC, insulation)?

- Not at all involved..... 1
- Somewhat involved..... 2
- Very involved 3
- I don’t remember..... 4

The rest of the survey will largely focus on windows-related information.

Q6. Are you familiar with high-efficiency triple-pane windows? It is completely fine if you have not heard of these windows.

- Yes, I have heard of them or installed them..... 1
- No, I have not heard of these..... 2
- I’m not sure..... 3

[PROGRAMMERS NOTE]

CREATE SEGMENTS

- NEW CONSTRUCTION: [IF Q4=1]
- EXISTING HOME REPLACERS: [IF Q4≠1 & Q1=1]
- EXISTING HOME CONSIDERING: [IF Q4≠1 & Q1≠1 & Q2=1]
- EXISTING HOME NOT CONSIDERING: [IF Q4≠1 & Q1≠1 & Q2≠1]

[MaxDiff: Important Factors in Your Decision]

In the next set of questions, we want to understand what is most and least important to you when you may be shopping to upgrade the windows in your home.

You will see several screens, each with a set of 4-5 factors. On each screen, please choose the one factor that is or would be MOST important to you and the one factor that is or would be LEAST important to you when considering purchasing windows.

[Attribute List for Drivers/Benefits]

- a) Lowered energy bills
- b) Improved environmental sustainability
- c) Increased home resale value
- d) Available rebates and incentives
- e) Improved indoor comfort (temperature and drafts)
- f) The look of the window or enhanced curb appeal
- g) Reduced outside noise
- h) Ease of window maintenance
- i) Strong warranty coverage
- j) Total upfront cost
- k) Clear and simple product options
- l) No-pressure sales experience
- m) Professional installation quality

[EXAMPLE SCREEN LAYOUT]

(Screen 1 of 12)

Please choose the one factor that matters MOST to you, and the one factor that matters LEAST to you when considering purchasing windows.

	Most Important	Least Important
Lowering energy bills	<input type="radio"/>	<input type="radio"/>
Improving my home's security	<input type="radio"/>	<input type="radio"/>
Enhancing my home's curb appeal	<input type="radio"/>	<input type="radio"/>
The availability of a strong warranty	<input type="radio"/>	<input type="radio"/>

[EXISTING HOME REPLACERS] [IF Q4#1 & Q1=1] [ASK REP1 THRU REP14]

REP1 Which of the following factors contributed to your decision to replace your windows? (Please select all that apply)

- Window glass was broken..... 1
- Windows were difficult to open or close2
- Windows were difficult to lock.....3
- Windows were drafty or letting cold air in.....4
- Windows looked old/wanted to improve curb appeal..... 5
- Wanted to reduce moisture in or on the panes6
- Wanted to reduce outside noise..... 7
- Wanted to reduce energy bills..... 8
- Wanted to add resale value to my home 9
- Other (Please specify)..... 10

REP2. Where did you look to get information about your recent window replacement?
Select all that apply

- Retailer (Home Depot, Menards, Lowes etc) 1
- Contractors2
- Friends and family..... 3
- Utilities.....4
- Window manufacturers 5
- General online search 6
- Social media (please specify)..... 7
- Other source (please specify) 8
- I don't know..... 9

REP3. Approximately how many windows were replaced in your home?

[NUMERIC ENTRY 1-99]

- I don't remember..... 1

REP4. Which of the following best describes who installed the windows in your home?

- I installed them myself (DIY) 1
- A professional window contractor or installation company 2
- A general handyman 3
- Other (please specify) 4
- I don't know 5

[IF REP4=2]

REP5. Where did you look to find a contractor to install your windows? Select all that apply.

- Family or friends 1
- A contractor who has done other work for me 2
- Energy utility website 3
- Google or other internet search..... 4
- Other (Please specify)..... 5
- I don't know 6

REP6. Approximately how much did you spend in total on updating the windows in your home, including installation?

- Less than \$2,500 1
- \$2,500 - \$4,999 2
- \$5,000 - \$9,999 3
- \$10,000 - \$19,999 4
- \$20,000 - \$29,999 5
- \$30,000 - \$39,999 6
- \$40,000 - \$49,999 7
- \$50,000 - \$59,999 8
- \$60,000 - \$69,999 9
- \$70,000 - \$79,999 10
- \$80,000 or more 11
- Prefer not to answer 12
- I don't know 13

REP7. Thinking about the total cost of the project, please indicate how much you agree or disagree with the following statement:

"The investment in my new windows was well spent."

- Strongly disagree 1
- Somewhat disagree 2
- Neither agree nor disagree 3
- Somewhat agree 4
- Strongly agree 5
- I don't know 6

[IF REP7=1-5]

REP8. Please explain why you selected that response.

[TEXT BOX]

- I don't know 1



REP9. What BRAND of windows did you install?

Andersen / Renewal by Andersen	1
Harvey Industries	2
JELD-WEN.....	3
Marvin	4
MI Windows & Doors.....	5
Pella.....	6
Ply Gem	7
Simonton.....	8
Soft-Lite	9
Thermo-Tech	10
Vector	11
Another brand (please specify)	12
I don't know.....	13

REP10. What made you select that brand of window? (Select all that apply)

Recommendation by or available at a retailer (e.g. Home Depot)	1
Contractor recommendation or bid	2
Friend, family, or neighbor recommendation	3
I previously had this brand of windows.....	4
I knew of or liked the manufacturer/brand	5
Online reviews	6
Product cost.....	7
Product features or design	8
Something else (Please specify)	9
I don't know.....	10

REP11. What was the most influential in your decision to select that brand?

[PIPE IN RESPONSES FROM REP10]

I don't know.....	1
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REP12. How many panes of glass do your new windows have?

1 (single-pane)	1
2 (double-pane).....	2
3 (triple-pane).....	3
A mix of double- and triple-pane windows.....	4
I added storm windows	5
I don't know.....	6



[IF REP12=1,2,5]

REP13. When you received bids for your windows, were triple-pane windows provided as an option?

- Yes 1
- No 2
- I don't remember 3

[IF REP12=3,4]

REP14. What made you decide to go with triple-pane windows?

[TEXT BOX]

I don't know 1

[EXISTING HOME: CONSIDERING] [IF Q4≠1 & Q1≠1 & Q2=1] [ASK CON1 THRU CON5]

CON1 Which of the following were factors in motivating you to consider updating your windows? (Please select all that apply)

- Window glass was broken..... 1
- Windows were difficult to open or close 2
- Windows were difficult to lock 3
- Windows were drafty or letting cold air in.....4
- Windows looked old/wanted to improve curb appeal.....5
- Wanted to reduce moisture in or on the panes6
- Wanted to reduce outside noise..... 7
- Wanted to reduce energy bills..... 8
- Wanted to add resale value to my home 9
- Other (Please specify)..... 10

CON2: When researching window replacement, which sources of information have you or would you use? Select all that apply.

- Retailer (Home Depot, Menards, Lowes etc) 1
- Contractors 2
- Friends and family..... 3
- Utilities 4
- Window manufacturers 5
- General online search 6
- Social media (please specify)..... 7
- Other source (please specify) 8
- I don't know..... 9

CON3. What are the primary reasons that you are considering, but have not yet replaced your windows? Please select all that apply.

- Too high of cost 1
- My current windows are still functional..... 2
- I don't know where to start 3
- The installation process is too disruptive..... 4
- I am planning to move soon 5
- I need to take care of other home needs first 6
- I don't see the value / return on investment..... 7
- The options and terminology are confusing..... 8
- I have not found a contractor I like 9
- Other (Please specify)..... 10
- I don't know 11



[IF MULTIPLE SELECTIONS IN CON3]

CON4. Of the options you selected, which one is the primary reason you have not yet replaced your windows?

[PIPE IN RESPONSES FROM CON2]

CON5. When was the last time, if ever, that the windows on your home were replaced?

- Within the past 5 years..... 1
- 6-10 years ago 2
- 11-20 years ago 3
- More than 20 years ago 4
- Never, they are the original windows 5
- I don't know 6

[EXISTING HOME: NOT CONSIDERING] [IF Q4≠1 & Q1≠1 & Q2≠1] [ASK NC1 THRU NC2]

NC1. When was the last time, if ever, that the windows on your home were replaced?

- Within the past 5 years..... 1
- 6-10 years ago 2
- 11-20 years ago 3
- More than 20 years ago 4
- Never, they are the original windows 5
- I don't know 6

NC1b. What condition are your windows in?

- Excellent 1
- Good 2
- Fair..... 3
- Poor 4

[ASK NC2 to NC4 IF NC1b = FAIR OR POOR; OTHERWISE SKIP TO PRICING SECTION]

NC2. What are the primary reasons that you are **not** considering updating your windows in the next few years? Please select all that apply.

- Too high of cost 1
- My current windows are still functional 2
- I don't know where to start 3
- The installation process is too disruptive..... 4
- I am planning to move soon 5
- I need to take care of other home needs first 6
- I don't see the value / return on investment..... 7
- The options and terminology are confusing..... 8
- I have not found a contractor I like 9
- Other (Please specify)..... 10
- I don't know 11

[IF MULTIPLE SELECTIONS IN NC2]

NC3. Of the options you selected, which one is the primary reason you are not considering updating your windows in the next few years?

[PIPE IN RESPONSES FROM NC2]

NC4. How soon do you expect to replace the windows in your home?

- In the next 5 years..... 1
- 6-10 years..... 2
- 10+ years..... 3
- Have not considered/no plans to replace 4

Pricing (All Respondents)

[INSTRUCTION SCREEN]

Pricing is certainly an important factor in the decision process for updating the windows on your home.

Most new windows in MN are double-pane windows. However, new technology has made triple-pane windows available. Triple-pane windows offer superior insulation that will lower your energy bill, reduce outdoor sound, limit drafts, and minimize condensation, among other benefits.

PR1. Assuming a single standard 3’x5’ double-pane window costs \$1000 to install (including the window and labor), **how much more** would you be willing to pay to install a triple-pane window?

(Please enter the additional amount you would pay over \$1,000, not the total amount)

[DOLLAR INPUT]

\$ _____

I would not be willing to pay anything more 1

PR2. Assuming the triple-pane window is \$300 more than the double-pane window (\$1300 installation cost in total), would you be any more likely to purchase a triple-pane window in the following situations:

	Much more likely 4	Somewhat more likely 3	Slightly more likely 2	This would not impact my decision 1	I don't know 9
a. My utility offered a financing option to pay the costs over time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. My utility offered a \$50 rebate (per window)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. My utility offered a \$100 rebate (per window)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

[IF PR2a=1,9 & PR2b=1,9 & PR2c=1,9]

PR3. What amount of financing or rebates (per window) would influence your decision?

[TEXT BOX]

No amount would influence my decision 1
 I don't know 2

Demographics

Finally, just a few more questions to help us classify your responses.

D1. Overall, how energy efficient would you say your home is?

- Very efficient 1
- Somewhat efficient..... 2
- Neither efficient nor inefficient 3
- Somewhat inefficient 4
- Very inefficient 5
- Don't know 9

D2. How many people live in your household?

[NUMERIC INPUT 1-99]

- Prefer not to answer..... 1

D3. How long have you lived in your home?

- Less than 2 years..... 1
- 2-4 years 2
- 5-9 years 3
- 10-14 years 4
- 15-20 years 5
- Over 20 years 6
- Prefer not to answer..... 7

D4. What is your age?

- 18-24..... 1
- 25-34..... 2
- 35-44..... 3
- 45-54..... 4
- 55-64..... 5
- 65-74..... 6
- 75 or older..... 7
- Prefer not to answer..... 8

D5. Which of the following best describes your total annual household income before taxes?

- Less than \$50,000 1
- \$50,000 - \$74,999..... 2
- \$75,000 - \$99,999..... 3
- \$100,000 - \$149,999..... 4
- \$150,000 - \$199,999..... 5
- \$200,000 or more..... 6
- Prefer not to answer..... 7



D6. What is the approximate current value of your home?

Less than \$100,000.....	1
\$100,000 - \$199,999.....	2
\$200,000 - \$299,999.....	3
\$300,000 - \$399,999.....	4
\$400,000 - \$499,999.....	5
\$500,000 - \$749,999.....	6
\$750,000 - \$999,999.....	7
\$1,000,000 or more.....	8
Prefer not to answer.....	9

Closing

Thank you for your time and valuable feedback!

To be entered into the sweepstakes drawing for one of two (2) \$500 Amazon gift certificates or one of ten (10) \$50 Amazon gift certificates, please provide your email address below. Your email will only be used to contact you if you are a winner and will not be linked to your survey responses.

Email Address: [Text Entry]

[] Check here to opt-out of the sweepstakes.

Thank you for participating!

FOLLOW UP

F1. Would you be interested in participating in a follow-up interview about your responses?
Please note that selecting “yes” does not guarantee you will be contacted.

Yes.....	1
No.....	2

[IF F1=1 & ABS SAMPLE]

Please enter your contact information. We will not share or sell your information, and it will not be attached to your responses in any public reporting. If you are contacted for an interview, we may reference your specific responses to this survey.

First Name _____

Last Name _____

Email _____

Phone _____