


2025

IMPROVING AMERICA'S HOUSING

JOINT CENTER FOR HOUSING STUDIES
OF HARVARD UNIVERSITY

Joint Center for Housing Studies of Harvard University

Harvard Graduate School of Design | Harvard Kennedy School

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INTRODUCTION AND SUMMARY

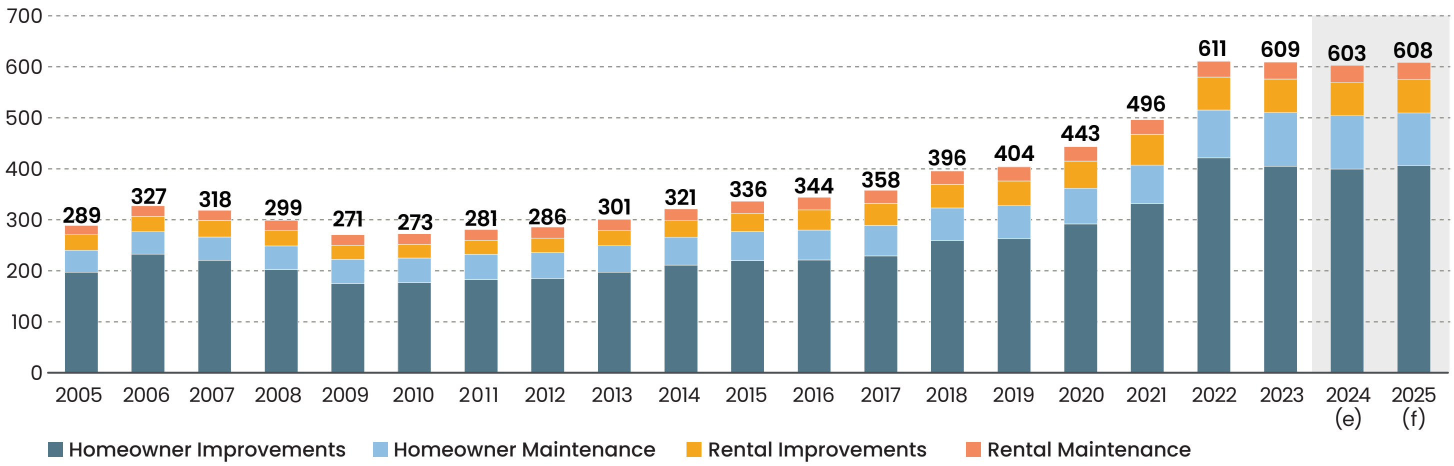
Spending in the US residential remodeling market reached unprecedented heights in the wake of the COVID-19 pandemic, soaring above $600 billion in 2022. Despite modest declines in 2023 and 2024, market expenditures for improvements and repairs to owner-occupied and rental properties remained far above pre-pandemic levels. This extraordinary boom was driven by strong growth in the number of owners undertaking projects and in average spending, bolstered by a healthy labor market, record-high property values, and aging homes in need of investment. Many owners continue to adapt their properties for changing needs and uses, even as today's lower rates of personal savings and household mobility dampen improvement and repair spending.

Significant inflation in the costs of building materials and labor coupled with a large and persistent skilled trade labor shortage have challenged not only owners seeking to update and maintain their properties, but also professional contracting firms. Overcoming these obstacles is essential in order to meet the current and future demand for modernizing and preserving the existing housing stock. Despite unparalleled spending in recent years, much more investment is required to address the large and growing need to further improve energy efficiency, disaster resiliency, and accessibility for the nation's 145 million homes.

Figure 1

The Home Remodeling Market Is Expected to Remain Above $600 Billion in 2025

Market Spending (Billions of Dollars)



Note: Estimated (e) and forecasted (f) values are modeled using the 2024:Q4 Leading Indicator of Remodeling Activity (LIRA).
Source: JCHS analysis of US Department of Housing and Urban Development (HUD), American Housing Surveys; US Department of Commerce, Retail Sales of Building Materials; US Census Bureau, Surveys of Residential Alterations and Repairs (C-50); US Bureau of Economic Analysis, Detailed Fixed Asset Tables; US Bureau of Labor Statistics, Consumer Price Index: Rent of Primary Residence; and LIRA.

REMODELING EXPENDITURES REMAIN ELEVATED

The pandemic sparked a spending boom in improvements—which include projects, whether discretionary or required, that typically boost home values—and in routine maintenance and repairs that generally prevent depreciation. Since peaking at $611 billion in 2022, the remodeling market has contracted slightly in the face of mixed economic and industrial conditions **(Figure 1)**. Yet spending is ultimately expected to remain near its peak through 2025, according to the latest estimates and projections from the Joint Center for Housing Studies.

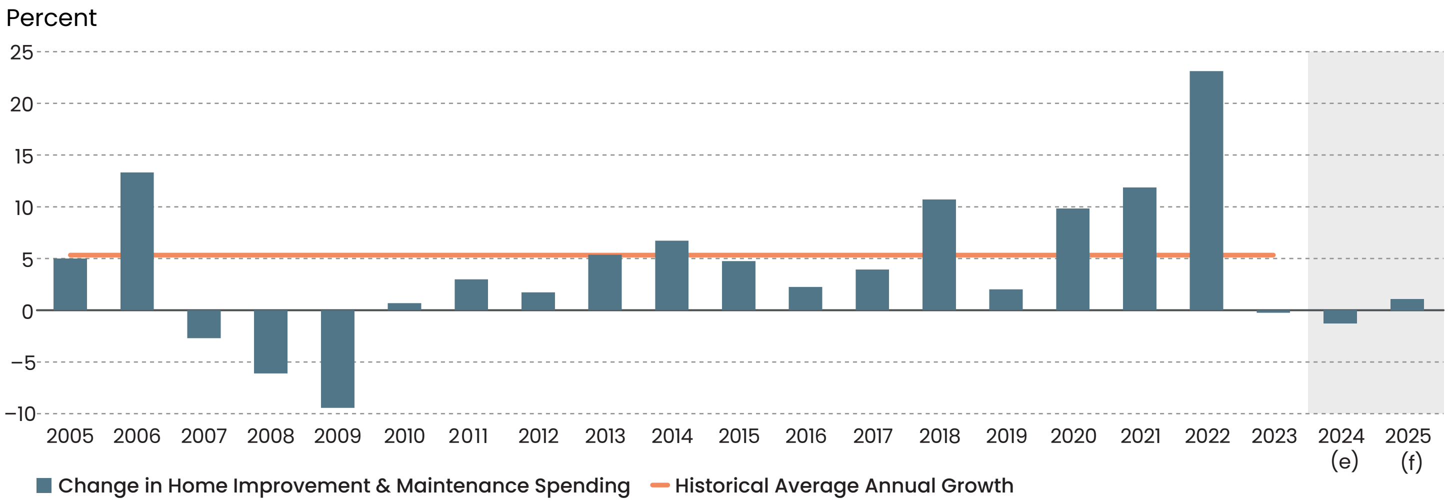
The market decline in the aftermath of the pandemic is modest, thus demonstrating the underlying strength of consumer demand for home improvements and repairs. Indeed, the recent dip in spending is projected to be short-lived and mild, especially compared to the previous downturn during the Great Recession, when home improvement and repair spending fell 17 percent from peak to trough **(Figure 2)**. The Center forecasts that the remodeling market will return to growth in 2025, but at a rate well below the historical average annual gain of about 5 percent.

The sharp increase since 2019 was propelled by the owner-occupied segment, which accounts for more than 80 percent of total expenditures. In 2023, both the number and the share of homeowners spending on improvements remained above pre-pandemic levels and rates at almost 26 million households and 29.7 percent of owners. In 2019, just over 22 million, or 28.0 percent of owners, were undertaking improvements. The share of owners spending on maintenance remained steady from 2019 to 2023 at 75 percent, even as the number increased from 60 million to 65 million. On average, homeowners spent almost $4,700 on improvements in 2023, nearly 9 percent above per owner spending in 2007 during the prior market boom after adjusting for inflation. Additionally, average per owner maintenance spending hit a new high of $1,200.

Some early pandemic shifts in the composition of home improvement spending have since reverted to pre-pandemic trends. Aggregate improvement expenditures became more concentrated among high-spending households between 2021 and 2023 as homeowners focused relatively less on do-it-yourself (DIY) projects and more on professional installations. During the same period, owner expenditures on projects that often require skilled labor—such as

Figure 2

The Remodeling Downturn Is Expected to Be Short-Lived and Mild



Notes: Estimated (e) and forecasted (f) values are modeled using the 2024:Q4 LIRA. Historical average annual growth is from 1995 to 2023.
Source: JCHS analysis of HUD, American Housing Surveys; US Department of Commerce, Retail Sales of Building Materials; US Census Bureau, C-50; US Bureau of Economic Analysis, Detailed Fixed Asset Tables; US Bureau of Labor Statistics, Consumer Price Index: Rent of Primary Residence; and LIRA.

kitchen and bath remodels, interior replacements including flooring, system replacements like electrical and HVAC, and disaster repairs—increased at a faster pace than the improvement market overall. Annual spending on professionally installed projects grew 14 percent between 2021 and 2023 in real terms, while DIY spending declined 13 percent.

DEMOGRAPHIC CHANGES TRANSFORM THE MARKET

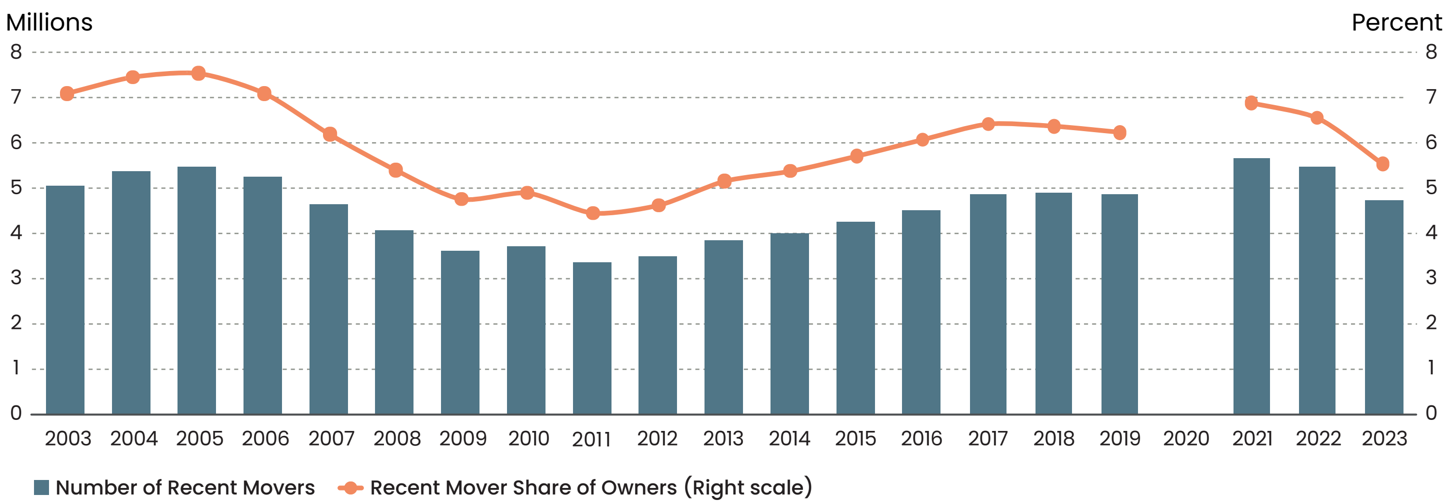
Changing homeowner demographics are impacting the size and composition of the improvement market. In 2023, owners age 65 and over contributed 27 percent of total improvement outlays, up from 14 percent two decades earlier. This gain reflects the large increase in the number of older homeowners and the considerable growth in their average spending. Between 2003 and 2023, the number of owners age 65 and over grew by 12 million, pushing their share of owners from 24 percent to 34 percent. Over the same time, their average per owner spending climbed from an inflation-adjusted $1,800 in 2003 to $3,800 in 2023—more than twice the 48 percent growth in per capita spending among all homeowners.

Younger homeowners have also increased their improvement spending in the past decade, although the worsening housing affordability crisis suppresses their ranks and their contributions to the remodeling market. After a steep decline in the wake of the Great Recession, the number of homeowners under age 35 grew 15 percent to 8 million between 2015 and 2023, though there were still 25 percent fewer younger owners than during the mid-2000s housing boom. While real aggregate spending by owners under age 35 jumped 51 percent over the same period, their market expenditure remained 14 percent below the prior peak.

As the overall population becomes more racially and ethnically diverse, households headed by a person of color contribute more to the home improvement market despite enduring disparities in income, homeownership, and home equity. In 2023, homeowners of color accounted for 23 percent of aggregate improvement expenditures, up from 14 percent in 2003. This corresponded with a nearly 9 percentage point increase in the share of homeowner households headed by a person of color. Immigrant owners account for a growing share of the market as well, up from 8 percent of aggregate improvement expenditures in 2003 to 13 percent in 2023. Foreign-born

Figure 3

Owner Mobility Has Dropped After a Pandemic-Induced Increase



Notes: Recent movers bought their homes within the previous year. Estimates for 2020 are omitted due to data collection issues experienced during the pandemic.
Source: JCHS tabulations of US Census Bureau, American Community Survey 1-Year Estimates.

owners represent much larger shares of metro home improvement markets where immigrant households constitute greater proportions of homeowners.

Although the number and share of homeowners changing residences increased early in the pandemic, homeowner mobility has since dropped below its pre-pandemic rate amid elevated interest rates, high home prices, and limited for-sale inventories **(Figure 3)**. According to the American Community Survey (ACS), the number of owners who moved in the previous year fell from 5.7 million to 4.7 million between 2021 and 2023 after growing by about 800,000 households between 2019 and 2021. Elevated mortgage rates will likely continue to constrict mobility, leaving many would-be buyers unable to afford a home and disincentivizing owners with below-market rates from selling.

Homeowner mobility typically boosts improvement spending as owners prepare homes for sale and buyers prioritize improvements during the first years after purchase. Owners who undertake pre-sale projects typically spend twice as much as owners overall, while recent homebuyers consistently outspend non-movers by more than a third. Accordingly, falling mobility rates are expected to reduce demand for the sorts of improvements that often accompany a home sale.

However, under the current circumstances, the ordinarily negative effect of lower mobility on home improvement spending may be somewhat offset by other spending patterns that stem from the decline of housing turnover. That is, owners who remain in their homes may be more likely to undertake certain improvements to facilitate longer tenures and address changing needs. For example, owners planning to stay put may decide that a new roof or a more energy-efficient HVAC system is a better investment than a temporary repair. The net effect of these dueling market forces remains to be seen.

AGING HOUSING STOCK CALLS FOR REINVESTMENT

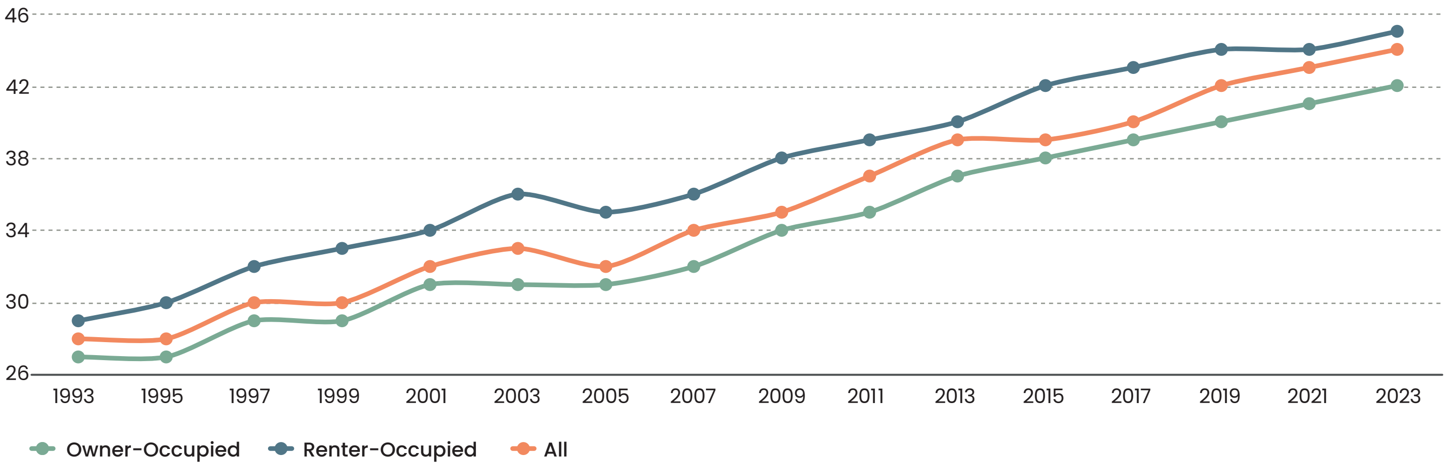
The housing stock is older than ever before. With a median age of 44 years in 2023, the stock has aged considerably since the Great Recession drove homebuilding to historic lows **(Figure 4)**. At the same time, improvements in building construction standards and materials have extended the longevity of homes, further contributing to aging. But as homes age, more improvements are needed to replace worn components and systems, such as roofs and HVAC, in addition to the standard maintenance. In 2023, average per owner improvement spending for homes built before 1980 was 24 percent higher than spending on homes built since 2010, and average per owner maintenance spending was 76 percent higher. The ongoing aging of the housing stock will drive strong repair and improvement spending for years to come.

Public and nonprofit assistance is also required to address inadequate housing conditions for households that lack the resources to fund needed repairs and upgrades. Homeowners with lower incomes spend much less on improvement and repair than their higher-income counterparts, which jeopardizes safe and habitable living conditions. In 2023, average per owner improvement and maintenance spending among homeowners with annual household incomes in the lowest quintile (less than $37,500) was $3,100 compared to $10,900 among those with incomes in the highest quintile (more than $172,000). Consequently, 6 percent of owners with the lowest incomes live in moderately or severely inadequate housing that has structural deficiencies or lacks basic features such as running water, electricity, and heat, nearly double the share of owners overall. There is both a market opportunity and a moral imperative for expanding direct home improvement and repair services, financing tools, and counseling programs that help to preserve the affordable housing stock and ensure that all households live in safe and adequate housing.

Figure 4

The Housing Stock Has Aged Greatly

Median Age of Housing Units (Years)



Note: All includes vacant units.
Source: JCHS tabulations of HUD, American Housing Surveys.

CLIMATE CHANGE NECESSITATES IMPROVEMENT SPENDING

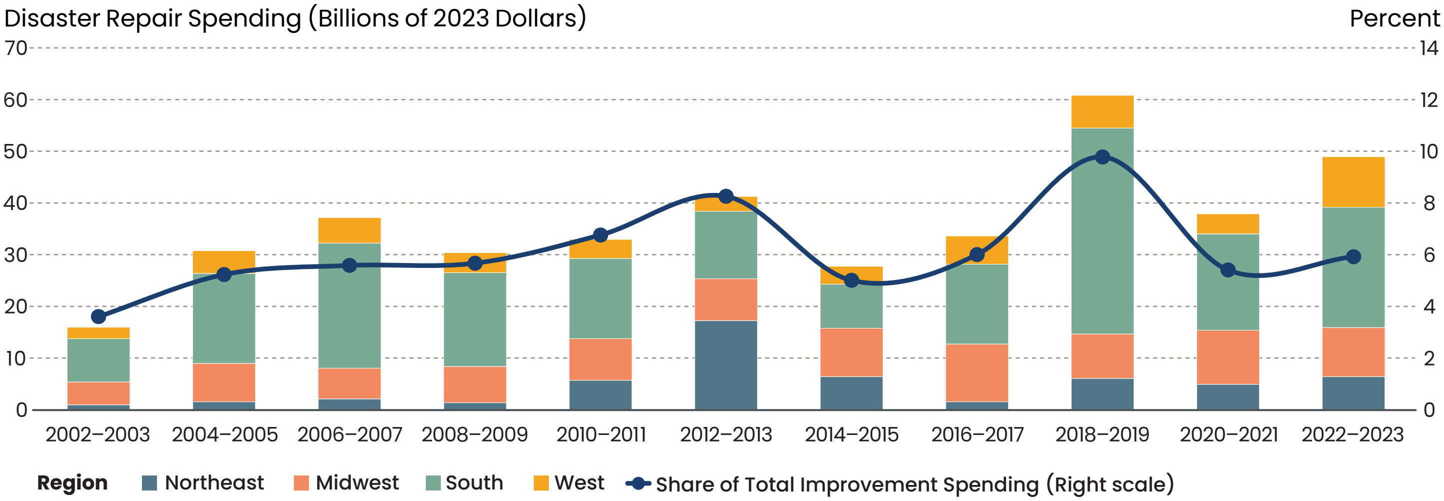
In confronting global climate change, the need to improve the energy performance and disaster resilience of the housing stock grows increasingly urgent. The market for home improvement projects that influence and thus have the potential to reduce home energy consumption, such as roofing, HVAC, and windows, has nearly quadrupled in the last two decades compared to a tripling of overall spending. Spurred in part by incentives for energy retrofits following the Great Recession, the share of aggregate homeowner spending on energy-related improvement projects grew between 2009 and 2011 by more than 7 percentage points to 36 percent and has since maintained an elevated market share. In 2023, projects that affect home energy use accounted for about $140 billion in owner improvement spending, 34 percent of the national total. In addition, 17 percent of homeowners (nearly 15 million households) reported undertaking one or more projects in the previous two years explicitly to improve energy efficiency.

Further increases in energy-related remodeling are expected due to incentives in the 2022 Inflation Reduction Act (IRA), including residential retrofit rebates and tax credits. In 2023, the first full year that the law's clean energy and energy-efficient home improvement tax credits were available, more than 3.4 million tax filers claimed these credits for such projects as rooftop solar installations, insulation, windows, and electric heat pumps. These filings indicate growing consumer interest in and demand for energy-related upgrades. Even with the increased spending, much of the housing stock still requires extensive retrofits to improve home energy performance.

Housing is also impacted by the changing climate through the growing frequency and intensity of hazard events like hurricanes, tornadoes, wildfires, and flooding. Homeowner spending for disaster repairs has trended up in all regions of the country, totaling $49 billion in 2022–2023, as compared to $16 billion in 2002–2003 after adjusting for inflation **(Figure 5)**. Aggregate spending growth has been especially strong in the Northeast, but the South and the West have also had above-average gains. Meanwhile, disaster repair spending as a share of national improvement expenditures increased from an average of 4.4 percent in the decade before 2004 to 6.4 percent in the decade since 2013.

Figure 5

Spending for Disaster Repairs Is Trending Up Across the Country



Notes: Disaster repairs are a subset of improvement spending on owner-occupied homes. Expenditures are adjusted for inflation using the CPI-U for All Items.
Source: JCHS tabulations of HUD, American Housing Surveys.

The need remains for disaster mitigation retrofits that make homes more resilient against weather- and climate-related hazards and reduce future damage. Such activities include strengthening roofs against high winds, elevating mechanical equipment such as HVAC and water heaters or entire homes above flood levels, and replacing exterior materials with noncombustible alternatives. Although few homeowners undertake mitigation projects, there are increasing motivators to do so, including skyrocketing hazard insurance premiums. The national average homeowner insurance premium jumped 17 percent between 2021 and 2023 alone, according to the American Housing Survey (AHS). Rising insurance costs as well as increasing disaster exposure will almost certainly drive growth in the disaster mitigation market.

SUPPLY-SIDE CHALLENGES CONTINUE

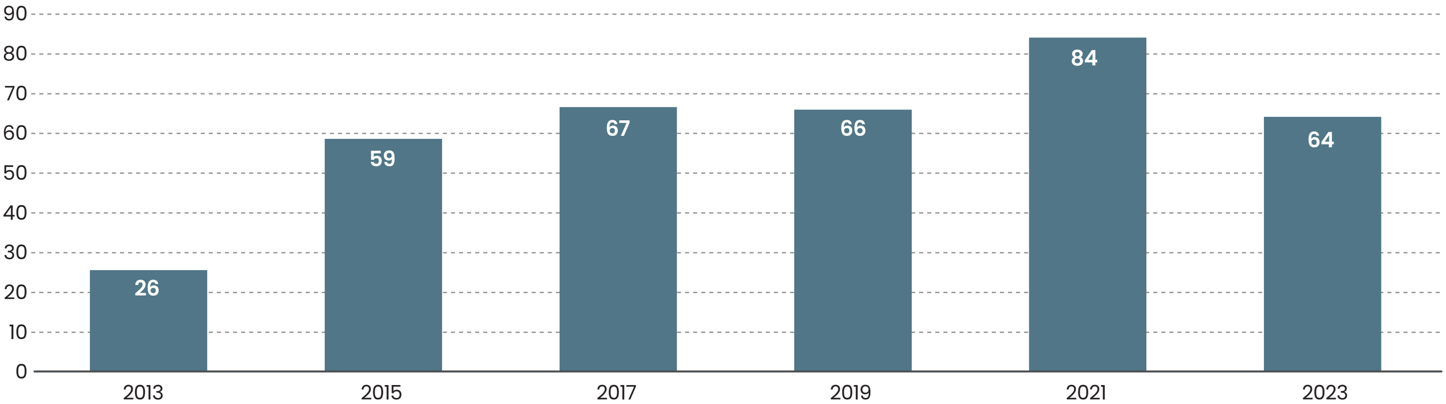
Despite growing concentration among larger-scale firms and notable private equity investment, mergers, and acquisitions, the residential remodeling industry remains highly fragmented, with large shares of self-employed contractors and small payroll businesses. Nearly two-thirds of general remodeling contractors with payrolls had revenues of less than $500,000 at last measure in 2017. Consequently, the remodeling sector suffers high rates of business closings even during strong markets. The typical general remodeling business employs fewer than four staff, even as the number of these establishments with payrolls has grown rapidly since the Great Recession. This ongoing fragmentation hinders the capacity of professional contractors to meet demand.

The remodeling industry is further constrained by the substantial growth in the costs of building materials and labor since the pandemic. Shortages of labor also remain entrenched for many skilled trade jobs. Between 2015 and 2023, a majority of remodelers reported some or serious shortages in the availability of subcontracted workers such as carpenters, masons, electricians, and plumbers, according to the National Association of Home Builders (NAHB) **(Figure 6)**. The construction industry has relied heavily on foreign-born laborers for many years, with immigrants accounting for a record-breaking 34 percent of the skilled trades labor force in 2023. Efforts to recruit and retain younger, native-born, and female workers, as well as non-Hispanic people of color, for construction trade jobs are slowly diversifying the workforce, but more must be done to meet current and future labor needs.

Figure 6

Most Remodelers Continue to Experience Skilled Trade Labor Shortages

Share of Remodelers Reporting Some or Serious Shortages of Subcontractor Labor (Percent)



Note: Data are averages of the following trades: rough and finished carpenters, electricians, excavators, framing crews, roofers, plumbers, masons, painters, weatherization workers, and HVAC workers.
Source: JCHS tabulations of National Association of Home Builders/Westlake Royal, Remodeling Market Index.

Investments in construction research and development hold promise for both decreasing the costs and increasing the productivity of the current labor force. To date, however, innovations specific to home remodeling and repair have been minimal. Advancements in predictive technologies that use data from sensors or property inspections to identify needed repairs or improvements are promising for expanding demand. But the remodeling industry's capacity to invest in these and other technologies, trainings, or building construction and material innovations is limited by its high fragmentation.

THE OUTLOOK

In the near term, the remodeling industry faces both challenges and opportunities. On the one hand, elevated interest rates, weak home sales, high labor and material costs, and a persistent shortage of skilled labor are expected to constrain the market. At the same time, massive levels of home equity, a sustained shift toward working from home, favorable demographics, and the aging of the housing stock will support significant investment in home improvements and maintenance, perhaps most notably among owners who prioritize updating their existing homes over moving. The remodeling market has further opportunities to adapt homes to address deficiencies in accessibility, energy efficiency, and disaster resilience.

Given the strong foundation and growing needs, residential remodeling is expected to remain a formidable economic sector. Improvements and repairs to the existing housing stock have constituted a majority share of total private residential construction spending in the US for 16 years running, excepting 2021. Barring an unforeseen boom in homebuilding, this trend is anticipated to last. Home improvement and repair spending is likely to remain near the recent peak and therefore should continue to play a significant role in residential investments.

REMODELING MARKETS IN TRANSITION

The residential remodeling market soared to new heights in the wake of the pandemic, driven by strong gains in both the number of property owners pursuing projects and average spending levels. Expenditures for improvements and repairs to owner-occupied and rental properties topped $600 billion in 2022. Though the remodeling market cooled in 2023, spending levels remained elevated as owners “locked in place” by high interest rates and home prices undertook projects to meet their changing needs over longer tenures. With the phenomenal growth in renovation and repair spending, the market has far surpassed the prior mid-2000s peak, even after adjusting for considerable price inflation.

PANDEMIC FUELS UNPRECEDENTED SPENDING ON REMODELING

The dramatic impacts of the pandemic on household preferences, behaviors, and housing wealth resulted in enormous investment in improvements and repairs to the existing housing stock. Spending in the home remodeling market skyrocketed 51 percent from $404 billion in 2019 to $609 billion in 2023, according to the latest estimates from the Center. This was an average annual gain of 10.8 percent—more than twice the market’s historical average of 4.2 percent from 1995 to 2019. When adjusted for inflation, the remodeling market expanded 27 percent between 2019 and 2023.

This remarkable growth is partly attributable to the unique circumstances of the pandemic, including surging homebuying and rental demand along with the increased time at home that both motivated and necessitated property upgrades and maintenance. Rapidly rising property prices further boosted spending by providing owners with the home equity and confidence to undertake more and larger projects. Aggregate home equity in the US grew 64 percent to $32 trillion from 2019 to 2023 according to the Federal Reserve Board. By Center estimates, homeowners gained an average of more than $125,000 in equity over this period.

Even as home sales declined and renter household growth slackened considerably in 2022, many owners continued to invest in their homes and rental properties to meet changing needs and preferences. Indeed, improvement and repair spending ticked down only 0.3 percent in 2023 and remained 86 percent greater than at the prior 2006 peak, or 23 percent in real terms. Despite the recent softening in the market, the improvement and repair portion of total residential investment—which also includes spending for construction of new single-family and multifamily homes—has stayed above 50 percent for nearly 16 consecutive years, well over the historical average of 44 percent.

The spectacular gains sparked by the pandemic were felt across the remodeling market. Annual spending for improvements to the owner-occupied and rental housing stock—including remodels, additions, and replacements that typically increase property values—rose 51 percent between 2019 and 2023. This rise in improvement expenditures was on par with the 49 percent growth in spending for routine maintenance and repairs that help preserve property values. Increases were greatest in the owner-occupied segment, in which nominal spending for improvements and repairs jumped 56 percent from $328 billion to $510 billion between 2019 and 2023, or 31 percent when adjusted for inflation. Expenditures on the rental stock also grew substantially, up 31 percent from $76 billion to $99 billion during the same period, or 10 percent in real terms.

Improvements to owner-occupied homes, which include both discretionary and necessary projects and historically account for about two-thirds of total market spending, reached $405 billion in 2023, up 54 percent from 2019, or 29 percent when adjusted for inflation. Most of this growth was due to a substantial increase in the average per owner outlay, which rose from $3,300 to $4,700, along with strong growth in homeowner ranks. Between 2019 and 2023, the number of owners grew 9 percent (7.4 million households), as compared to 7 percent from 2015 to 2019.

At the same time, there was an unprecedented rise in the number and proportion of owners making improvements **(Figure 7)**. In 2023, nearly 26 million homeowners undertook one or more improvement projects—a 16 percent increase (3.5 million households) since 2019. The share of owners with at least one home improvement project reached a two-decade high of 29.7 percent in 2021 and remained there in 2023.

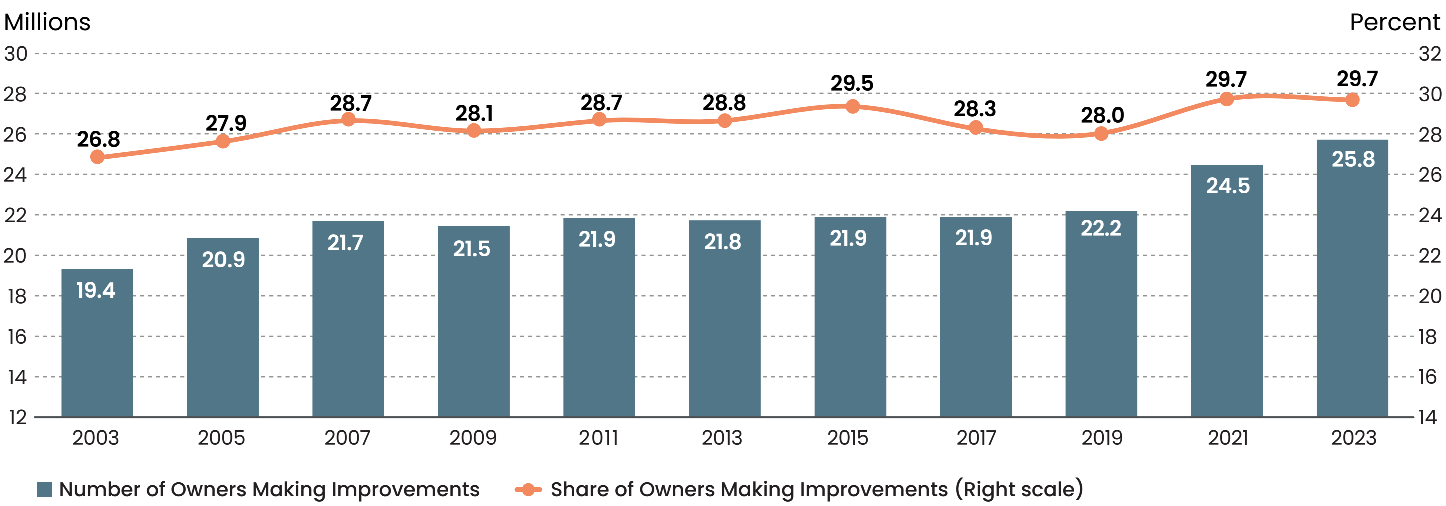
Spending for routine maintenance to owner-occupied homes, which typically accounts for a sixth of the residential remodeling market, swelled 61 percent between 2019 and 2023, from $65 billion to $105 billion, or 35 percent when adjusted for inflation. The bulk of this growth was driven by a considerable increase in the average per owner expenditure, which rose from $800 to $1,200 over this period. While the share of owners with maintenance spending remained unchanged from 2019 at 75 percent, the number of owners pursuing maintenance work grew by 9 percent to 65 million in 2023.

NECESSARY PROJECTS DOMINATE IMPROVEMENT ACTIVITY

Among the various types of improvement projects homeowners pursued in 2023, replacements that affect a home's safety and functionality (such as roofing, windows, and HVAC) and therefore cannot be delayed indefinitely led the market, accounting for 49 percent

Figure 7

Record-Breaking Numbers and Shares of Owners Invest in Home Improvements

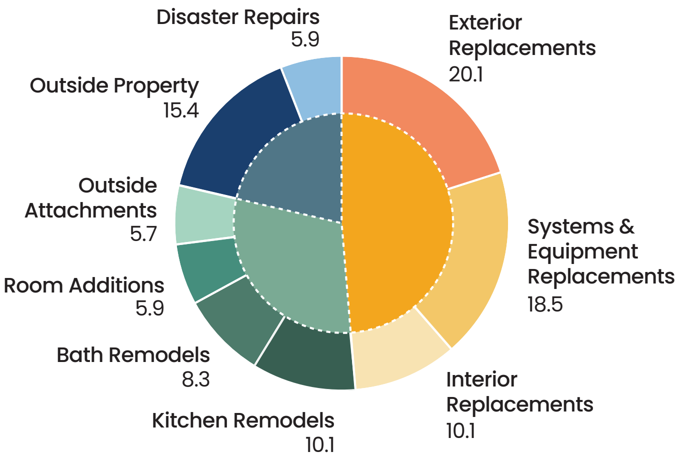


Source: JCHS tabulations of HUD, American Housing Surveys.

Figure 8

Half of Improvement Spending Is to Replace Core Home Components

Share of Home Improvement Spending (Percent)



Notes: Aggregate home improvement expenditure is $405 billion. See Table A-1 for definitions of project categories.
Source: JCHS tabulations of HUD, 2023 American Housing Survey.

of aggregate expenditures ($197 billion) **(Figure 8)**. By contrast, discretionary projects that often reflect owners' desires for updated amenities or aesthetics and can be deferred (such as kitchen and bath remodels and room additions) made up 30 percent of aggregate expenditures ($121 billion). Outside property improvements, such as fencing, sheds, landscaping, and recreational structures, are also largely considered optional projects and accounted for 15 percent of spending ($63 billion). The remaining 6 percent of improvement spending ($24 billion) was for disaster repairs, which are usually considered necessary for restoring a home's basic function and safety.

The market shares for replacement and discretionary projects have stayed essentially unchanged in the years since the last downturn, which marked a major shift in project composition. Before the Great Recession, the spending on improvements was equally proportioned between replacement and discretionary projects, with each constituting about 40 percent of aggregate expenditures. In the aftermath, the market share for replacement projects has held steady at around 50 percent, due partly to the accelerated aging of the housing stock as well as to the aging of the homeowning population. Both owners of older homes and owners at older ages tend to focus larger shares of home improvement spending on necessary replacement projects.

As for outside property improvements, market shares have hovered around 15 percent for the past several decades, ticking up during market booms and down during busts. By contrast, shares for disaster repair projects have trended upward with the increasing frequency and severity of hazards, from an average of 4.4 percent in the decade before 2004 to 6.4 percent in the decade since 2013. The greater focus on disaster repairs combined with the plurality of spending on necessary replacements means that the improvement market is increasingly dominated by projects that cannot be avoided.

PROFESSIONAL INSTALLATIONS RETAKE MARKET SHARE

Homeowner spending for improvements rose 22 percent between 2021 and 2023, or 9 percent in real terms. Expenditures for professional projects, which include labor, materials, profit, and overhead, grew faster at 28 percent to $340 billion, or 14 percent in real terms. With this gain, the market share for professionally installed improvements expanded to an unprecedented 84.1 percent of aggregate expenditures on owner-occupied homes. This was an increase of 4.0 percentage points during the period and marked a return to the long-term pre-pandemic shift toward relatively more spending for professionally installed home improvements and less for DIY work.

The market share for DIY improvements has mostly trended downward, from about a quarter of aggregate expenditures during the last remodeling boom in the mid-2000s to a historic low of 15.9 percent in 2023. Early in the pandemic, spending on DIY projects, which includes only the owner's costs for materials, grew twice as fast as that on professional installations. But it has since cooled as homeowners have increasingly resumed pre-pandemic routines. Between 2021 and 2023, outlays for DIY projects dropped 2 percent to

$64 billion, or 13 percent in real terms. Nonetheless, DIY improvement expenditures remained far above pre-pandemic levels, along with overall spending in the remodeling market.

Both the consistent growth of spending on professional improvements and the volatility of DIY spending in recent years reflect longer-term trends. Since 2009, expenditures for professionally installed projects have grown at a steady pace, whereas outlays for DIY improvements have swung from extreme gain to decline **(Figure 9)**. Among the reasons for these differing trends are that DIY projects are usually smaller scale than professional projects and are more likely to be elective. In 2023, the typical DIY project cost $2,600, compared to $7,800 for the average professional project. That year, aggregate spending for DIY installations was about equally divided between discretionary and replacement projects at 36 percent and 40 percent, respectively. By contrast, 29 percent of professional improvement expenditures was for discretionary projects and 50 percent was for replacements. DIY spending was more focused on largely optional outside property projects (19 percent versus 15 percent) and somewhat less focused on disaster repairs (5 percent versus 6 percent).

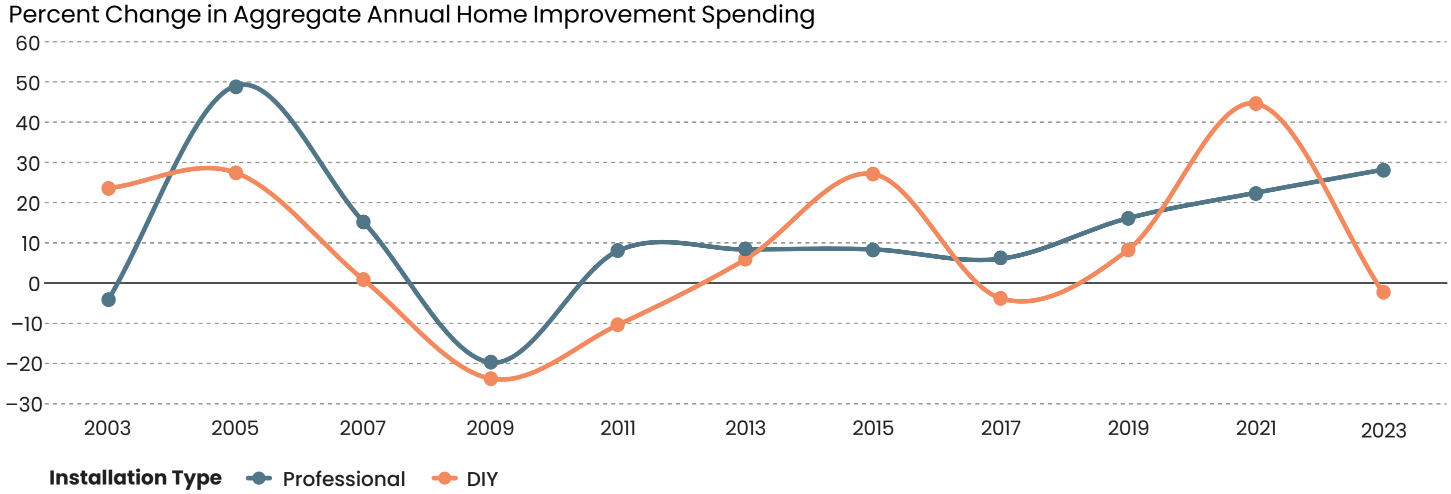
That professional improvement spending is weighted more toward replacements speaks to the growing need to update home components and systems, such as roofing, electrical, and plumbing. Such improvements generally require highly specialized skills and thus increase demand for professional installations. Aging homeowners, growing wealth, and declining household mobility have further contributed to the long-term shift toward professional installations.

In 2023, owners age 65 and over devoted more than 88 percent of their improvement dollars to professional projects on average, compared to 76 percent for owners under age 35. Owners with home values in the highest quintile (more than $618,000) committed 90 percent of their improvement spending to professional installations, compared to 73 percent for owners with the lowest values (less than $178,000). Finally, owners who have resided in their homes for at least 20 years dedicated 87 percent of their improvement budget on average to professionally installed projects, compared to 80 percent among owners who bought their homes within the prior three years.

Figure 9

Professional Improvements Have Steadily Increased While DIY Remains Cyclical

Percent Change in Aggregate Annual Home Improvement Spending



Note: Spending for professionally installed projects includes the cost of labor, materials, profit, and overhead, whereas spending for DIY projects includes only the cost of materials.
Source: JCHS tabulations of HUD, American Housing Surveys.

CONCENTRATION OF MARKET SPENDING STRENGTHENS

Another return in the composition of improvement activity to the pre-pandemic trend is the concentration of expenditures among the highest-spending homeowners. Historically, a relatively small number of owners has accounted for a large share of aggregate improvement activity, reflecting household income and wealth disparities. After the Great Recession precipitated a steep drop in spending concentration, owners spending an inflation-adjusted $50,000 or more slowly increased their share of market expenditures from 34 percent in 2011 to 43 percent in 2019 **(Figure 10)**. This trend reversed in the early part of the pandemic as many more homeowners pursued improvements of all kinds and sizes. From 2019 to 2021, real market spending grew 16 percent for smaller projects (less than $10,000) and 27 percent for midrange projects ($10,000–49,999), while aggregate expenditures for larger projects ($50,000 or more) rose 13 percent. With the faster growth in midsize and smaller-scale projects, the share of aggregate improvement outlays contributed by high-spending owners dipped to 41 percent in 2021.

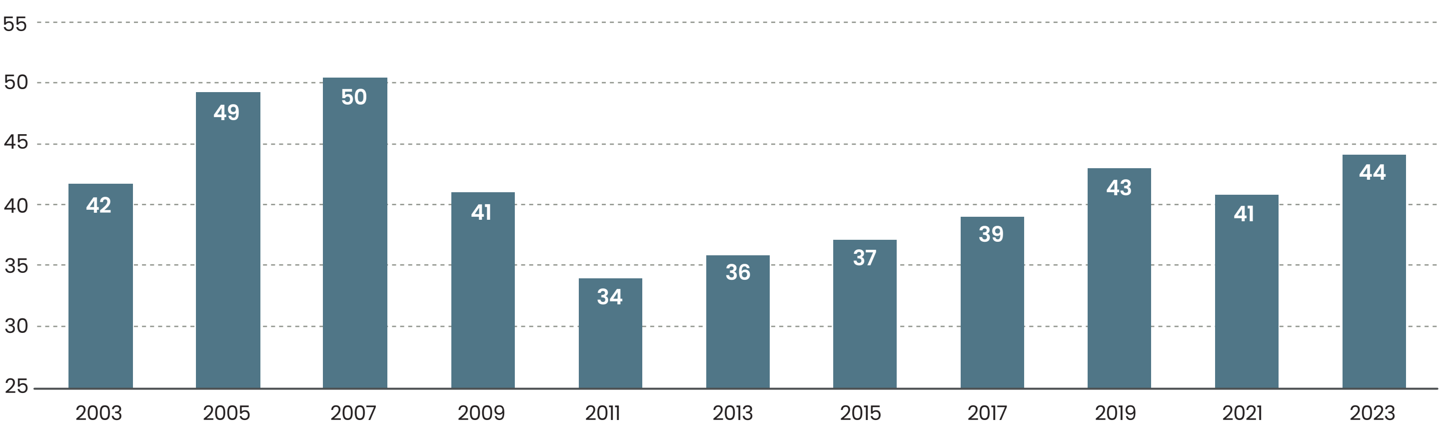
Just as quickly, however, spending concentration patterns reversed again. From 2021 to 2023, homeowners turned away from lower-cost DIY projects, and prices for professional installations soared along with broader economic inflation. Concurrently, a much larger share of the labor force spent more time working from home than before the pandemic. Remote work remained especially prevalent among higher-income households. In 2023, fully 25 percent of workers with incomes of $100,000 or more worked from home at least some portion of the week, compared to less than 14 percent of workers overall. In this environment, market expenditures by high-spending owners increased at a much faster pace than those of lower-spending owners.

From 2021 to 2023, real aggregate improvement expenditures by homeowners spending at least $50,000 increased by 17 percent, compared to 7 percent for those spending $10,000 to $49,999 and a decline of 11 percent for owners spending less than $10,000. Consequently, high-spending homeowners expanded their share of the improvement market to 44 percent in 2023, the highest concentration of spending recorded since the mid-2000s remodeling

Figure 10

The Rebound in Market Spending Concentration Resumed in 2023

Share of Home Improvement Expenditures by Owners Spending at Least $50,000 (Percent)



Note: Expenditures are adjusted for inflation using the CPI-U for All Items.
Source: JCHS tabulations of HUD, American Housing Surveys.

boom and a resumption of the pre-pandemic trend of growing market concentration.

Nevertheless, the concentration of improvement expenditures among high-spending homeowners remained lower than during the previous market boom, when about 50 percent of aggregate expenditures was from owners spending at least $50,000 in inflation-adjusted terms. Since then, both the dramatic shift away from higher-end discretionary projects and the greater share of owners making improvements are countering the trend toward concentration. Today's relatively more diverse spending is likely helping the improvement market to weather the downturn.

REGIONAL AND LOCAL IMPROVEMENT MARKETS VARY

Even with the phenomenal gains in the overall market for homeowner improvements, per owner spending levels differ substantially by regional and local market. This is largely due to variations in home value and household income, both of which drive improvement activity. In 2023, homeowners in the West and the Northeast spent considerably more on average for improvements at $5,400 and $5,200, respectively, compared to an average of $4,400 per owner in the Midwest and $4,200 in the South. The median home value of $472,000 in the Northeast and the West was 36 percent higher than the national median in 2023, while the median owner income of $100,000 in these regions was 14 percent higher. By contrast, median home values and household incomes in the Midwest and the South were 15 percent and 9 percent lower, respectively, than national medians.

The concentration of regional improvement markets among high-spending homeowners also varies considerably. Owners spending at least $50,000 accounted for more than 51 percent of aggregate improvement expenditures in the West and 47 percent in the Northeast, compared to 42 percent in the South and just 38 percent in the Midwest.

The difference in homeowner spending patterns is even more dramatic among major metros. Annual per owner spending on improvements averaged $4,900 in real terms between 2015 and 2023 in the 35 markets available in the AHS, though levels ranged from $3,200 to $7,200. Expenditures were typically greater in metros located on the coasts, where higher home values and incomes encourage more investment in housing **(Figure 11)**. Annual per owner improvement spending averaged $6,000 or more in coastal areas such as Boston, San Francisco, and Washington, DC, and less than $4,000 in interior markets like Detroit, Atlanta, and Las Vegas. The variation in local market concentration is also striking among major metros. In 2023, top-spending homeowners ($50,000 or more) accounted for just 24 percent to 37 percent of aggregate improvement spending in Detroit, Chicago, and Cleveland, compared to 58 percent to 65 percent in Seattle, New York, and San Francisco.

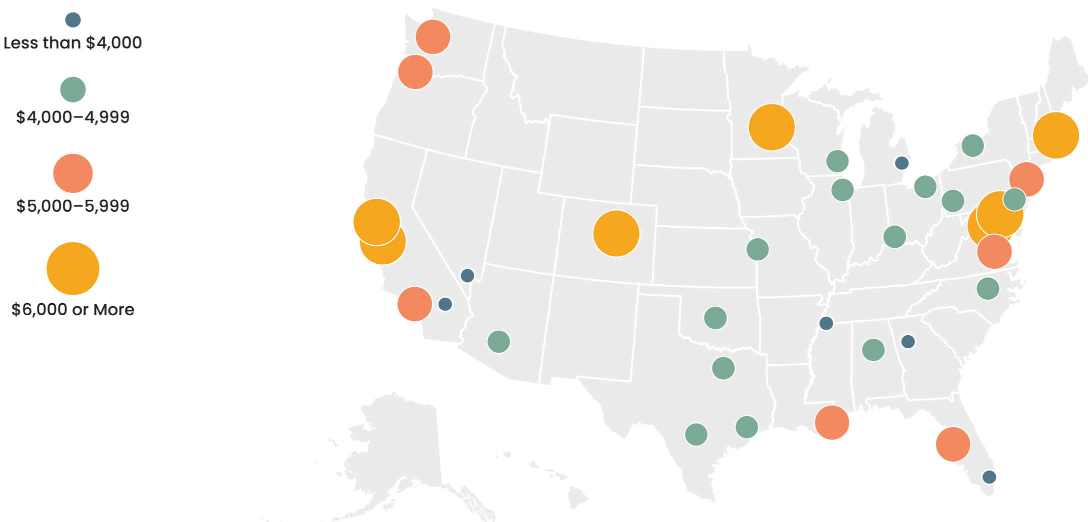
Despite the considerable differences in local spending levels and market concentration, major metros collectively drive a disproportionate share of national improvement activity. In 2023, the 15 largest metro areas by population accounted for 29 percent of homeowners in the US, 28 percent of owners with one or more improvement projects, and 33 percent of aggregate improvement expenditures, more than $133 billion. Per owner spending of $5,300 in these metros was 13 percent above the national average. In these large metro areas, the median home value of $474,000 was 36 percent higher than the national median of $348,000 in 2023, while the median owner income of $108,000 was 23 percent higher than the $88,000 nationally.

The disparate levels and concentrations of improvement spending across regions and metros are further explained by relative differences in the age of the housing stock and of homeowners. Professional remodeler labor and operating costs also contribute to sharply different levels and concentrations of improvement spending. Additionally, homeowners residing in areas of the country with relatively higher incomes and property values have benefited from higher levels of

Figure 11

Improvement Outlays Tend to Be Higher in Coastal Markets

Average Annual Per Owner Home Improvement Spending, 2015–2023 (2023 Dollars)



Notes: Data are for 35 metros available in the 2015–2023 American Housing Surveys, including the 15 largest by population. Expenditures are adjusted for inflation using the CPI-U for All Items. Annual per owner spending averaged $4,900 for the 35 metros and $4,100 nationwide. See Table A-4 for more detail on historical trends in metro-area spending.
Source: JCHS tabulations of HUD, American Housing Surveys.

home equity generated by strong house price appreciation, another key driver of improvement spending, especially for larger-scale projects.

CASH STILL FUNDS MOST PROJECTS

Despite massive home equity gains since the pandemic, savings continues to be the most common source of home improvement funding, although reliance on cash declines as project size increases. In 2023, the share of improvement projects paid for mainly with cash was 76 percent, while the share funded primarily by home equity–based financing was 5 percent. Additional funding sources included credit cards (6 percent of projects), homeowner insurance settlements (4 percent), and contractor-arranged financing (2 percent). The remaining projects were primarily paid for with other sources, such as gifts from family members or personal loans.

Project expenditures ranged markedly in 2023 depending on the payment method. When owners paid with credit cards or savings, average project spending was $4,000 and $5,000, respectively, as compared to $10,600 for projects with contractor-arranged financing. Average project spending increased to $13,000 if owners tapped equity and to $14,900 if they relied principally on homeowner insurance settlements.

For smaller-scale improvements costing $2,000 or less—more than half of all projects in 2023—82 percent were paid for with cash. By contrast, owners are much more likely to tap equity to cover higher-cost projects. In 2023, the share of projects funded mainly with home equity through loans, lines of credit, or cash from mortgage refinancing was just 3.9 percent of improvements costing less than $10,000, versus 11.7 percent for those costing $10,000 to $49,999 and 19.7 percent for those costing at least $50,000. As the volume of high-priced projects has increased, so, too, has the use of home equity. Between 2019 and 2023, the number of projects costing $50,000 or more in real terms grew 48 percent, while large-scale projects funded with home equity rose 51 percent.

Along with project size, funding sources vary by project type. Room additions, exterior replacements (such as roofing, windows, and siding), and disaster repairs are most likely to be funded from sources other than savings **(Figure 12)**. In 2023, about a quarter of spending for room additions was paid for with home equity–based financing. Home equity is an important source of funding for other discretionary projects, funding 15 percent of spending for kitchen and bath remodels and outside attachments (such as porches, decks, and garages). Home equity also funded 13 percent of spending for outside property projects (such as fencing, sheds, and recreational structures). For exterior replacements, 10 percent of spending was paid for with home equity and another 18 percent with insurance settlements. By contrast, insurance settlements financed fully 68 percent of spending for disaster restoration projects.

THE OUTLOOK

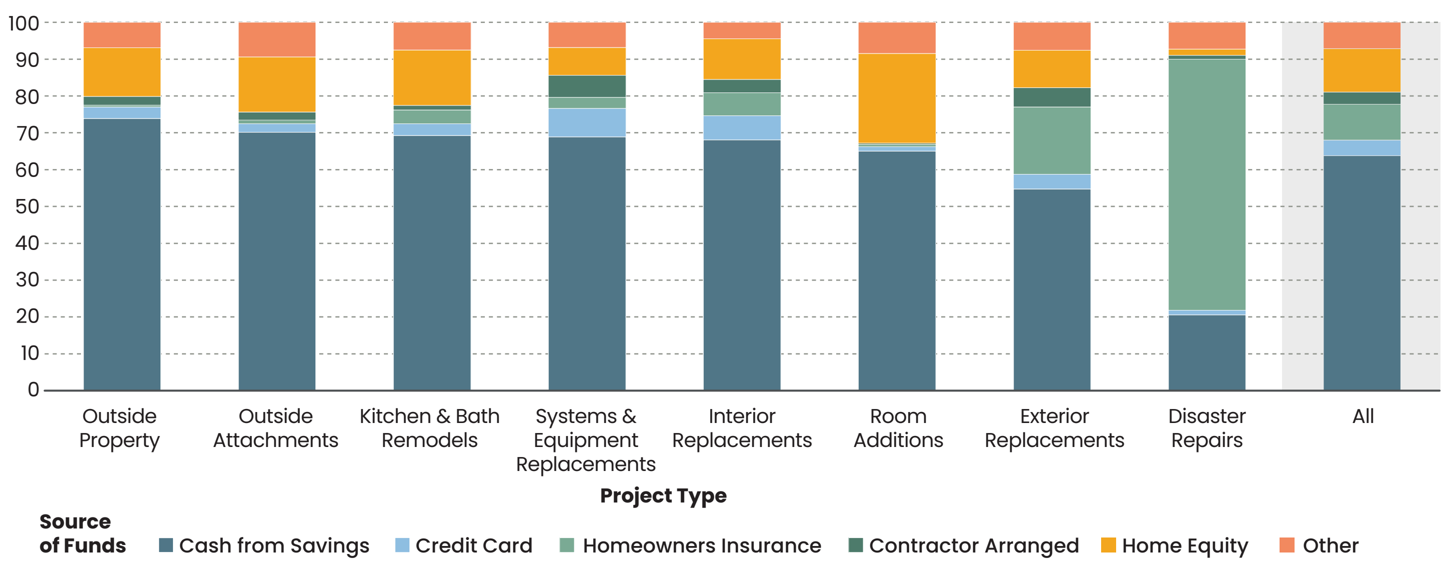
Given the improbability of a near-term homebuilding boom, the housing stock will continue to age in the coming years. At the same time, the number of older owners will continue to grow. Taken together, these two trends will likely sustain the larger portion of home improvement spending devoted to necessary replacements of core home components and systems. And because most homeowners lack the technical skills to perform specialized improvements like roofing, electrical, and plumbing, the emphasis on replacements will support high shares of spending for professional installations. Although DIY expenditures are likely to grow along with the overall market, DIY is expected to remain a relatively low share of total improvement spending.

Offering homeowners additional financing options could be a promising growth opportunity for the remodeling industry. Heavy reliance on savings to fund home improvement projects is a limiting factor for many owners. As a result, expanding the types and availability of new financing alternatives, especially those tied to home equity, would likely lead to stronger gains in improvement expenditures and also help to preserve and modernize the nation's housing stock. In particular, providing a wider array of affordable funding options would better support the home renovation and repair needs of lower-income owners, older owners, owners of color, and those living in older and undermaintained homes.

Figure 12

Savings Is the Main Source of Improvement Funding for Most Projects

Share of Home Improvement Spending (Percent)



Notes: Credit card category includes retail store charge cards. Home equity includes home equity loans, home equity lines of credit, and cash from refinancing. Other includes funding sources not reported. See Table A-1 for definitions of project categories.
Source: JCHS tabulations of HUD, 2023 American Housing Survey.

CHANGING HOUSEHOLD DEMOGRAPHICS

The shifting characteristics of US households continue to reshape activity and spending patterns in the home remodeling market. Older homeowners constitute a larger portion of the market due to their growing population and rapid gains in average spending levels. Still, middle-aged homeowners, along with those who are married with children, spend the most on average for improvements. Younger owners are expanding their activity in the market, but worsening housing affordability has kept their ranks and their aggregate expenditures well below the prior peak. Households of color have become larger shares of the homebuying and improvement markets, as have immigrant households. Though homeowner mobility briefly increased in the early stages of the pandemic, it has since dropped below pre-pandemic levels. The result is twofold, putting downward pressure on demand for improvements that typically happen in the years before and after a home sale while driving alternative spending to accommodate longer tenures and changing needs and uses.

OLDER OWNERS INCREASE MARKET SHARE

Older households are a growing force in the improvement market, doubling their share of spending over the past two decades. In 2023, spending by homeowner households headed by a person age 65 and over reached $110 billion. That year, these older owners accounted for 27 percent of total market expenditures, as compared to 23 percent in 2013 and 14 percent in 2003 **(Figure 13)**. In 2023, older homeowners accounted for the plurality of market spending, surpassing that of owners aged 55–64 (24 percent), aged 45–54 (20 percent), aged 35–44 (21 percent), and under age 35 (8 percent).

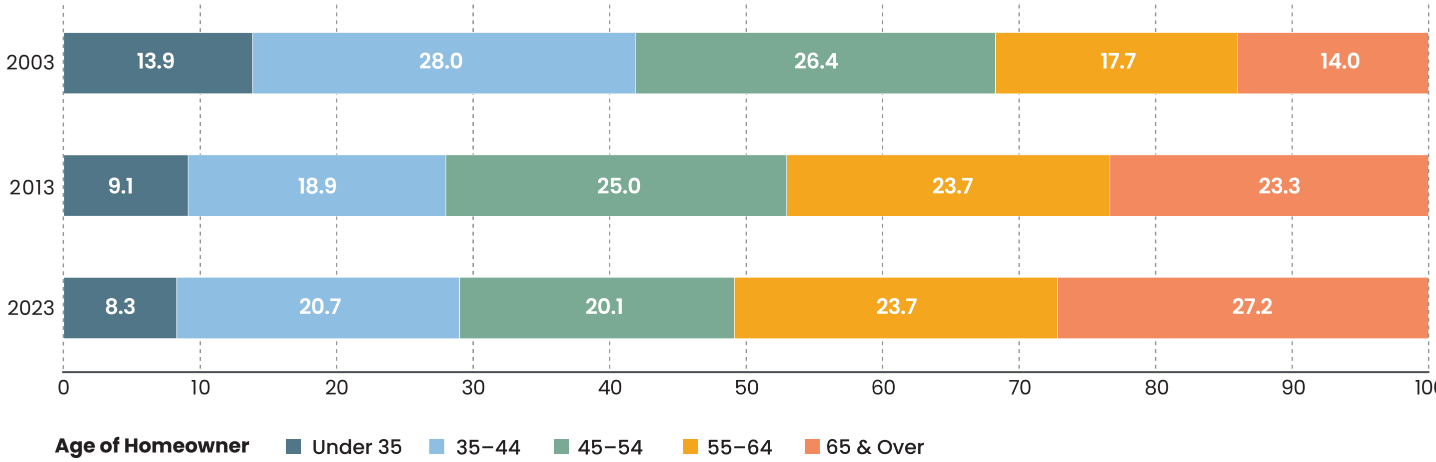
The growing contribution of older homeowners to the improvement market reflects strong gains in their numbers, as well as their rising average spending levels. Between 2013 and 2023, the number of owners age 65 and over increased 36 percent (7.7 million households), making them the fastest-growing age group and constituting 69 percent of the total growth in homeowner households. With these gains, 34 percent of homeowner households were headed by a person age 65 and over in 2023, up from 29 percent in 2013. Although the share of owners age 65 and over who undertook one or more improvement projects held steady over the decade at about 28 percent, their average per owner spending climbed by 35 percent in real terms, from $2,800 in 2013 to $3,800 in 2023.

As the number of older households climbs, they are reshaping the improvement market. Older homeowners typically have longer housing tenures and are more likely to live in older homes, which require more investment to replace structural components and outdated systems and equipment. In 2023, owners age 65 and over had lived in their homes for an average of 26 years compared to 11 years for owners under age 65. That same year, nearly 55 percent of owners age 65 and over lived in homes built before

Figure 13

Older Owners Have Greatly Increased Their Market Presence

Share of Home Improvement Spending (Percent)



Source: JCHS tabulations of HUD, American Housing Surveys.

1980, while just 18 percent lived in homes built in 2000 or later. By contrast, roughly 46 percent of owners under age 65 lived in a home built before 1980, and 29 percent lived in one built in 2000 or later.

Reflecting their typically older housing, older homeowners devote a higher portion of their improvement budgets to replacement projects, such as roofing, windows, HVAC, plumbing, and flooring, than younger owners. In 2023, owners age 65 and over spent an average of 54 percent of their improvement dollars on replacements, well above the 47 percent share for owners under age 65.

Older owners are also driving demand for accessibility improvements to remain in their homes as long as they are able. Because the incidence of physical disability and navigational difficulties increases with age, older homeowners are the age group most likely to pursue accessibility modifications that maximize independence and potentially reduce the need for long-term care services. Among owners reporting at least one improvement project in 2022 or 2023, 9.5 percent of those aged 65–79 undertook a project to improve accessibility, as did 11.5 percent of owners age 80 and over, well above the 4.5 percent share for owners under age 65. With the number of households headed by an older adult continuing to climb, demand for accessibility modifications will likely drive more improvement spending and support new technologies and features that enable older owners to remain safely and comfortably in their homes.

EXPENDITURES RISE FOR YOUNGER OWNERS

Aggregate improvement spending by younger households has rebounded over the past decade, even as the number of younger homeowners remains suppressed amid the growing housing affordability crisis. In 2023, the median age of recent first-time homebuyers hit a new high of 35 years, compared to 32 years in 2003. The rising age of the typical first-time homebuyer can be partially explained by the severe and lasting impacts of the Great Recession on housing and labor markets, which have limited the number of younger households able to purchase homes. Between 2007 and 2015, the number of homeowner households headed by a person under age 35 fell by a third (3.5 million). With this decline, improvement expenditures among younger owners fell 24 percent from a peak of $39 billion in 2007 after adjusting for inflation.

The ranks of younger homeowners, as well as their improvement expenditures, have rebounded since bottoming out in 2015 **(Figure 14)**. Between 2015 and 2023, the number of owners under age 35 increased by 15 percent, to 7.9 million households. Average per owner spending by younger owners rose 32 percent during the same period, reaching a new inflation-adjusted high of $4,200. These gains pushed aggregate improvement expenditures by younger households to $34 billion in 2023, a 51 percent increase since 2015 after adjusting for inflation. Despite this progress, total expenditures by younger owners were still 14 percent below their prior peak in 2007, while the number of owners under age 35 was 24 percent lower.

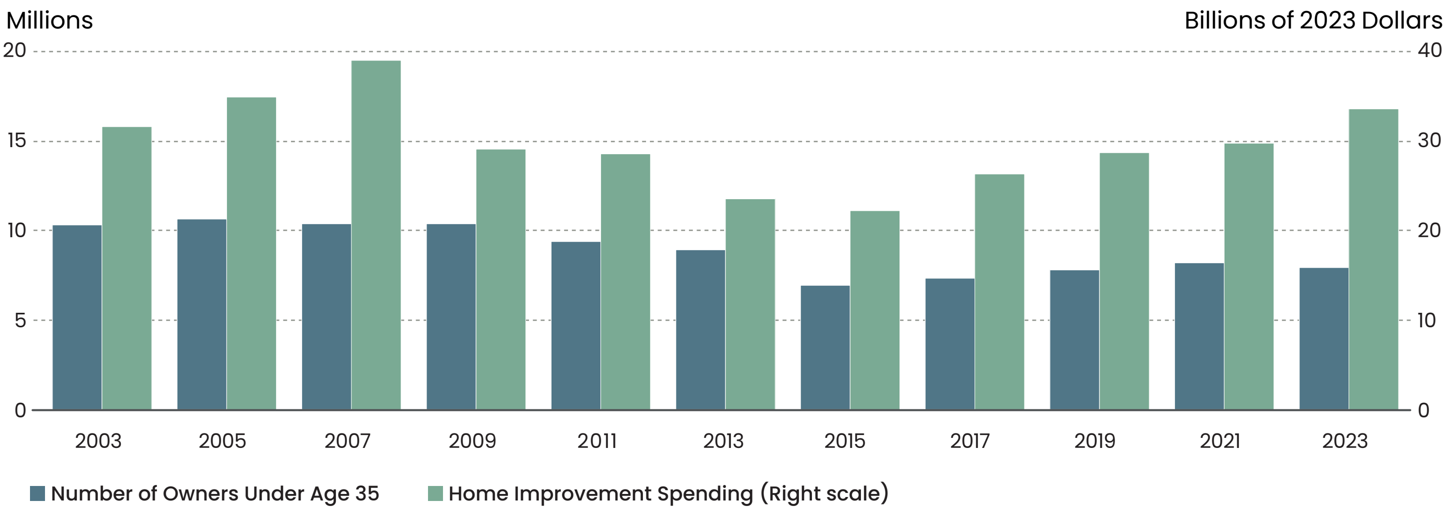
Younger homeowners tend to invest their improvement dollars differently from older owners, especially by project installation. Compared to other age groups, younger owners devote a much higher share of their improvement budgets on average to DIY activities, which are typically lower cost. In 2023, DIY installations accounted for 24 percent of improvement spending by owners under age 35—well above the 15 percent share for owners age 35 and over. In addition, younger owners tend to spend slightly higher shares of their improvement budgets on discretionary upgrades such as kitchen and bath remodels than their older counterparts (32 percent versus 30 percent) and on outside property improvements such as fencing and landscaping (17 percent versus 15 percent). Conversely, younger owners spent a smaller share of their improvement dollars, on average, on disaster repairs (3 percent versus 6 percent) and about the same on replacement projects (48 percent versus 49 percent) compared to owners age 35 and over.

PER OWNER SPENDING STILL PEAKS IN MIDDLE AGE

Homeowners typically spend the most on improvements in middle age—a time when family sizes and incomes are growing. In 2023, per owner spending by households aged 35–64 was 37 percent greater than the averages for the youngest and oldest households. Homeowners aged 35–44 and 45–54 had the highest per owner spending, at $5,700 and $5,300, respectively. Owners aged 55–64 also reported relatively high average per owner spending at $4,900, as compared to owners under age 35 ($4,200) and owners age 65 and over ($3,800).

Figure 14

Younger Owners Are Expanding Spending on Improvements Despite Lower Ranks



Note: Expenditures are adjusted for inflation using the CPI-U for All Items.
Source: JCHS tabulations of HUD, American Housing Surveys.

Higher average spending levels among middle-aged homeowners reflect differences in income and household composition. In 2023, the median income of owners aged 35–64 was $111,000 compared to $100,000 for owners under age 35 and $53,000 for owners age 65 and over. Additionally, middle-aged owners are the most likely (at 45 percent) to be married with children—a group with by far the highest median income of any household type ($140,000). In 2023, married couples with children had the highest per owner improvement spending of any household type, at $6,800, about 46 percent greater than that of all owners ($4,700) and well above that of married couples without children ($5,000), single-parent households ($3,700), and single-person households ($3,000).

HOUSEHOLDS OF COLOR EXPAND MARKET ACTIVITY

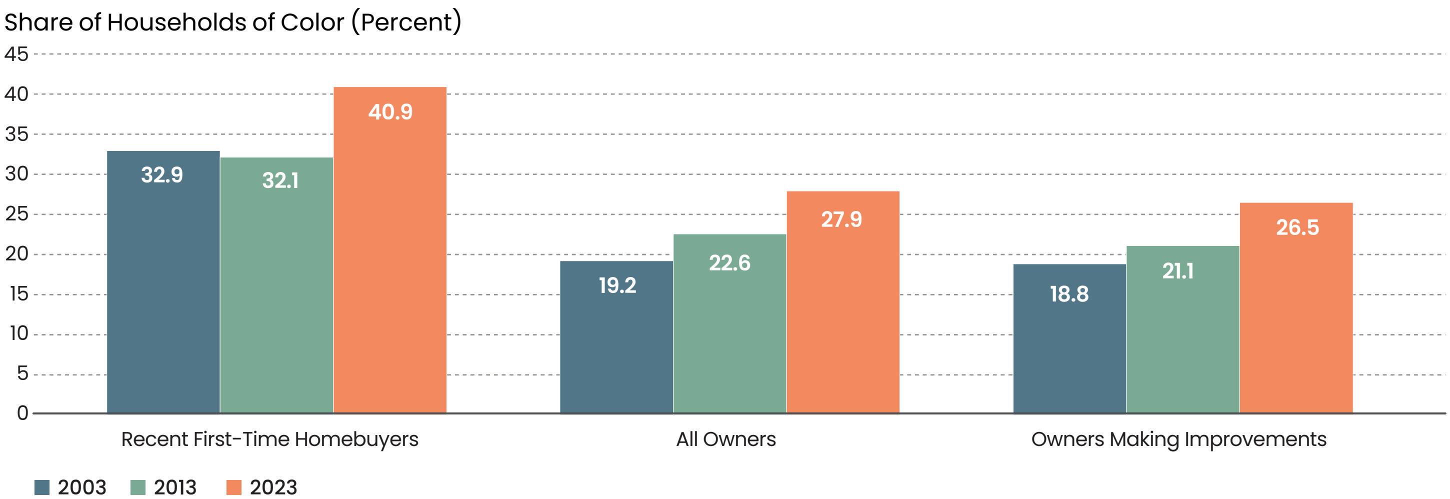
Households headed by a person of color are a growing share of the homebuying and home improvement markets **(Figure 15)**. Between 2003 and 2023, households headed by a person of color increased their share of first-time homebuyers by 8 percentage points to 41 percent. In 2023, nearly 28 percent of homeowners were people of color, up from 19 percent two decades earlier.

As homeownership rates have climbed for households of color, so, too, has their remodeling activity. Homeowners of color accounted for 26 percent of owners with improvement projects in 2023, an increase of about 8 percentage points since 2003. Indeed, average improvement spending has grown faster for owners of color than for non-Hispanic white owners in recent decades. Between 2003 and 2023, per owner spending by homeowners of color rose 63 percent after adjusting for inflation, compared to 49 percent for their white counterparts. Homeowners of color also increased their share of market expenditures from 14 percent to 23 percent in these years.

While Black, Hispanic, and Asian households constitute small fractions of nationwide improvement spending, they account for substantially larger market shares in metro areas where these groups have higher homeownership rates. In 2023, Black owners accounted for just 7 percent of improvement spending nationally but 32 percent of the market in New Orleans and Atlanta,

Figure 15

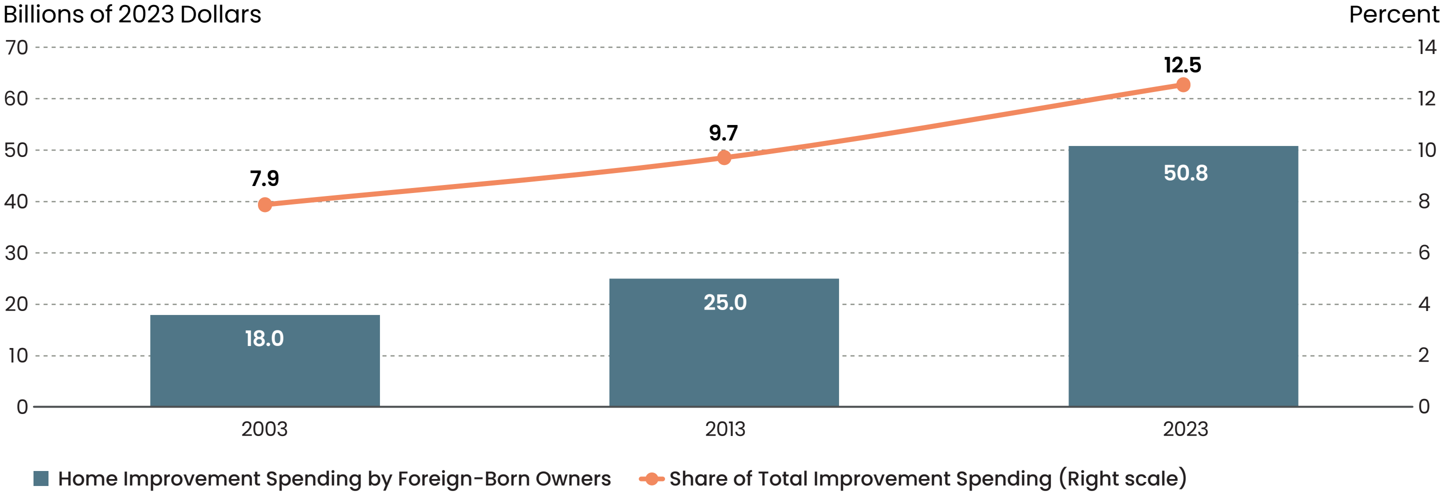
Households of Color Are a Growing Part of Homebuying and Remodeling Markets



Notes: Households of color include those headed by an American Indian or Alaska Native, Asian, Black, multiracial, or Native Hawaiian or Pacific Islander person or a Hispanic person of any race. Recent homebuyers purchased within the previous three calendar years.
Source: JCHS tabulations of HUD, American Housing Surveys.

Figure 16

Immigrant Owners Account for a Rising Share of the Home Improvement Market



Note: Expenditures are adjusted for inflation using the CPI-U for All Items.
Source: JCHS tabulations of HUD, American Housing Surveys.

and between 18 and 19 percent of the markets in Houston, Miami, Detroit, and Washington, DC. Hispanic owners accounted for 9 percent of national improvement expenditures but much higher shares of spending in Riverside (37 percent), Miami (30 percent), Dallas (21 percent), Los Angeles (20 percent), and Houston (19 percent). Asian owners accounted for 22 percent of the improvement market in both Los Angeles and San Francisco, compared to just 5 percent nationally.

Nonetheless, persistent racial disparities in major drivers of remodeling activity result in unrepresentative patterns of improvement spending. Particularly for Black and Hispanic households, centuries of discriminatory policies and practices have produced enduring inequities in income, homeownership rates, home values, and home equity. In 2023, the homeownership rate for white households was 73.5 percent, as compared to 46.1 percent for Black households and 49.5 percent for Hispanic households. The median home value for white owners was $346,000 in 2023, somewhat above the median for Hispanic owners ($340,000) and much higher than that of Black owners ($288,000). And at last measure in 2022, the median home equity for white owners was $205,000 compared with $135,000 for Hispanic and $123,000 for Black owners, according to the Survey of Consumer Finances. Reflecting these disparities, in 2023, households headed by a person of color accounted for 36 percent of households in the US but just 28 percent of homeowners and 23 percent of aggregate improvement spending.

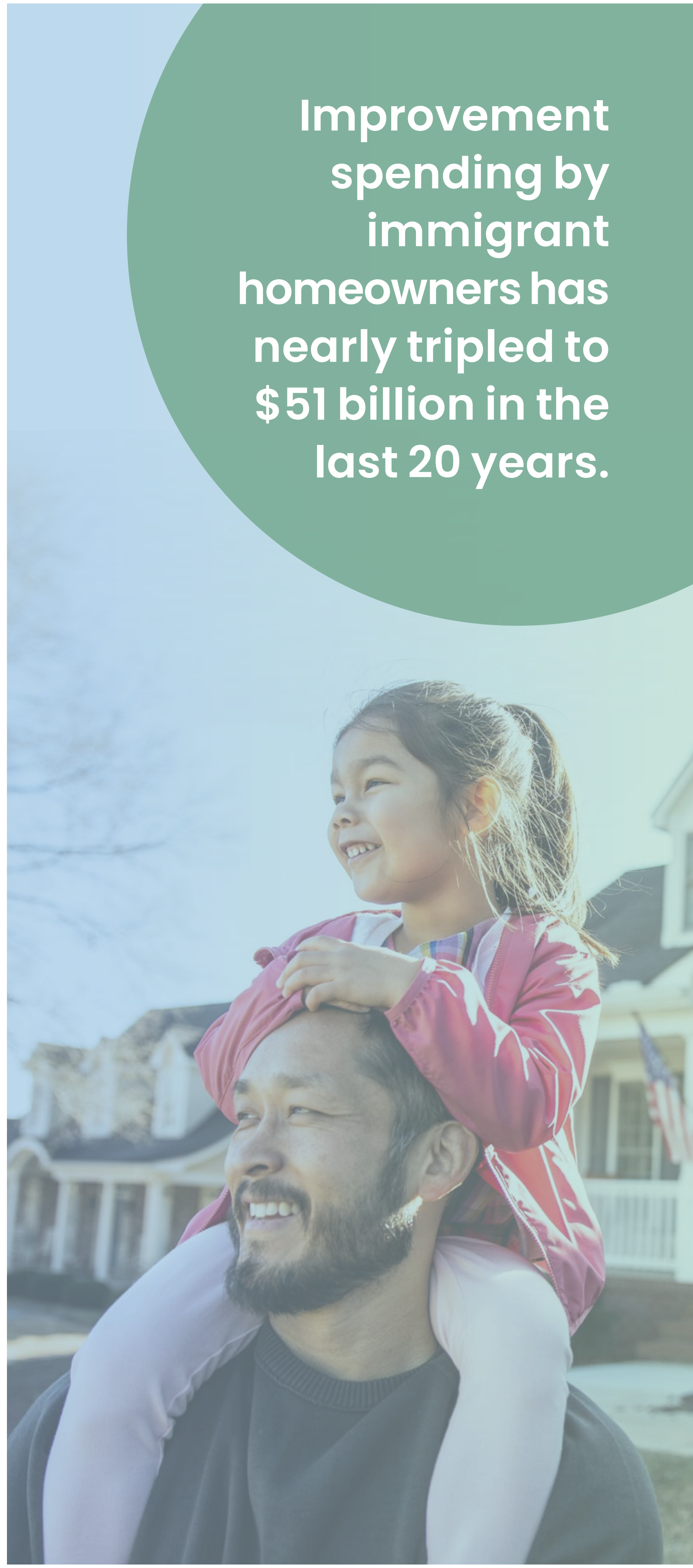
Further racial disparities are evident in average improvement spending and project financing. In 2023, white homeowners spent an average of $5,000 on improvements, well above per owner spending for Black ($3,600), Hispanic ($3,700), and Asian households ($4,500). Homeowners of color are also less likely to use home equity as a main source of funding for improvement projects. In 2023, the share of aggregate improvement spending funded primarily by home equity—either a home equity loan or line of credit, or cash from refinancing—was 6.7 percent for Asian owners, 9.3 percent for Black owners, 11.7 percent for Hispanic owners, and 12.2 percent for white owners.

IMMIGRANT OWNERS BOOST IMPROVEMENT SPENDING

Foreign-born homeowners are becoming a larger share of the improvement market. Between 2003 and 2023, the number of immigrant homeowners almost doubled, from 5.9 million to 11.6 million, and their share of owners grew from 8 to 13 percent. Against this backdrop, real improvement spending by immigrants nearly tripled, from $18 billion to $51 billion **(Figure 16)**. During this period, spending by homeowners born outside the US rose to 13 percent of the improvement market in 2023, up from 8 percent two decades earlier.

The growing aggregate improvement expenditures of immigrant homeowners reflect not only their increasing population but also their rising average spending levels. Between 2003 and 2023, per owner spending by foreign-born households climbed 44 percent in real terms, only somewhat below the 49 percent growth among their native-born counterparts. However, foreign-born homeowners had somewhat lower per owner expenditures than native-born owners in 2023, spending an average of $4,400 on improvements compared to $4,700 among native-born owners.

The contribution of immigrant households to improvement markets varies across the country. In general, foreign-born households account for a larger share of total spending in metro areas where they constitute a greater share of homeowners. In 2023, immigrants contributed about half of aggregate improvement spending in Miami (45 percent) and a third of the market in Los Angeles. These metros also had the two largest shares of foreign-born homeowners at 46 percent and 38 percent, respectively, among the 20 major metros covered in the AHS. Immigrant owners accounted for 20 percent to 25 percent of total improvement spending in Washington, DC; New York; Houston; Chicago; Riverside; and San Francisco. In these areas, foreign-born households were at least 20 percent of homeowners. By contrast, foreign-born households accounted for as little as 4 percent of improvement expenditures in Milwaukee

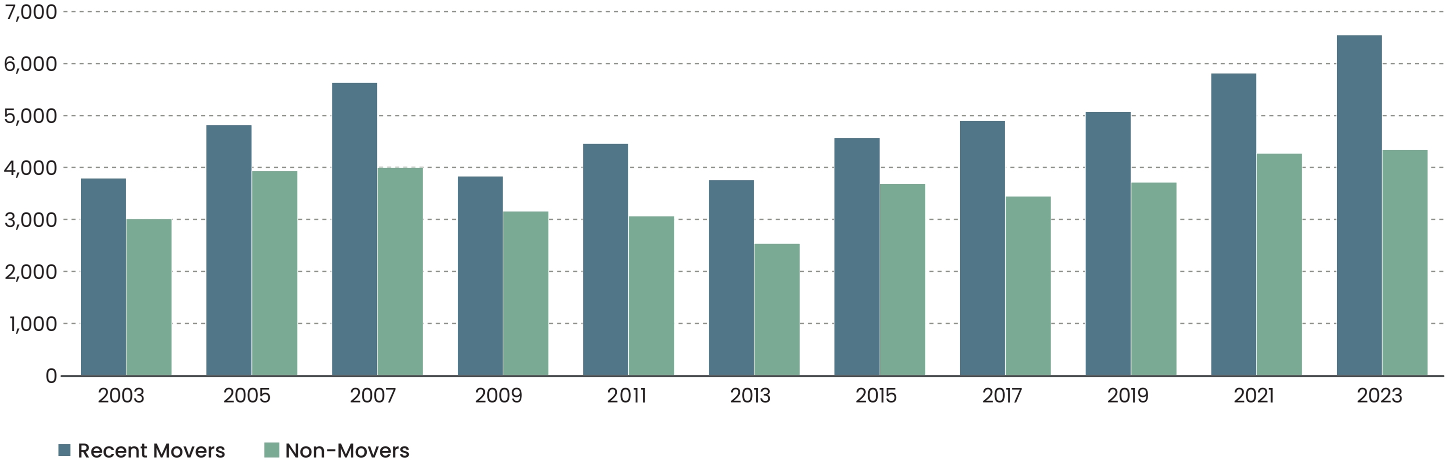


Improvement spending by immigrant homeowners has nearly tripled to $51 billion in the last 20 years.

Figure 17

Recent Movers Typically Spend Much More on Improvements

Average Per Owner Home Improvement Spending (Dollars)



Note: Recent movers bought their homes within the previous three calendar years.
Source: JCHS tabulations of HUD, American Housing Surveys.

and 5 percent in Cincinnati and Cleveland, where immigrants were just 5 percent to 8 percent of homeowners in 2023.

Immigrant homeowners spent, on average, a somewhat greater portion of their improvement budgets than native-born owners on discretionary upgrades (33 percent versus 30 percent) and disaster repairs (6 percent versus 4 percent) in 2023. Conversely, immigrant owners spent a lower share on outside property improvements (13 percent) compared to native-born owners (18 percent). Homeowners born outside the US also devoted a larger portion of their improvement dollars on average to DIY projects than native-born owners. In 2023, DIY installations accounted for 19 percent of improvement expenditures for immigrant owners compared to 16 percent for those born in the US.

HOMEOWNER MOBILITY DROPS

After a brief increase in the early stages of the pandemic, homeowner mobility has resumed its pre-pandemic downward trend amid elevated mortgage interest rates, skyrocketing home prices, and limited for-sale inventories. Between 2021 and 2023, the number of owners who moved within the prior 12 months fell 16 percent to 4.7 million, according to the ACS. The share of recent movers as a percentage of owners also dropped sharply, from 6.8 percent in 2021 to 5.5 percent in 2023.

The rapid rise in interest rates since 2021 has greatly constrained homeowner mobility. According to Freddie Mac, the average interest rate on a 30-year mortgage climbed swiftly from 3.5 percent in January 2022 to 7.6 percent in October 2023, the highest rate in more than 20 years and more than double the 3.8 percent rate averaged in the decade before 2022. In this environment, many would-be homebuyers found themselves unable to afford a purchase, and many existing owners with below-market mortgage rates were disincentivized to sell. Instead, households with favorable rates largely stayed put, contributing to a massive shortage of for-sale inventory that further limited homebuying opportunities. Existing single-family home sales plummeted 32 percent between 2021 and 2023, reaching the lowest level since the depths of the Great Recession.

Traditionally, a great deal of remodeling activity happens around the time of a home sale. Owners prioritize improvements in preparation for selling the property, and buyers address post-purchase wants and needs. On average, homeowners who undertake pre-sale projects spend about twice as much on improvements as the annual per owner expenditure. Moreover, recent homebuyers typically spend considerably more on improvements than owners who did not recently move **(Figure 17)**. In 2023, owners who bought their homes within the prior three years spent an average of $6,600 on improvements, about 51 percent higher than per owner spending by those who had not recently moved ($4,300). A smaller but still substantial discrepancy holds even after controlling for age and income differences between recent buyers and non-movers.

In addition to higher per owner spending levels, recent homebuyers focus their remodeling dollars differently from owners who stay put. In 2023, recent homebuyers devoted 20 percent of their improvement budgets on average to DIY installations and 35 percent to discretionary projects compared to 15 percent and 29 percent, respectively, for non-movers. For these reasons, declining household mobility will likely put downward pressure on demand for the project and installation types more common in the years after a home purchase.

Yet the typically negative impact of lower mobility on improvement activity could be offset by other investments owners may decide make more sense if remaining in their homes longer, such as roofing, HVAC, and window replacements. In 2023, the average owner had lived in their home for 16.1 years, up from 13.8 years in 2003. As tenures lengthen, homeowners will likely spend more on replacements, as well as discretionary and other improvements to accommodate changing needs. Improvement activity could also be bolstered by more people working from home, especially among higher-income households, which will likely spark improvement and repair spending both to facilitate changing uses and to address additional wear and tear.

THE OUTLOOK

Several demographic drivers support expansion of the improvement market. With the aging of the population, older homeowners will likely increase market spending and share, especially for accessibility upgrades and core replacement projects. Further growth in spending is expected as more members of the enormous millennial generation reach peak homebuying and remodeling ages. Immigrant households will likely account for a growing portion of improvement expenditures, particularly in the metro markets where they constitute a larger share of owners.

Yet there are challenges on the horizon, too. The growing housing affordability crisis will hamper homeownership aspirations for the youngest households and threaten gains made by households of color in homebuying and remodeling markets. The rising costs of homebuying and homeownership, including monthly payments for mortgage, insurance, taxes, utilities, and other expenses, will require increasing shares of household incomes, leaving little left for improvements and repairs. To the extent that younger households are able to become homeowners and pursue improvements, this group will support demand for discretionary and outside property projects, as well as lower-cost DIY work.

Though the decline in homeowner mobility will likely continue to dampen remodeling market growth, the impact may be buffered somewhat by spending to accommodate changing needs for longer tenures and increased levels of work-from-home arrangements. Given the massive gains in housing wealth in recent years, the longer housing tenures could motivate owners to invest in improvements and repairs to address changing uses, along with the extra wear and tear associated with spending more time at home.

REVITALIZING THE NATION'S HOUSING STOCK

The aging housing stock has fueled spending on routine maintenance and improvements like replacements of core components and systems. Yet further investment is required to address urgent needs related to basic habitability, weatherization, and accessibility, especially for lower-income households. Financial constraints shape the level and the types of investment homeowners can make. Owners with lower incomes typically spend little on improvements and repairs, focus their expenditures on essential projects, and bear the largest burden for such costs. Many are forced to defer or forgo critical home improvements and repairs altogether. Consequently, homeowners with lower incomes are disproportionately exposed to substandard conditions that threaten their health, well-being, and financial stability, as are homeowners of color. Public and civil sector home repair assistance programs help close gaps in investment, but funding falls far short of the need.

AGING HOUSING STOCK REQUIRES GREATER INVESTMENT

The US housing stock is the oldest it has ever been. Innovations in building techniques and materials have extended the useful lives of homes. Additionally, the slowdown in construction following the Great Recession has contributed to the aging of the stock. In 2023, the median age of owner-occupied homes hit 42 years, up from 37 years in 2013 and 31 years in 2003.

Older homes require more investment to head off deterioration. Per owner improvement and repair spending increases considerably as homes age past 20 years, and it remains elevated as core components and systems cycle through their useful lives **(Figure 18)**. In 2023, owners living in homes built before 1940 spent an average of $6,700 on improvements and repairs, about 50 percent more than those occupying homes built in 2010 or later. Newer structures usually require less investment because they are earlier in the replacement cycle and comply with stronger building standards. In 2023, owners living in homes built in the 2010s spent an average of $4,500 on improvements and repairs, while those occupying homes built in 2020 or later spent an average of $4,300.

As the housing stock continues to age, replacements of core components, systems, and equipment will likely drive growth in the improvement market. On average, owners in older homes spend a larger portion of their improvement dollars on replacement projects, such as roofing, siding, windows, electrical, plumbing, and HVAC. In 2023, replacements accounted for half of all remodeling expenditures on homes built before 1940 but just 37 percent of spending on structures built in the 2010s and 9 percent on those constructed in 2020 or later.

SUBSTANDARD HOUSING CONDITIONS PERSIST

Despite improvements in building codes and construction standards, the number of homeowners living in housing that fails to meet basic safety and suitability standards remains stubbornly high. In 2023, 2.9 million homeowner households (3.3 percent) lived in moderately or severely inadequate homes as categorized by the US Department of Housing and Urban Development (HUD) compared to 2.7 million (3.8 percent) in 2003. Inadequate units are those with multiple structural deficiencies like water leaks, large open cracks, and holes in the floor or serious problems with any basic features such as plumbing, electrical, and heating. Housing inadequacy is considered moderate or severe depending on the number and type of these problems. Although severely inadequate housing conditions have improved over the decades, moderately inadequate conditions have worsened. In 2023, 663,000 homeowners lived in severely inadequate housing compared to 933,000 in 2003. At the same time, the number of owners occupying moderately inadequate homes increased from 1.8 million to 2.2 million.

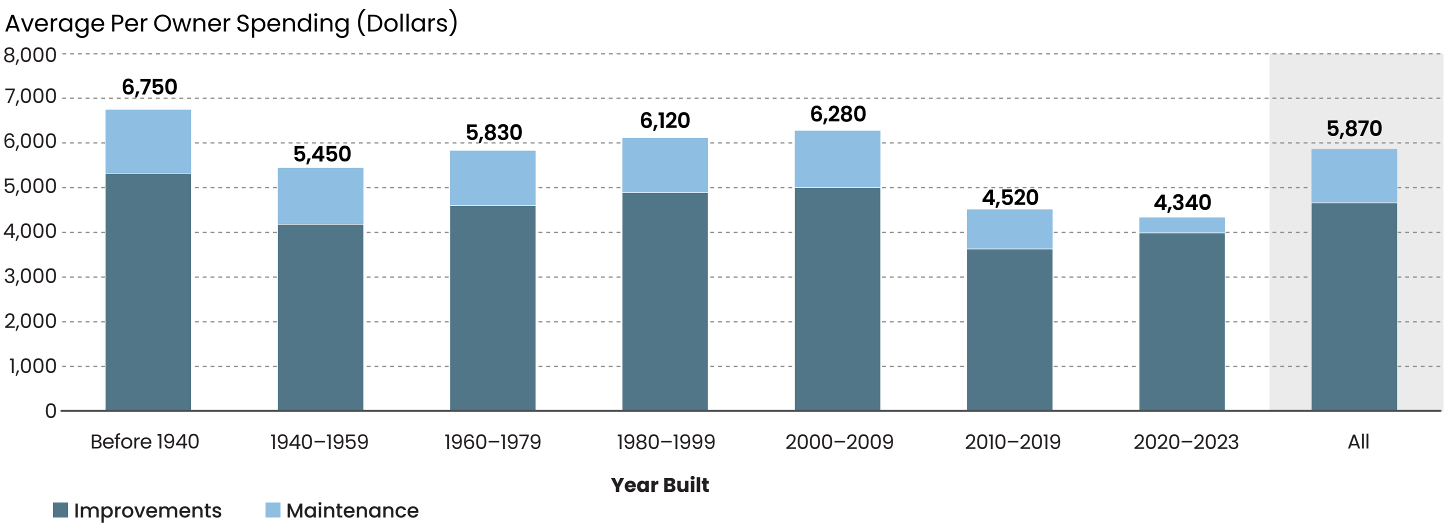
Housing inadequacy is far more common in older homes due to deterioration. Among owner-occupied homes built before 1940, 6.8 percent were inadequate, more than double the share of all owner-occupied units and more than five times the 1.3 percent of those built in 2010 or later. Beyond building age, rates of housing inadequacy also differ by the type and location of the structure. For example, manufactured homes and homes in non-metro areas are much more likely to be inadequate.

Homeowners with lower incomes and Black and Hispanic homeowners are the most likely to live in inadequate housing **(Figure 19)**. In 2023, 5.8 percent of owners with annual household incomes in the lowest quintile (less than $37,500) occupied homes classified as moderately or severely inadequate, nearly triple the 2.1 percent of those in the highest income quintile (more than $172,000). Additionally, 4.9 percent of Black owners and 4.2 percent of Hispanic owners lived in inadequate homes, as compared to 2.9 percent of non-Hispanic white owners and 2.1 percent of Asian owners. Research also shows that households living in tribal communities are disproportionately exposed to substandard housing conditions.

Racial disparities in housing conditions reflect a long history of discriminatory policies and real estate practices that have limited housing choices for home-

Figure 18

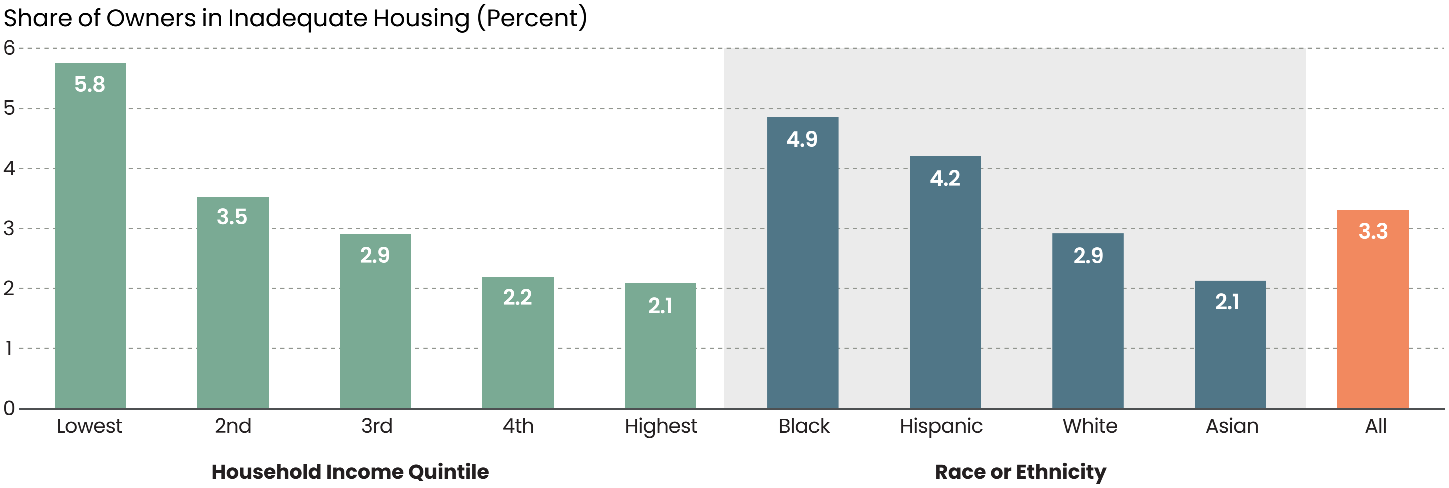
Owners of Older Homes Spend More on Improvements and Repairs



Source: JCHS tabulations of HUD, 2023 American Housing Survey.

Figure 19

Lower-Income Owners and Owners of Color Are More Likely to Occupy Inadequate Homes



Notes: Quintiles are equal fifths of owners ranked by total household income. The lowest quintile includes incomes of less than $37,500 and the highest quintile includes incomes of more than $172,000. Asian, Black, and white householders are non-Hispanic. Hispanic householders may be of any race. Inadequate units are those with multiple structural deficiencies, such as water leaks, large open cracks, and holes in the floor, or serious problems with any basic features such as plumbing, electrical, and heating. Inadequacy is considered moderate or severe depending on the number and types of these problems.
Source: JCHS tabulations of HUD, 2023 American Housing Survey.

buyers of color, and in some cases steered people of color to neighborhoods with older and lower-quality housing. Substandard housing is linked to numerous negative health outcomes, including lead poisoning, asthma, physical injuries, and poor mental health. The disproportionate exposure of households of color to substandard housing conditions amplifies existing socioeconomic and racial disparities in health, wealth, finances, and housing stability.

Although most homes meet the criteria for basic physical adequacy and habitability, the housing stock still has significant unmet repair needs that may threaten occupants' health and safety. The Federal Reserve Bank of Philadelphia estimated that 33 percent of the owner-occupied stock (27 million homes) needed at least one repair in 2022. With an estimated average cost of nearly $3,600 per unit, these unaddressed projects are valued at $98 billion. Homes occupied by households with incomes below the federal poverty guideline had even higher average unmet repair costs ($4,000).

NEED FOR ACCESSIBILITY MODIFICATIONS IS GROWING

Given the aging population, the housing stock will require considerable investment to improve accessibility and meet the needs of people with mobility disabilities. According to the most recently available data, in 2019, 4.0 percent of owner-occupied homes had at least one household member who experienced difficulty entering or navigating their home because of a physical condition. The incidence of these challenges increases with age. Among owners age 75 and over, 9.6 percent had a household member with such difficulties, compared with owners aged 65–74 (5.2 percent), aged 55–64 (3.9 percent), and under age 55 (1.8 percent). Among owners age 75 and over, 8.3 percent lived with someone who experienced difficulty entering their home, while meaningful shares had family members who struggled to get to the bathroom (4.9 percent), bedroom (4.5 percent), or kitchen (4.4 percent).

Demand for home accessibility modifications has increased across all age groups **(Figure 20)**. In 2022–2023, 3.7 percent of owners undertook one or more improvement projects to make their homes more accessible, up from 2.8 percent in 2018–2019. The number of owners undertaking a remodeling project for accessibility reasons reached a new high in 2022–2023 at 3.2 million, up from 2.3 million in 2018–2019. Homeowners age 65 and over were the most likely to undertake a project to improve accessibility (5.5 percent) compared to those aged 55–64 (3.9 percent) or under age 55 (2.2 percent). The share of owners remodeling for accessibility improvements grew most rapidly for owners age 65 and over, by 1.4 percentage points between these periods.

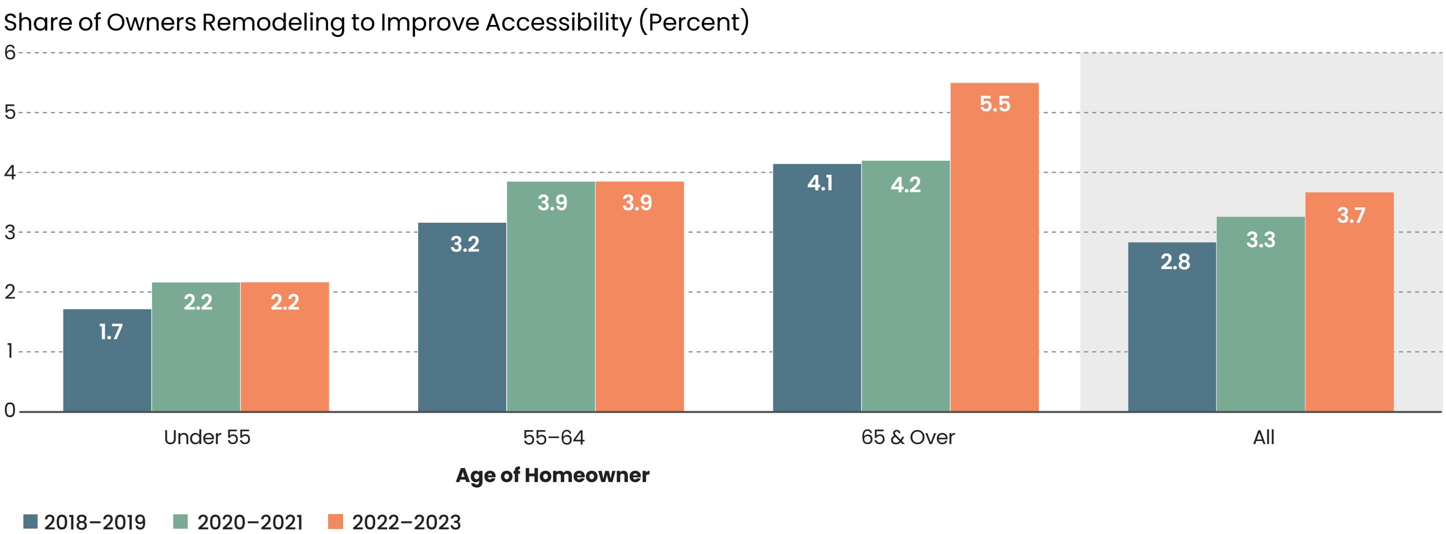
The need for more accessible housing is also impacting professional remodelers. In 2023, fully 63 percent of professional remodelers reported installing home modifications in the past year to support aging in place, according to NAHB. Remodelers performing accessibility work cited bathroom installations as the most in demand of all aging-in-place projects, with 93 percent of these remodelers installing grab bars; 83 percent, curbless showers; and 77 percent, higher toilets. Other common modifications included widening doorways (63 percent), improving lighting (49 percent), adding bedrooms or full bathrooms to the entry level (42 percent), and adding ramps or lowering doorway thresholds (42 percent). Absent these and other modifications to address accessibility needs, residents may risk injury or depend on family, friends, or paid professionals to safely navigate their homes and manage daily tasks.

DISPARITIES IN SPENDING AND BURDENS ENDURE

Despite the importance of home maintenance and updates, one in five homeowners (20 percent) reported no spending on improvements or repairs in 2023, while another 14 percent invested less than $500. For owners with lower incomes, investments in even basic repairs and critical replacements may be financially out of reach. In 2023, over 28 percent of owners with annual

Figure 20

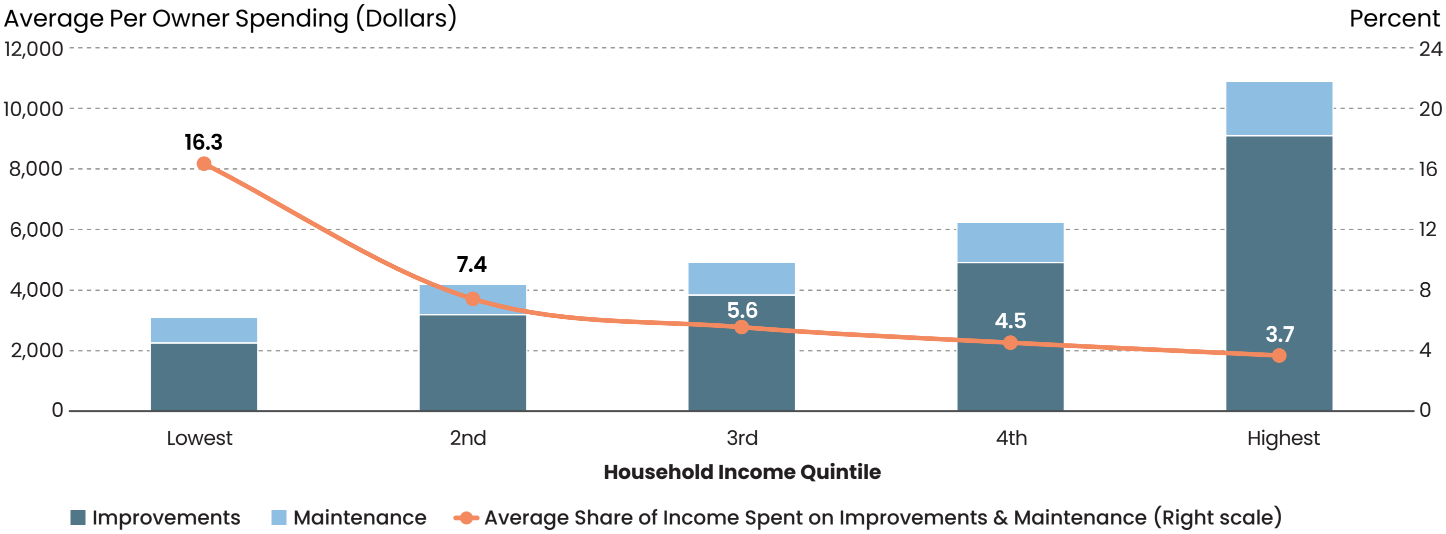
Demand for Accessibility Features Has Ticked Up Across Age Groups



Note: *Survey asked owners with improvement projects, "Did you do any home improvements to make your home more accessible for people with physical limitations, such as people using a wheelchair or a walker?"*
Source: *JCHS tabulations of HUD, American Housing Surveys.*

Figure 21

Improvement and Repair Investments by Lower-Income Owners Represent a Large Share of Income



Notes: Quintiles are equal fifths of owners ranked by total household income. The lowest quintile includes incomes of less than $37,500 and the highest quintile includes incomes of more than $172,000. Owners with zero or negative income are assumed to spend 0% of income for improvements and maintenance, while those spending over 100% are top-coded at 100%. Average share of income spent on home improvements and maintenance includes households with no spending. The average among all owners was 7.5 percent.
Source: JCHS tabulations of HUD, 2023 American Housing Survey.

household incomes in the lowest quintile (less than $37,500) did not spend on improvements or maintenance. By comparison, just 14 percent of owners with incomes in the highest quintile ($172,000 or more) spent nothing on improvements or repairs that year.

Among homeowners who do undertake improvement or repair projects, those with lower incomes are more likely than higher-income homeowners to report small amounts of spending. In 2023, about 18 percent of owners in the lowest income quintile spent less than $500 on their homes compared to just 7 percent of the highest-income owners. Another 22 percent spent between $500 and $2,499, compared to 19 percent of those with the highest incomes. In total, nearly 69 percent of owners with the lowest incomes invested little or no money in improving and maintaining their homes, compared to 41 percent of the highest-income homeowners.

Nevertheless, owners with lower incomes are far more burdened by home improvement and repair costs **(Figure 21)**. In 2023, owners with incomes in the lowest quintile spent an average of $3,100 on improvements and maintenance, less than a third of the per owner spending by owners with incomes in the highest quintile ($10,900) and about half as much as owners overall ($5,900). Yet these expenses typically represent a much larger share of household income for owners in the lowest income quintile. On average, homeowners in the lowest income quintile (including those who did not undertake projects) spent the equivalent of 16.3 percent of their incomes on improvements and maintenance in 2023. By comparison, the highest-income owners spent the equivalent of just 3.7 percent of their incomes, on average, on improvements and maintenance.

Improvement and repair costs also disproportionately strain Black, multiracial, and Hispanic homeowners, reflecting disparities in incomes, savings, and home equity, among other things. In 2023, Black owners on average spent the equivalent of 8.3 percent of their household incomes on improvements and maintenance. On average, spending for such projects also represented 8.0 percent of incomes for multiracial owners and owners of another race, and 7.8 percent of incomes for Hispanic owners, as compared to 7.4 percent and 6.1 percent for white and Asian owners, respectively.

LOWER-INCOME OWNERS PRIORITIZE CRITICAL PROJECTS

Financial constraints shape not only the level of investment owners make but also the types of projects they pursue. In addition to spending much less overall, homeowners with lower incomes prioritize the projects most essential to maintaining habitability and therefore hardest to postpone, such as replacing broken HVAC systems, repairing damages after a disaster, and undertaking routine maintenance **(Figure 22)**. In 2023, 27 percent of aggregate improvement and maintenance expenditures among the lowest-income owners was for routine maintenance such as minor plumbing or roofing repairs, well above the 16 percent for the highest-income owners. The lowest-income owners also allocated larger shares of their total expenditures to replacement projects, including roofing, windows, and HVAC (43 percent versus 35 percent), and disaster repairs (5 percent versus 3 percent).

By contrast, homeowners with the highest incomes devoted 30 percent of their aggregate improvement and maintenance spending to discretionary projects, as compared to 18 percent for those with the lowest incomes. These projects typically reflect desires for updates and upgrades and are more likely to be deferrable, including kitchen and bath remodels and room additions. The highest-income owners also spent much more of their total expenditures on outside property improvements such as landscaping, fencing, and recreational structures than households with the lowest incomes (15 percent versus 8 percent).

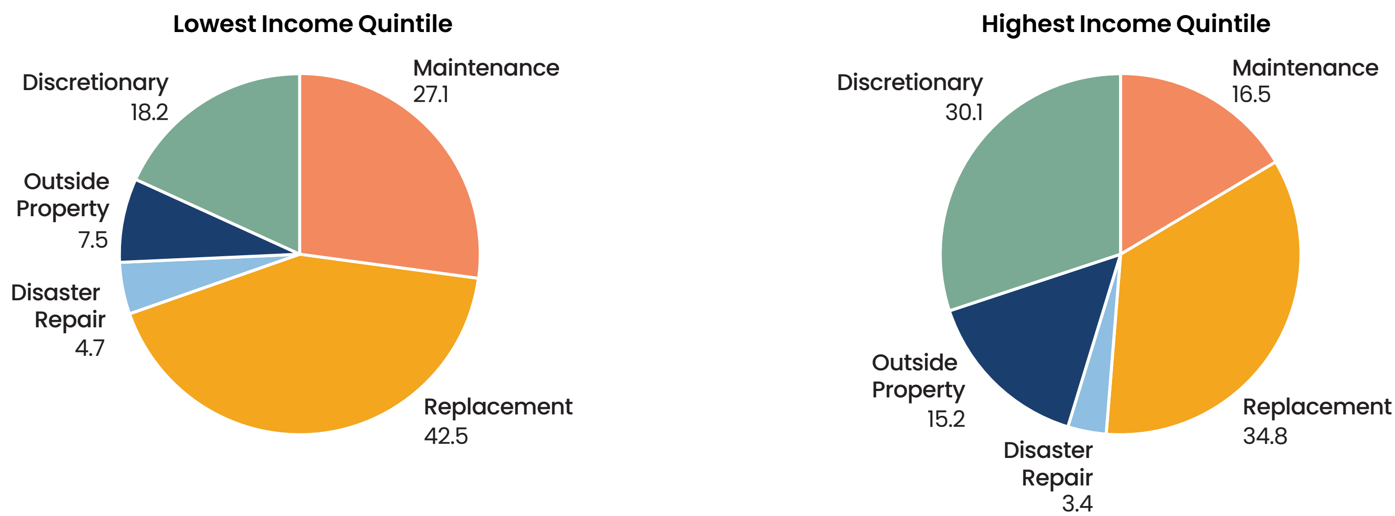
CRUCIAL HOME REPAIR PROGRAMS REMAIN UNDERFUNDED

Given the significant financial burden of home improvements and repairs and the imperative to preserve the existing housing stock, public and civil sector programs that subsidize these projects are critical. A vast but fragmented landscape of home repair assistance programs operates nationally and at the state and local levels. The extent and nature of this

Figure 22

Lowest-Income Owners Spend Much Larger Shares of Remodeling Budgets on Maintenance and Replacements

Share of Home Improvement and Maintenance Spending (Percent)



Notes: Quintiles are equal fifths of owners ranked by total household income. The lowest quintile includes incomes of less than $37,500 and the highest quintile includes incomes of more than $172,000. See Table A-1 for definitions of improvement project categories.
Source: JCHS tabulations of HUD, 2023 American Housing Survey.

assistance varies considerably across geographies and by the characteristics of eligible households, the types of repairs offered, and the structure of program funding. Insufficient funding often limits the scale and depth of available assistance, and existing programs reach only a fraction of eligible households.

The largest federal sources of funding for home repairs are HUD's Community Development Block Grant (CDBG) and HOME Investment Partnerships Program, and the US Department of Energy's Weatherization Assistance Program. In fiscal year 2023, jurisdictions received $487 million in CDBG funds for the rehabilitation of single-family homes and $104 million for multifamily homes.

National civil sector programs and organizations such as Rebuilding Together, Habitat for Humanity, the Green and Healthy Homes Initiative, and SBP also undertake needed repair work and help households cover costs. Rebuilding Together, for example, completed repair and improvement projects for nearly 10,000 homes in 2023. The specific interventions these programs offer are wide-ranging and include structural repairs and replacements, removal of health hazards, repair of disaster damages, retrofits for disaster resiliency, and accessibility modifications. In smaller cities and rural communities, local private and civil sector programs likely constitute the bulk of the available repair assistance.

In recent years, efforts to expand home repair assistance have benefited from new legislation. In 2023, Pennsylvania's Whole-Home Repairs Program became the first statewide initiative to subsidize home repair costs for lower-income homeowners and rental property owners to address habitability, weatherization, accessibility, and other needs. The Whole-Home Repairs Program was financed with a $125 million appropriation and used American Rescue Plan Act (ARPA) funds. Building on this momentum, the Whole-Home Repairs Act was introduced in Congress as a bipartisan bill in March 2024. If passed, the act would establish a nationwide pilot program to assist homeowners and rental property owners with critical repairs.

Research consistently indicates that repair interventions produce positive outcomes for both individuals and communities. Yet home repair assistance programs are universally underfunded. The persistence of substandard housing conditions and the large financial burden of home improvements and maintenance among lower-income households are two consequences of the gap in investment. Equitable implementation of home repair assistance could reduce racial disparities in housing conditions, especially if programs target resources to disinvested and formerly redlined neighborhoods. However, doing so is impossible with existing resources.

THE OUTLOOK

The aging of the housing stock and the large scope of unmet improvement and repair needs will continue to drive growth in homeowner expenditures. The increasing population of older adults will also spur investments in accessibility modifications that enable owners to stay in their homes longer.

Many needed repairs and improvements will be facilitated by public, civil sector, or philanthropic assistance. However, home repair programs remain critically underfunded, and many homeowners, especially those with lower incomes, lack the financial resources to undertake necessary projects to maintain safe and adequate conditions. Additional resources are crucial to help households cover renovation and repair costs; address health, safety, and accessibility needs; and preserve the aging housing stock.

OPPORTUNITIES FOR ENERGY, DISASTER, AND CLIMATE RETROFITS

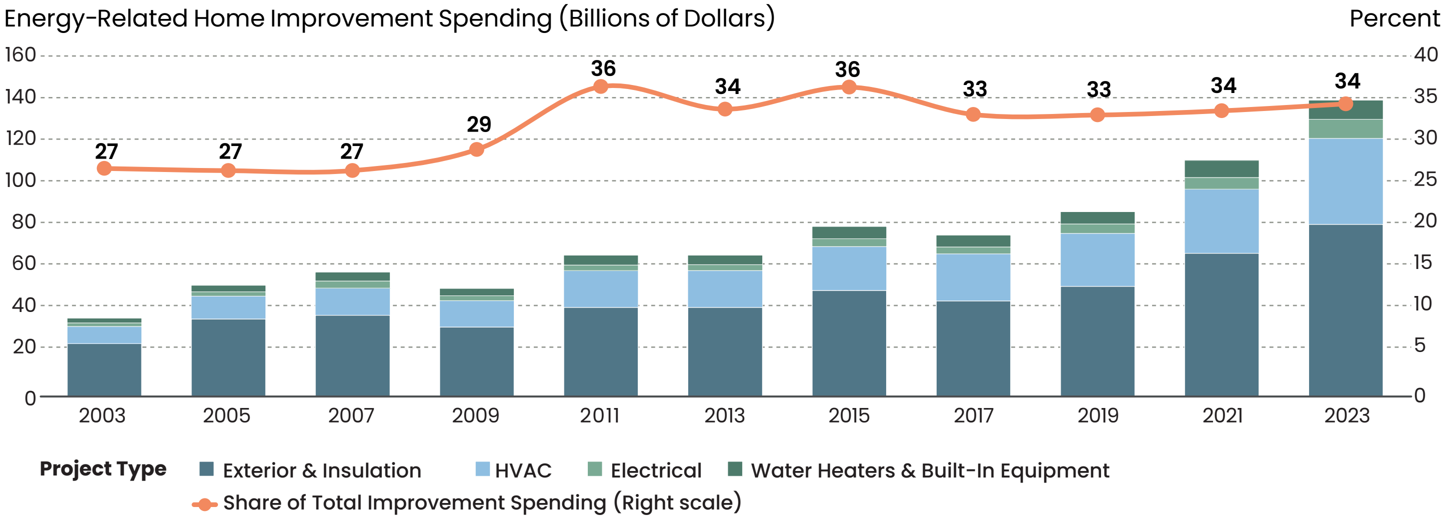
The housing sector accounts for almost a fifth of US greenhouse gas emissions. Against this backdrop, investments in energy efficiency, electrification, and renewable energy sources are urgently needed to reduce the residential carbon footprint and lessen households' utility costs. Likewise, the housing stock must be adapted to increasingly common hazards such as hurricanes, floods, and wildfires. Public policies that require or incentivize investment, household assistance, and industry engagement have helped to boost interest in energy performance and disaster resiliency projects, especially for households with lower incomes. But additional attention and resources are needed to upgrade homes to ensure that all the stock meets performance expectations beyond basic habitability, occupant satisfaction, and resale value.

SPENDING INCREASES FOR ENERGY-RELATED RENOVATIONS

Although relatively few homeowners pursue projects with energy efficiency or decarbonization as a primary motivator, market spending on any improvement that ultimately impacts home energy use has expanded greatly in the past two decades **(Figure 23)**. Total homeowner spending on projects that influence and thus have the potential to reduce home energy consumption, such as roofing, HVAC, windows, siding, water heaters, electrical, and insulation, increased

Figure 23

More Than a Third of Owner Improvement Expenditures Are for Projects That Affect Energy Use



Notes: Energy-related projects impact home energy use and have the potential to reduce consumption. Exterior includes roofing, windows, doors, and siding. Electrical includes wiring, fuse boxes, and breaker switches. Built-in equipment includes dishwashers and garbage disposals. Spending for water heaters and built-in equipment before 2011 is partially estimated.
Source: JCHS analysis of HUD, American Housing Surveys.

25 percent from $111 billion in 2021 to $139 billion in 2023, exceeding gains on improvements overall (22 percent). Homeowner expenditures for energy-related projects in 2023 were more than double the amount spent in 2013 ($66 billion) and nearly four times the spending in 2003 ($37 billion). Projects that impact home energy use have also become a consistently larger share of the improvement market. In 2023, energy-related projects accounted for 34 percent of all improvement spending on owner-occupied homes, in line with market shares since 2011 but up from 27 percent in 2003.

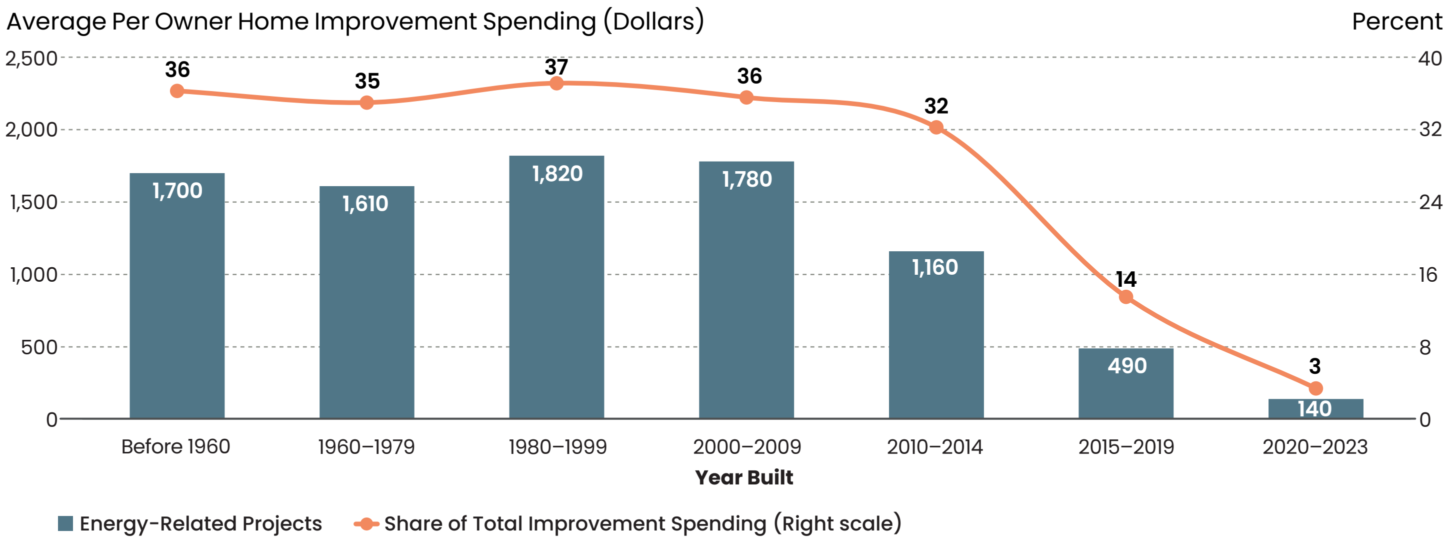
The bulk of homeowner outlays for energy-related improvements goes toward replacing roofing and HVAC systems. In 2023, replacements of roofing accounted for a third ($46 billion) of energy-related improvement spending and HVAC accounted for 29 percent ($40 billion). Owners also spent $22 billion on windows and doors; $9 billion each on siding replacements, water heaters and built-in equipment, and electrical upgrades; and another $3 billion on insulation. Whether these projects are to reduce energy bills or to replace worn components, they are often necessary expenditures that also contribute to basic habitability. Regardless of homeowner motivation, each energy-related improvement presents an opportunity to cut residential greenhouse gas emissions, increase the energy efficiency of the housing stock, and reduce household utility costs.

The substantial growth in spending for improvements that impact home energy use largely reflects the aging of the housing stock and the need to replace worn components and systems. Older homes are typically much less energy efficient than newer ones, partly because their core systems require modernization and partly because energy building codes were not promulgated until the 1980s. According to the most recent Residential Energy Consumption Survey (RECS), homes built before 1980 consumed about 30 percent more energy per square foot in 2020 than those built since 1980.

As homes age and their systems need to be replaced, energy-related projects become a consistently higher share of improvement expenditures **(Figure 24)**. This is especially true after the structures' first 15 to 20 years. In 2023, just 3 percent of aggregate improvement spending on homes built since 2020 was for proj-

Figure 24

Spending for Energy-Related Projects Is Considerably Higher on Older Homes



Notes: Energy-related projects impact home energy use and have the potential to reduce consumption. Such projects include roofing, windows, doors, siding, insulation, HVAC, water heaters, built-in dishwashers, garbage disposals, electrical wiring, fuse boxes, and breaker switches.
Source: JCHS tabulations of HUD, 2023 American Housing Survey.

ects that impact home energy use, as compared to 14 percent for those constructed between 2015 and 2019 and 32 percent for those built from 2010 to 2014. Among homes constructed before 2010 (14 years or older), 36 percent of total improvement outlays were on energy-related projects. Per owner spending for energy-related improvements in 2023 was $1,700 on homes built before 2010, nearly three times the average spending on homes built since 2010 ($600).

Even as spending on energy-related improvements has risen considerably over the past two decades, relatively few homeowners do these projects with the goal of advancing their homes' energy performance. In 2022–2023, 17 percent of owners, or 14.7 million households, completed one or more projects to improve energy efficiency and reduce energy consumption, up from 15 percent, or 12.0 million owners, in 2018–2019. Owners living in older, less efficient homes are more likely to undertake projects to improve energy efficiency. Fully 19 percent of owners living in homes built before 1960 completed one or more energy-efficiency improvements in 2022–2023, compared to just 7 percent of owners living in homes built since 2010.

For many owners who decide to make energy-efficiency improvements, reducing home energy costs is a primary motivator. The average retail price of residential electricity increased 22 percent between 2020 and 2023, according to the US Energy Information Administration, appreciably outpacing consumer inflation of 18 percent.

DISPARITIES IN ENERGY-RELATED HOME IMPROVEMENTS

The need for energy-efficiency investments is especially great among households with lower incomes. Lower-income owners are more likely to live in older homes, which tend to be the least energy efficient. In 2023, 29 percent of owners with annual household incomes in the lowest quintile lived in homes built before 1960, well above the 21 percent share of owners with incomes in the highest quintile. By comparison, just 6 percent of lowest-income owners lived in homes built in 2010 or later, compared to 16 percent of those with the highest incomes.

Homeowners with lower incomes and homeowners of color spend far less on improvements that affect home energy use versus their higher-income and white counterparts, respectively. In 2023, aggregate spending on energy-related projects by owners with annual household incomes in the highest quintile was 2.6 times that of owners with incomes in the lowest quintile. Racial disparities in energy-related improvement spending reflect long-standing inequities in income, home values, and home equity. In 2023, Black and Hispanic owners spent less than $1,300 on average for improvements that affect home energy use, and Asian and multiracial owners or those of another race spent less than $1,500. In comparison, white homeowners spent over $1,700.

Additionally, households with lower incomes and households of color bear a greater financial burden for energy costs. In 2023, the typical homeowner with household income in the lowest quintile devoted 26 percent of monthly housing costs to energy bills, including electric, gas, oil, and other fuels. By comparison, owners with incomes in the highest quintile typically dedicated just 12 percent of total monthly housing costs to energy bills. In 2023, Black owners spent 3.6 percent of their income on energy bills, at the median, while multiracial owners or those of another race spent 3.3 percent and Hispanic owners spent 3.2 percent. By comparison, white homeowners spent a median 3.0 percent of their income on energy bills and Asian owners spent 2.3 percent. Rising energy costs will exacerbate financial strains in household budgets, especially among owners living in older, less efficient homes.

Many households face difficulties meeting energy needs. In 2020, one in five homeowners reported experiencing at least one form of energy insecurity in the previous year, according to the RECS. Among all

A quarter of remodelers report that energy-improving projects account for the majority of their work.

homeowners, 14 percent reported reducing or forgoing spending on food or medicine to pay energy costs, 7 percent left their homes at unhealthy temperatures, and 7 percent received a disconnect or delivery stop notice. Additionally, 5 percent were unable to use air conditioning and 3 percent were unable to use their heating equipment because they could not repair breakdowns or because of energy delivery disruptions due to lack of payment.

Households with lower incomes and households of color are most vulnerable to energy insecurity. In 2020, 45 percent of households with annual incomes of less than $40,000 reported some form of energy insecurity compared to just 7 percent of households with incomes of $150,000 or more. In 2020, 52 percent of Black households, 47 percent of Hispanic households, and 25 percent of Asian households reported one or more forms of energy insecurity compared to 20 percent of non-Hispanic white households. Further, households with older adults, people with chronic illnesses, or other physically vulnerable individuals are most likely to suffer additional health risks associated with energy insecurity.

PUBLIC POLICY SHAPES HOME ENERGY INVESTMENTS

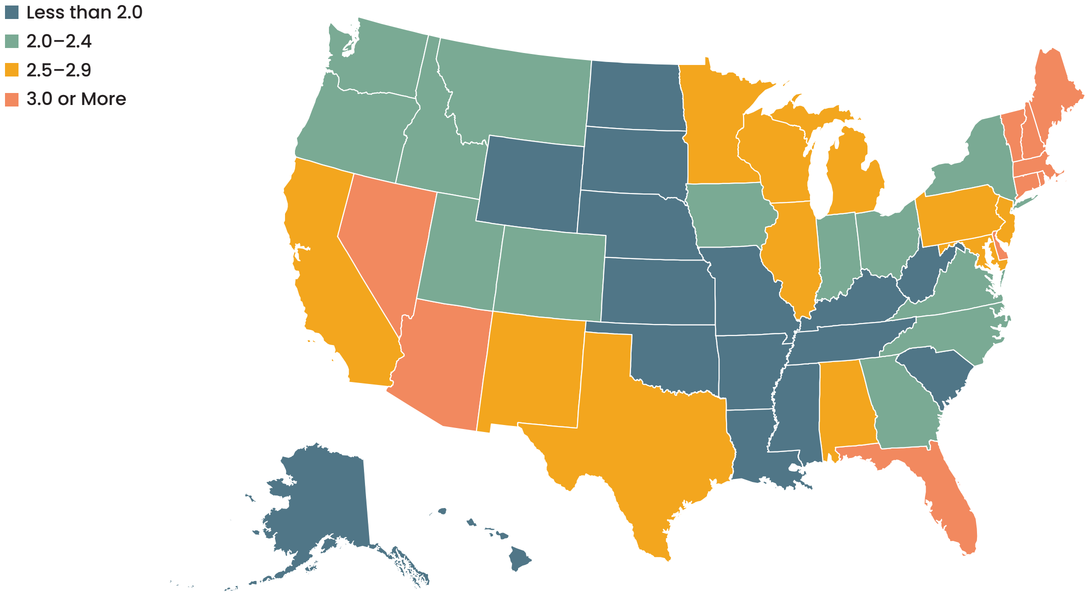
Public, civic, and private organizations offer homeowners financial incentives, products, and assistance to help offset the costs of energy-efficiency, electrification, and renewable energy improvements. For example, the 2022 IRA appropriated rebates and tax credits to help households across all income levels improve their home energy performance. The Weatherization Assistance Program received an additional $3.5 billion under the 2021 Infrastructure Investment and Jobs Act to assist households with very low incomes in doing the same.

Some of the substantial gain in spending for energy-related improvements reflects the impact of public investments. The American Recovery and Reinvestment Act of 2009 introduced tax credits to support

Figure 25

Energy Tax Credits Are Used Most Often in New England, Delaware, Florida, and Parts of the Southwest

Share of Returns Claiming Residential Energy Credits in Tax Year 2023 (Percent)



Notes: Data include US individual income tax returns (Form 1040) claiming a non-zero residential clean energy credit, energy-efficient home improvement credit, or both. The share of US tax returns claiming residential energy credits was 2.5%.
Source: JCHS tabulations of Internal Revenue Service; Research, Applied Analytics and Statistics Division.

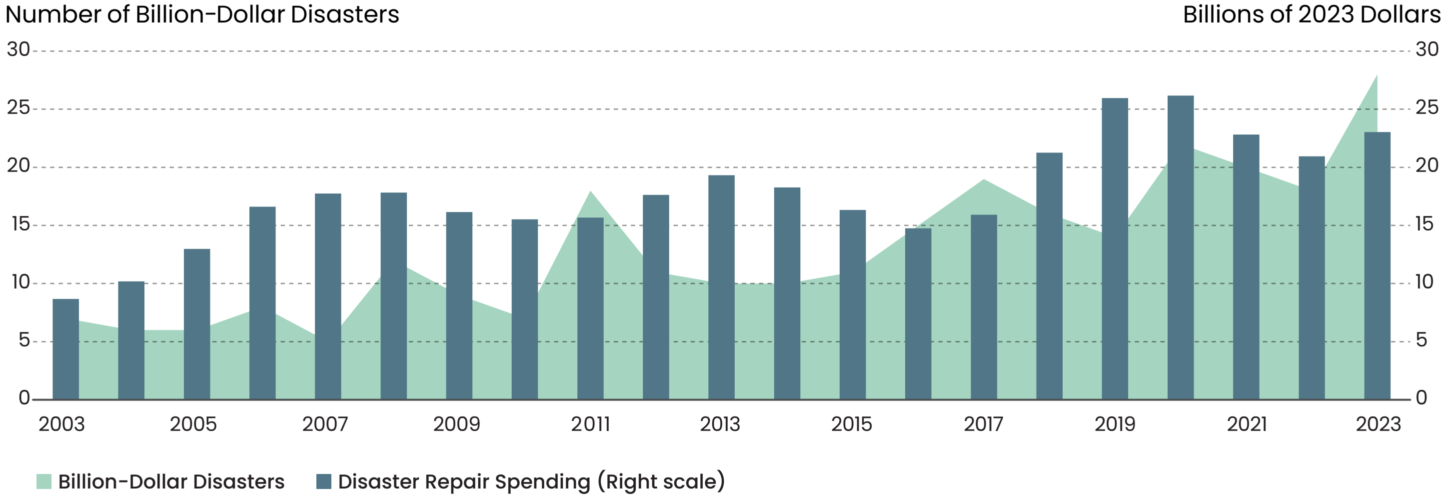
energy-efficiency retrofits, likely contributing to the 31 percent surge in spending on projects that affect home energy use between 2009 and 2011, from $51 billion to $66 billion. By comparison, total expenditures for homeowner improvements grew only 4 percent over the same period as the market struggled to recover from the worst downturn on record in the wake of the Great Recession. As a result, the share of market spending on energy-related projects jumped more than 7 percentage points from 29.0 percent in 2009 to 36.4 percent in 2011. About 6.7 million owners reported receiving tax credits in 2010–2013 for energy-efficiency improvements, according to the AHS.

A similar impact may occur with new federal incentives. For example, the IRA's expanded residential energy tax credits have already resulted in a demonstrable uptake. In 2023, the first full year the credits were available, more than 3.4 million income tax filings claimed the clean energy credit, the energy-efficient home improvement credit, or both, for an average tax credit of $2,500 per return, according to the Internal Revenue Service. These filings were the equivalent of $8.4 billion in credits across the 50 states, with the largest shares concentrated in New England, Delaware, Florida, and parts of the Southwest **(Figure 25)**. The projects most commonly supported by these tax credits included rooftop solar installations, insulation, windows, and central air conditioners. If current federal tax credits, rebates, and weatherization assistance remain in place, demand for energy-related improvements may surge as it did last decade under prior incentives.

Although many professional residential remodeling contractors are familiar with energy retrofits, more industry engagement is needed to meet the growing demand for energy-efficiency, electrification, and renewable energy improvements. In 2023, 25 percent of remodelers reported that energy-improving products or installations accounted for the majority of their projects on a dollar basis over the past year, and

Figure 26

Growth in Severe Storms Has Fueled the Disaster Repair Market



Notes: Billion-dollar disasters are events that generate over $1 billion in damages after adjusting for inflation. Disaster repairs are a subset of improvement spending on owner-occupied homes. Disaster repair spending is a three-year rolling average adjusted for inflation using the CPI-U for All Items.
Source: JCHS tabulations of National Oceanic and Atmospheric Administration, US Billion-Dollar Weather and Climate Disasters; and HUD, American Housing Surveys.

an additional 27 percent said these improvements constituted a quarter to half of their work. More than 31 percent of remodelers reported installing Energy Star windows in the past year, 28 percent installed electric heat pump HVAC systems, and 11 percent installed rooftop solar panels, according to surveys conducted by the Center and the Farnsworth Group.

DISASTER REPAIR SPENDING TICKS UP

In 2023, the US experienced 28 weather- and climate-related disasters for which damages reached or exceeded $1 billion—the highest number on record. That year, the Congressional Budget Office cited $114 billion in total disaster losses, $34 billion (30 percent) of which was not covered by insurance. The increase in the number and severity of disasters like hurricanes, floods, and wildfires has spurred post-disaster repair and rebuilding activity. In aggregate, homeowners spent $23 billion on average annually in 2021–2023 repairing disaster-related damages, up from less than $9 billion in real terms 20 years earlier **(Figure 26)**. Average spending among owners who restore their homes after a disaster has also trended upward from an inflation-adjusted $17,900 in 2003 to $22,100 in 2023.

In 2024, the number of billion-dollar disasters—including Hurricanes Helene and Milton—reached a near record of 27 and the 2025 Los Angeles wildfires are projected to be among the costliest disaster events in US history. As such, the share of home improvement spending for disaster repairs is expected to continue upward.

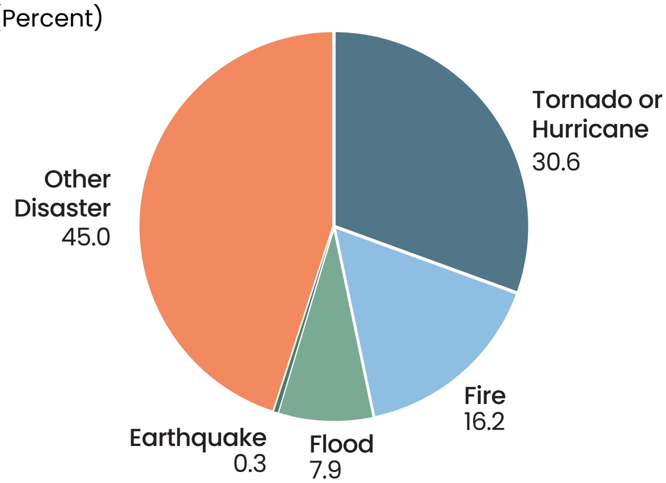
Disasters have long-lasting impacts on local remodeling markets. For example, after Hurricane Ida hit Louisiana in 2021, disaster repair spending accounted for 51 percent of the home improvement market in New Orleans in 2022–2023, pushing average annual per owner spending in the metro to $9,300, double the national average. Following such an event, repair spending is typically spread over several years as insurance companies assess damages and determine claims, and owners establish their financial capacity to address uncovered damages. Projects may also be delayed or completed in stages because local contractors and remodelers, who may also suffer damages to their homes and places of business, may not be able to meet the surge in demand immediately.

Certain disasters are commonly associated with specific areas in the US, such as hurricanes along the Gulf Coast, tornadoes across the central states, and wildfires in the West. While these areas suffer disproportionately from these events, a wider range of hazards are increasingly affecting every part of the country. Indeed, a considerable share of owner disaster repair expenditures occurs in response to hazards beyond the hurricanes, tornadoes, or fires often spotlighted in the media **(Figure 27)**. In 2023, other disasters such as severe hailstorms, snowstorms, and windstorms accounted for 45 percent of disaster repair outlays, well above the shares for hurricanes or tornadoes (31 percent), fires (16 percent), or flooding (8 percent). Although these events do not always garner the same national attention and public assistance as major disaster declarations, they are also escalating in number and severity.

Figure 27

Disaster Repair Expenditures Result from a Variety of Hazards

Share of Disaster Repair Spending by Type of Damage (Percent)



Notes: Disaster repairs are a subset of improvement spending on owner-occupied homes. No disaster repair spending for landslide damages was reported in the 2023 American Housing Survey. Other includes spending for repairs due to multiple disasters of any kind. Disasters can include damage from broken pipes or grease fires, but only if the unit was severely damaged as a result. Though not specified in the American Housing Survey, other disasters likely include severe hailstorms, snow and ice storms, windstorms, or other natural hazards as classified by FEMA.
Source: JCHS tabulations of HUD, 2023 American Housing Survey.

Nevertheless, only 51 percent of adults believed they were prepared for a disaster in 2023, according to the Federal Emergency Management Agency. However, that may be beginning to change as both exposure to and awareness of the risks grow. More owners have been motivated to spend on improvements for preparedness such as the installation of whole-home or portable backup generators. According to the AHS, 19 million single-family owner-occupied homes (25 percent) had a generator in 2023 to provide electricity during a power outage, up from 13 million homes (21 percent) in 2013. While generators certainly help households to stay safe and comfortable during and after hazard events, these types of preparedness investments neither reduce the greenhouse gas emissions contributing to the rise in disaster activity nor protect homes from future disaster damages.

DISASTER MITIGATION IS UNDERRESOURCED

Given the growing frequency, severity, and diversity of disasters, there is an urgency for home improvements that can help to reduce or eliminate damages from future disasters and chronic hazards caused by global climate change. Such mitigation improvements include storm shutters on windows; stronger roofs and home exteriors that can withstand high winds and water infiltration; elevated electrical and mechanical equipment, or even entire homes, to better protect from flooding; landscaping to prevent flooding or deflect embers; and roofing, siding, eaves, and vents made from fire- and ember-resistant materials. The National Institute of Building Sciences estimates that every $1 invested in private sector building mitigation retrofits could reduce the cost of future losses by $4.

Despite the potential benefits, household investments in disaster mitigation retrofits are rare, even in places with extreme exposure. According to the Survey of

Consumer Expectations, in 2022, only 11 percent of owners in the preceding three years adapted their homes in response to the threat of disasters or severe weather events. Affordability remains a barrier to more widespread action. Among the owners making recent investments, expenditures averaged $19,300. The Urban Institute studied New Orleans homeowners in the decade after Hurricane Katrina, finding that the only significant predictor of a household pursuing disaster mitigation was ability to pay, with the odds of taking at least one action increasing in tandem with the capacity to afford such expenses. Consequently, lower-income households invest in resilience at much lower rates.

Although mitigation actions are often expensive, owners with financial resources may pursue them to reduce home insurance premiums, which have increased dramatically. According to the AHS, the average annual cost for homeowner insurance jumped 17 percent nationally between 2021 and 2023, from $1,460 to $1,700. Because insurance claims are by far the largest source of funding for homeowners making disaster repairs, insurers have a vested interest in offering more and larger incentives, such as premium reductions or coverage expansion, for owners who perform mitigation retrofits. Retrofit standards and resources such as those in the Insurance Institute for Business and Home Safety's FORTIFIED program may result in greater homeowner awareness and, ultimately, more expansive investments by consumers in home mitigation. Such improvements may also help retain or even increase the resale value of homes in markets with high disaster exposure.

THE OUTLOOK

The imperative to both reduce the housing stock's substantial carbon footprint and bolster its resiliency to climate change is expected to become only more urgent with time. Without energy-efficiency upgrades, electrification, and renewable energy installations, home energy demand will further add to emissions and, in turn, the warming of the planet. The impacts of climate change on the severity and frequency of disasters, along with other environmental hazards, will continue to increase the costs of homeownership and widen disparities in disaster vulnerability.

Yet the costs of energy-efficiency, electrification, and disaster mitigation home improvements are a major obstacle for many households. Absent greater resources, they will remain out of reach. New federal assistance, rebates, and tax credits could further increase the share of home improvement spending for energy-related projects, even as the specific types of incentives are likely to evolve under the new federal administration. While additional funding has been made available to support some of these efforts, more is needed to achieve critical scale.

The home improvement and repair industry also has an important role to play in better supporting and assisting households as they seek higher performance in their homes. Expanding training and certification programs to increase the number of remodelers who can perform energy-related and disaster mitigation work will increase options for homeowners seeking to make these critical retrofits, reducing costs and ensuring that the remodeling industry is equipped to meet the escalating demand.

EVOLVING TRENDS IN INDUSTRY STRUCTURE AND SUPPLY

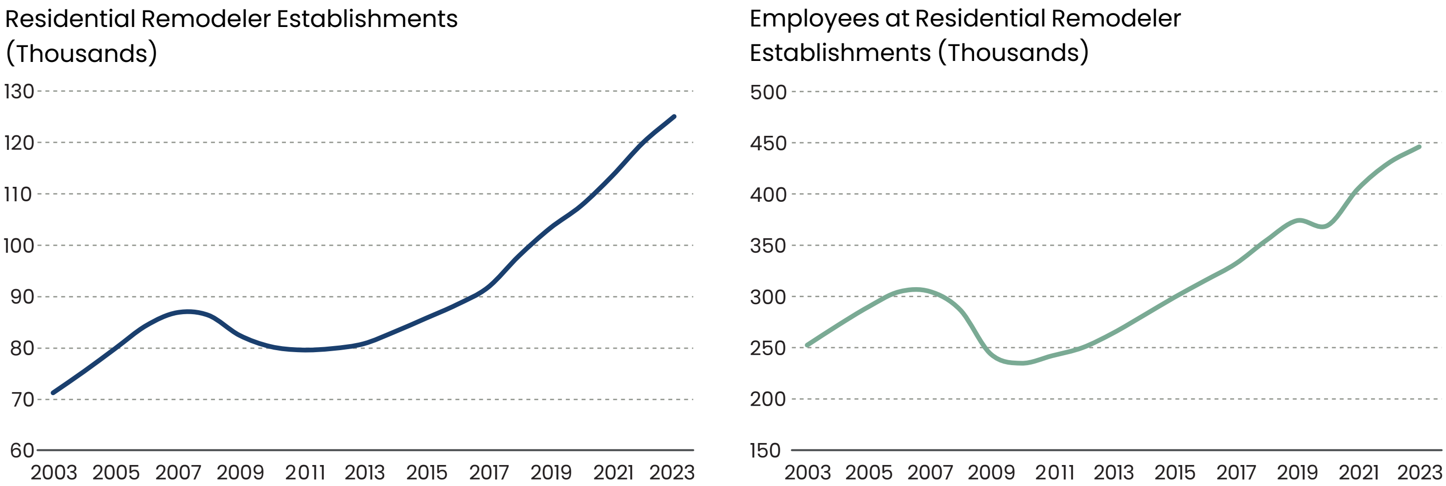
Despite a flurry of mergers and acquisitions and evidence of growing concentration among larger-scale firms, the residential remodeling industry remains highly fragmented. Small-scale and self-employed contractors dominate the industry but are acutely susceptible to business failure. High costs for building materials and the large, persistent shortage of skilled trade workers threaten firm survival as well as the industry's ability to meet current and future demand. In the near term, the remodeling industry faces uncertainty surrounding future immigration reforms and the prospect of shifting trade policies that may introduce new tariffs on imports of key building materials.

INDUSTRY REMAINS FRAGMENTED

Small businesses dominate the home improvement and repair industry. About two-thirds of remodelers are self-employed individuals or partnerships with no employees on payroll, and even most of those with employees are smaller operations. Among general remodeler establishments with payrolls, including full-service, design/build, and handyman maintenance and repair businesses, 44 percent had revenues of less than $250,000 and nearly two-thirds had revenues under $500,000 in 2017, according to the most recently available Economic Census. Only 8 percent of general remodelers with payrolls generated revenues of $2.5 million or more.

Figure 28

Numbers of General Remodeling Businesses and Employees Skyrocketed Over the Previous Decade



Note: Data are residential remodelers with payrolls as classified in NAICS 236118 and include general or full-service remodeling contractors and remodeling design/build firms.
Source: US Department of Labor, Bureau of Labor Statistics, Quarterly Census of Employment and Wages.

Since the bottom of the last industry downturn during the Great Recession, the number of general remodelers with payrolls increased 57 percent from fewer than 80,000 in 2011 to more than 125,000 by 2023 **(Figure 28)**. Employment among these establishments also soared an incredible 90 percent from a relative low of 235,000 employees in 2010 to 446,000 in 2023. With employment levels outpacing growth in the number of businesses, the average size of these general remodelers increased from 2.9 payroll employees in 2010 to 3.6 by 2016. Since then, average firm size has held steady, except in 2020 when early pandemic shutdowns caused a sharp rise in unemployment.

However, the aggregate numbers of remodeling establishments hide considerable churn in the industry, as evidenced by high rates of businesses entering and exiting every year. Within the residential construction sector, which includes homebuilders and remodelers, the average annual net growth in the number of payroll establishments of 4 percent between 2013 and 2022 masked much higher rates of business openings and closings. During that period, about 15 percent of establishments shuttered each year, even as 19 percent opened.

The remodeling industry faces many obstacles to scaling business operations, including low barriers to entry, volatile business cycles, difficulty attracting capital, and highly customized work. These challenges contribute to substantial fragmentation. According to the 2017 Economic Census, the largest 50 firms accounted for less than 8 percent of total receipts among general remodelers with payrolls. By contrast, the largest 50 production homebuilders and the largest 50 building material dealers accounted for 55 percent and 65 percent of their respective industry receipts. In more recent years, there has been a flurry of high-profile private equity investments in, and mergers and acquisitions of, large-scale remodeling companies. Nevertheless, evidence suggests that the remodeling industry remains considerably less consolidated than related industries.

Consolidation benefits remodeling firms through enhanced operating efficiencies, stronger negotiating positions with suppliers, improved workforce development and retention, greater access to capital at lower costs, and increased revenues and profits, all of which can help firms weather market downturns. Consolidation can also help stabilize churn in the industry to the degree that larger firms are less likely to fail. Homeowners, too, may benefit, but there are also downsides. Customers might have better experiences and, in turn, increased satisfaction but fewer options for soliciting bids and less ability to personalize projects.

ACHIEVING SCALE THROUGH SPECIALIZATION

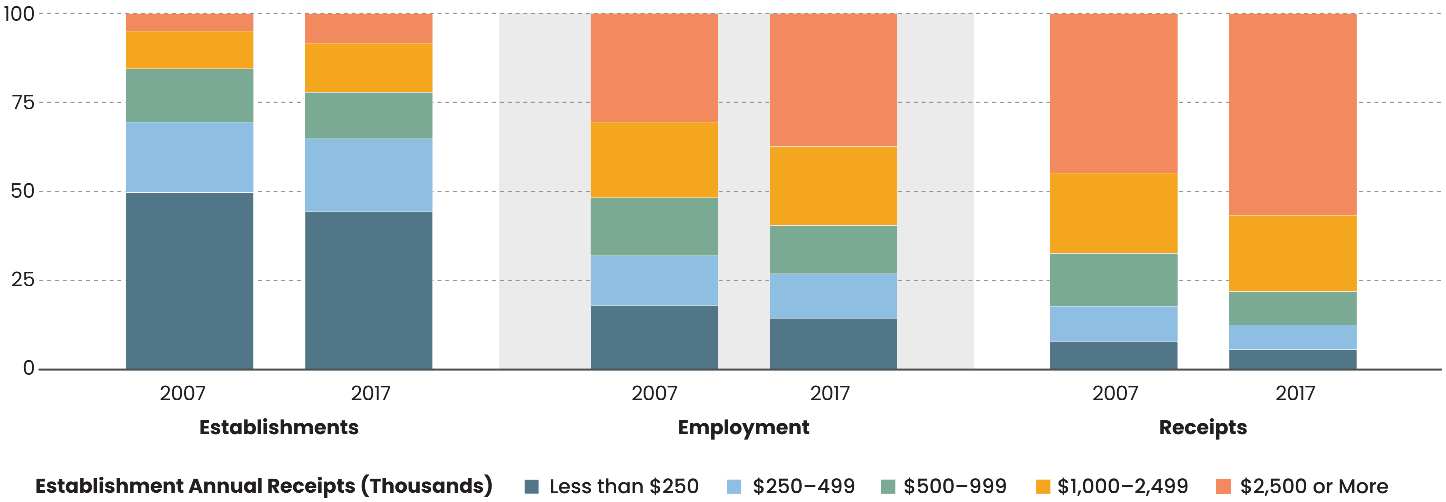
Despite market fragmentation, industry activity has become increasingly concentrated among larger-scale remodelers. In the decade before the pandemic, general remodelers with revenues of at least $2.5 million grew their share of industry employment from 31 percent in 2007 to 37 percent in 2017 and their portion of industry receipts from 45 percent to 57 percent, even as their share of establishments rose just 3 percentage points **(Figure 29)**. In more recent years, larger-scale firms in the annual *Qualified Remodeler®* publication's Top 500 Remodelers have also increased their portion of market expenditures, which suggests a continuation of this trend. Companies qualifying for the Top 500 generated annual remodeling revenues of $3 million or more in 2023, and their collective revenues accounted for 6.5 percent of aggregate homeowner spending for professional improvements that year, compared to 5.1 percent in 2017 and 3.8 percent in 2007.

Specialty replacement firms are driving market concentration. These businesses focus on relatively smaller projects with shorter timelines, such as roofing, siding, windows, and quick-turn bath remodels, and represent a growing share of the top 500 remodelers. In 2023, specialty remodelers constituted 57 percent of companies ranking among the top 500, up from 43 percent in 2013 and 36 percent in 2003.

Figure 29

The Largest General Remodelers Have Expanded Their Industry Foothold

Share of Residential Remodeler Industry Totals (Percent)



Notes: Data are residential remodelers with payrolls as classified in NAICS 236118 and include general or full-service remodeling contractors and remodeling design/build firms. Receipt sizes are not adjusted for inflation. Data for 2017 exclude establishments not operating for the entire year.
Source: JCHS tabulations of US Census Bureau, 2007 and 2017 Economic Census.

Specialty firms have performed better during recent market booms and busts than general remodelers, including design/build and full-service firms, as evidenced by revenues. From 2019 to 2023, the typical specialty replacement firm on the Top 500 Remodelers list grew its revenue an average of 12.0 percent annually compared to 9.4 percent for the typical top design/build or full-service remodeler. During the previous market downturn between 2007 and 2012, revenue for the typical top specialty replacement remodeler declined 0.9 percent on average annually, compared to a decrease of 2.6 percent for the typical top design/build or full-service firm.

Much of the stronger performance of specialty remodelers stems from the focused business model. Unlike general remodeling, projects for specialty replacement firms tend to be much less complex and, therefore, less time-consuming and labor intensive, resulting in shorter job cycles and potentially higher profit margins. Specialization also allows firms to develop greater operational efficiencies and secure more favorable pricing on materials. As a result, specialty replacement remodelers are better positioned to scale, access outside investment, and consider mergers or acquisitions. Indeed, much of the recent activity in remodeling company mergers and acquisitions has been among specialty replacement firms.

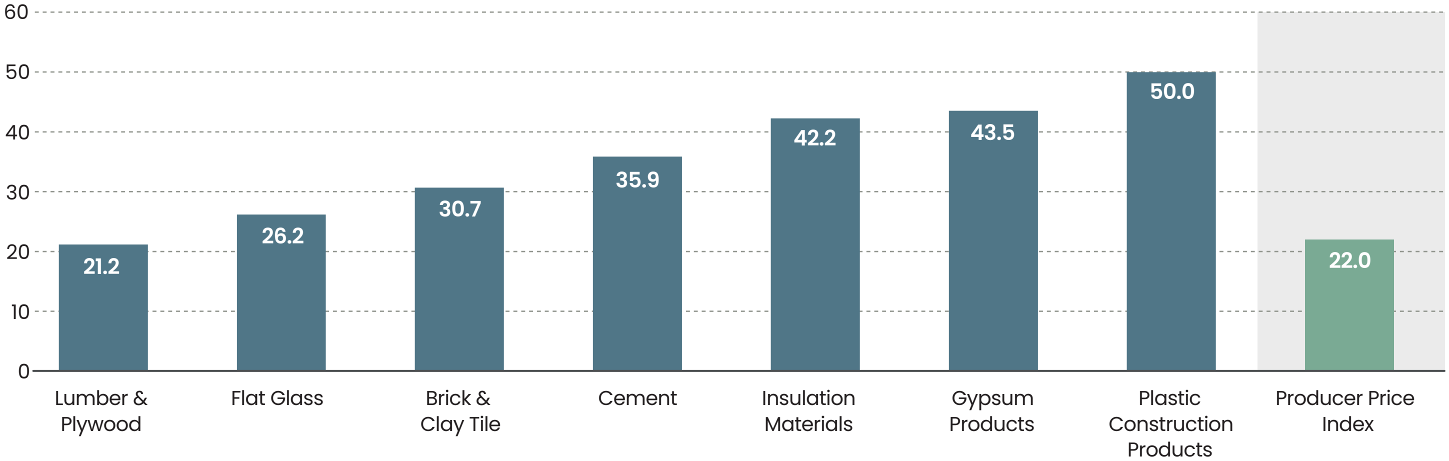
MATERIAL SHORTAGES AND HIGH COSTS REMAIN

Ongoing challenges to the home remodeling and repair industry include the high costs of building materials and supply chain concerns regarding product availability and long lead times. Even though annual growth in building material prices has largely slowed or even turned negative since 2022 as demand has cooled and bottlenecks have eased, the costs for many key materials are still appreciably above pre-pandemic levels **(Figure 30)**. For example, the price of lumber and plywood was still 21 percent greater through the third quarter of 2024 than in 2019 despite declining on a year-over-year basis for almost two years. Similarly, while growth in prices for glass, tile, and

Figure 30

Price Gains for Most Building Materials Have Far Outpaced Inflation

Change in Prices, September 2019–2024 (Percent)



Notes: Data are rates of change in 12-month rolling averages. Data for June to September 2024 are preliminary. The Producer Price Index (PPI) measures average change over time in the selling prices received by domestic producers for their output. PPI data are for final demand.
Source: JCHS tabulations of US Bureau of Labor Statistics, Producer Price Indices.

cement began to slow in 2023 or 2024, costs remained 26 percent to 36 percent higher than in 2019. And prices for insulation, gypsum, and plastic construction products in 2024 were 42 percent to 50 percent above those in 2019.

In addition to costs, material availability continues to be a greater concern than before the pandemic despite major progress. Shares of remodeling contractors reporting some or serious shortages of key building materials like lumber, cabinets, plumbing fixtures, HVAC equipment, and windows and doors skyrocketed from just 14 percent in 2018 to 65 percent in 2022, according to NAHB. Although material availability improved universally in 2023, the share of remodelers experiencing shortages was still much larger than previously. For example, 47 percent of contractors reported some or serious shortages in HVAC equipment in 2023 compared to just 7 percent in 2018. For windows and doors, vinyl siding, plumbing fixtures, copper wiring, cabinets, and ceramic tiles, the shares of remodelers experiencing shortages were at least 20 percentage points greater in 2023 than pre-pandemic.

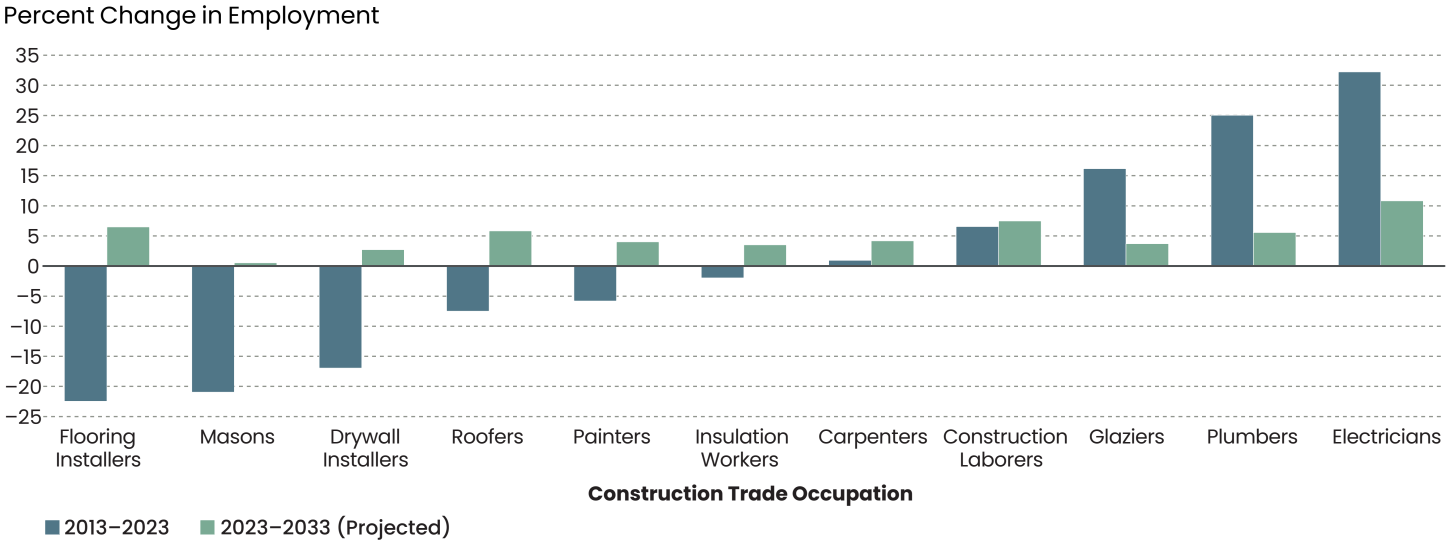
SKILLED TRADE LABOR SHORTAGES PERSIST

A large and enduring labor shortage in construction trade occupations jeopardizes the ability of the remodeling industry to meet current and future demand. In 2023, fully 64 percent of residential remodelers reported some or serious shortages in the availability of skilled trade subcontractors, including carpenters, masons, electricians, and plumbers, according to NAHB. While this represents a substantial decrease compared to the 84 percent of remodelers experiencing unavailability in 2021, skilled trade labor shortages have plagued the industry for most of the past decade. Between 2015 and 2019, the share of remodelers reporting some or serious shortages in construction trade subcontractors ranged from 59 percent to 67 percent.

The skilled trades shortage is widespread in the broader construction industry, and projected employment gains will not be sufficient to close the deficit in many key occupations, including flooring and drywall installers, masons, roofers, and painters **(Figure 31)**.

Figure 31

For Some Skilled Trades, the Loss of Workers Dwarfs Projected Growth



Notes: Historical data include persons age 16 and over housed in non-group quarters who are employed or unemployed but available for and seeking work. The construction trades labor force includes persons holding occupations classified in SOC 47-2000 within the construction industry (NAICS 23).
Source: JCHS tabulations of US Census Bureau, American Community Survey 1-Year Estimates; and US Bureau of Labor Statistics, Employment Projections.

Between 2013 and 2023, the number of workers in these professions dropped between 5.8 percent and 22.5 percent. Alarmingly, employment projections through 2033 by the Bureau of Labor Statistics (BLS) show only low to moderate growth for most of these occupations, from 0.1 percent for masons to 4.0 percent for painters. Even the above-average gains projected for roofers (5.8 percent) and flooring installers (6.5 percent) would result in a loss of workers over the two decades.

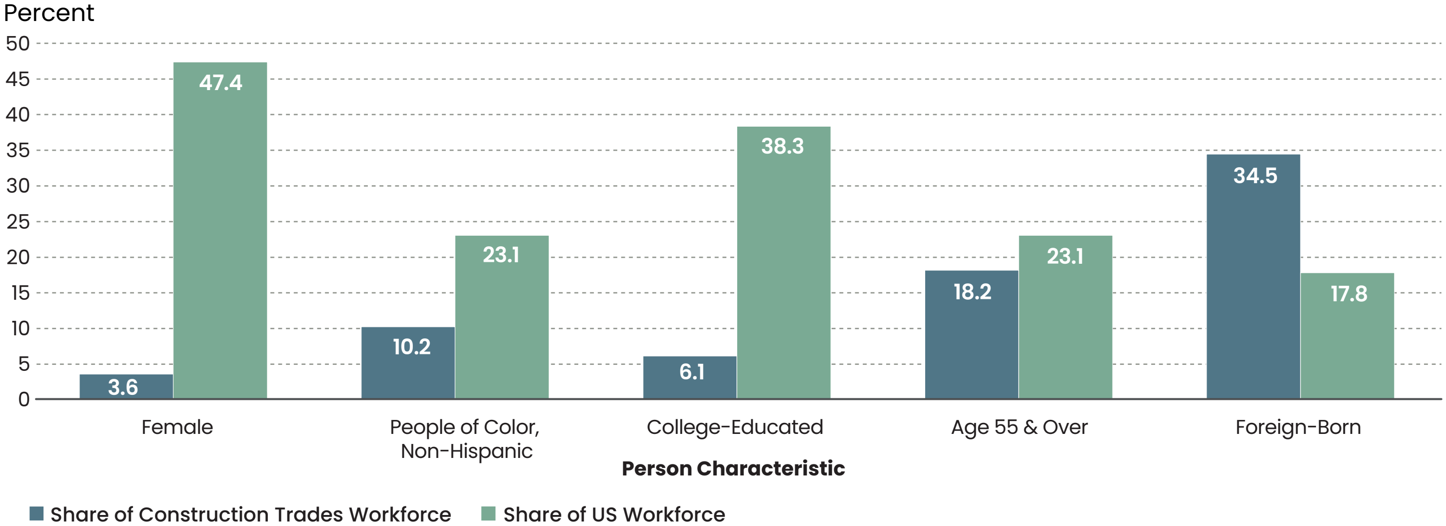
In an effort to recruit and retain workers, specialty trade and remodeling firms are offering better salaries and new benefits. Average annual growth in hourly wages for nonsupervisory employees at specialty trade and general remodeling contractors accelerated from 3 percent between 2016 and 2019 to 5 percent between 2020 and 2023. Additionally, more remodeling firms are offering employee benefits. In 2023, over 86 percent of *Qualified Remodeler®* publication's Top 500 Remodelers offered health insurance compared to 81 percent in 2013, about 77 percent offered 401K retirement plans compared to 59 percent in 2013, and nearly 75 percent offered dental insurance compared to 53 percent a decade ago.

WORKFORCE CHARACTERISTICS ARE MISMATCHED

Comparing key demographic characteristics of the construction trades workforce with those of the overall labor force suggests both challenges and opportunities for growing the skilled trades labor pool **(Figure 32)**. In 2023, just over 18 percent of construction trade workers were age 55 and over, compared to 23 percent of the total labor force. While skilled trade workers are relatively younger, the construction trades and the overall workforce have been aging in recent decades. Long-term decline in apprenticeship programs combined with the massive loss of construction trade workers during the mid-2000s housing crash—including a disproportionate share of those younger and less experienced—greatly contributed to the aging of the skilled trades workforce. The median age of construction trade workers was 40 in 2023, compared to 36 in 2007. At that time, 45 percent of skilled trade workers were under age 35. Increased efforts to rebuild the construction trades pipeline have stabilized the share of younger construction trade workers at 36 percent since 2012.

Figure 32

Women and Non-Hispanic People of Color Are Greatly Underrepresented in the Construction Trades



Notes: Data include persons age 16 and over housed in non-group quarters who are employed or unemployed but available for and seeking work. The construction trades labor force includes persons holding occupations classified in SOC 47-2000 within the construction industry (NAICS 23). College-educated includes attainment of at least a bachelor's degree.
Source: JCHS tabulations of US Census Bureau, 2023 American Community Survey 1-Year Estimates.

Workers born outside the US are substantially overrepresented in the construction trades. As of 2023, the immigrant labor share of skilled trade workers reached a new high of 34 percent, compared to 18 percent of the overall labor force. Fully 90 percent of these foreign-born skilled trade workers had immigrated from Latin America. Consequently, the Hispanic labor share of the skilled trades workforce also reached a new high of 42 percent in 2023, more than double the Hispanic worker share of the US labor force (19 percent). Given the importance of immigrants in construction, the uncertainty surrounding the US immigration system presents a major concern for the industry.

Reforming immigration policies to ensure a consistent inflow of skilled trade workers to the US is vital for growing the construction trades workforce. Another key opportunity lies in bolstering the ranks of largely underrepresented groups, including non-Hispanic people of color and women. Non-Hispanic people of color accounted for just 10 percent of construction trade occupations in 2023, compared to 23 percent of the US labor force.

By far, the starkest difference between the characteristics of the construction trades and the broader US labor forces—and possibly the greatest area of opportunity for expanding the skilled trades—lies in the female share of these occupations. Women are extremely underrepresented in construction trade jobs, constituting just 4 percent of the skilled trades workforce in 2023, compared to 47 percent of the US labor force. The share of women in skilled trade occupations has increased only incrementally over the years, up from 2.2 percent in 2011.

Attracting and retaining more non-Hispanic people of color and women to the skilled trades workforce, it seems, will require efforts beyond quality pre-apprenticeship and apprenticeship programs. Increased efforts to combat workplace discrimination and harassment, along with mentorship and networking opportunities, will be necessary as well.

Another major difference in the makeup of the construction trades and the overall labor force involves the share of college-educated workers.

In 2023, just over 6 percent of the skilled trades workforce had at least a bachelor's degree compared to 38 percent of the US labor force. This education gap has widened as a rising share of US workers has pursued college degrees. By this measure, the US labor pool has become increasingly mismatched with skilled trade occupations, which require significant training and apprenticeship but rarely a college degree.

Still, enrollment in vocational-focused community colleges, which offer many courses and certifications needed to work in the skilled trades, has grown at a strong clip according to the National Student Clearinghouse. In spring 2024, vocational college enrollment jumped 17.6 percent from the previous year, compared to just 2.6 percent growth in overall higher education enrollment. Between 2021 and 2024, the number of students enrolled in construction trade programs, mostly at two-year institutions, increased from 69,000 to 82,000. Additionally, the number of new apprentices in the construction industry has shown strong gains over the past decade despite pandemic-induced setbacks. The US Department of Labor reports that in fiscal year 2024, more than 101,000 people began a construction apprenticeship, up from 48,000 in fiscal year 2014.

The construction industry is working to improve perceptions and increase awareness among young people and their parents that skilled trade occupations offer paths to high-paying and rewarding careers. Employees of specialty trade contractors earn more on average than in most other major economic sectors, including manufacturing, transportation and warehousing, education and health services, wholesale or retail trade, and leisure and hospitality. Earnings of nonsupervisory employees of specialty trade contractors averaged $34 an hour in 2023, comparable to average earnings in both the financial sector and the professional and business services sector and just 14 percent lower than average hourly earnings for employees in the information sector.

THE OUTLOOK

Residential remodeling firms may never reach the same level of consolidation as related industries, such as homebuilding, but the growth of companies into larger-scale firms and the concentration of industry activity among the largest firms are likely to continue, especially within the specialty replacement segment. Private equity investments and merger and acquisition activity are also expected to grow as investors become increasingly aware of the size of the home improvement market and its potential for future gains, given the strong fundamentals and increasing resilience against severe downturns.

To ensure that the remodeling industry is able to meet both near- and long-term demands for updating and maintaining the nation's 145 million homes, policymakers and industry leaders need to address several challenges. For policymakers, this includes reforming the immigration system to enable a steady inflow of skilled trade labor, supporting the expansion of vocational and technical education and apprenticeships to build a strong pipeline of future workers, and considering the potential implications of new trade policies and import tariffs on building material pricing and availability. For industry leaders, addressing labor and material constraints will include hiring more younger workers, native-born workers, non-Hispanic people of color, and women in skilled trade jobs and greater adoption of innovative technologies, such as machine learning and AI, as cost-saving interventions.

REMODELING CHALLENGES AND OPPORTUNITIES

The home remodeling market is now on the other side of a phenomenal boom in activity and spending driven by the COVID-19 pandemic and its immense impacts on the economy, housing markets, and the ways owners use their homes. Despite small declines in 2023 and 2024, market spending for improvements and repairs is seemingly entering a new normal of elevated levels supported by the continued aging of homes and households, as well as high levels of housing wealth.

The astounding double-digit growth rates in national improvement and maintenance expenditures during the pandemic era were not expected to last, given a historical average annual gain in the market of about 5 percent. Nevertheless, spending remains notably higher than before the pandemic, even as the remodeling market experienced an inevitable downturn on the heels of this frenzied growth.

In the short term, market spending is expected to increase 1.1 percent in 2025 to $608 billion and hold steady near the highs of recent years, according to Center projections for improvements and repairs to the owner-occupied and rental housing stock. While this spending would represent a slight drop from the pandemic peak of $611 billion, it would nonetheless be fully 50 percent above pre-pandemic levels. Therefore, if projections hold, the post-pandemic decline will be mild and short-lived, especially compared to the last market downturn during the Great Recession.

In the longer term, there are many reasons to believe the home remodeling market will thrive. Continued growth in home values and equity will provide home and rental property owners the incentive and the means to invest in upgrades and maintenance. The increasing number of older homeowners will likely drive demand for accessibility modifications that help people reside safely and comfortably in their homes for longer. Millennials will continue to move through prime ages for first-time homebuying and peak improvement expenditures. And with the aging of the housing stock, spending on replacements and routine maintenance will also rise. More than 7 million single-family homes built during the housing boom of the mid-2000s are now reaching the age when owners typically ramp up spending to address deterioration. The growing frequency and severity of disasters will drive growth in both disaster reconstruction and mitigation spending. And even if federal supports for energy improvements are not sustained, consumer demand for projects that reduce energy use will likely remain.

Yet the home remodeling market cannot reach its full potential until all households are able to obtain necessary repairs and improvements. Prohibitively high costs for households with lower incomes mean critical projects go unaddressed. For the remodeling industry, this represents billions of dollars in unmet market opportunity. According to the Federal Reserve Bank of Philadelphia, the cost to address deficiencies across the existing housing stock is $149.3 billion as of 2022, including $97.9 billion for owner-occupied and $51.5 billion for renter-occupied properties. Unfortunately, most of these investments would only bring the homes up to standards of basic adequacy and would not fully address needs for improved accessibility, energy performance, or disaster resilience. Fully 38 percent of unmet repair needs are in the homes of households with incomes less than 200 percent of the federal poverty guidelines.

Several factors will impact the costs of home improvement and repair projects in the coming years. Employment in many trade occupations relevant to home repair and improvement is projected to grow over the next decade at rates higher than the gains in total US employment of 4 percent, according to the BLS. Such occupations include plumbers, electricians, flooring installers, roofers, and solar panel installers. Still, the long-running skilled trade labor shortage is unlikely to relent in the short term and may even worsen given possible reforms to US immigration policies, limiting growth for the remodeling market. This construction trades labor shortage will persist without far greater public and private investments in workforce training and apprenticeships and more concerted efforts to attract and retain younger workers, native-born workers, and especially non-Hispanic people of color and women, who have been severely underrepresented in the skilled trades. Additionally, possible changes in US trade policies such as import tariffs could impact the cost and availability of building materials and equipment.

Another enduring challenge facing the residential remodeling industry is its high degree of fragmentation. Despite increased private equity investment and some consolidation among firms, the prevalence of smaller-scale and self-employed remodelers is likely to continue. Such fragmentation suggests ongoing capacity constraints for most remodelers and limited technological innovation for all but the most sophisticated businesses. Even so, the remodeling industry is transforming to meet the demand for a wider range of improvements and repairs. Recent changes include massive public investment in energy retrofits and growing advocacy and financial support for home repair assistance programs that continue to drive demand.

There are other supply-side factors that are evolving quickly and whose impact on the remodeling market remains to be seen. Specifically, generative and predictive AI have the potential to transform the industry by improving efficiency and decision-making in marketing and sales strategies, lead generation and conversion, and project design and management. AI could also play a big role in improving home automation products and features, better managing home energy, and predicting when major home components and systems are likely to fail.

Looking forward, the home remodeling market may be entering a new phase of sustained demand from a greater diversity of households for an increased range of necessary project types beyond routine maintenance, core replacements, and disaster repairs. But the industry's capacity must expand to meet these growing needs. Despite the massive boom in home improvement and maintenance spending, considerable investment is still required to address the accessibility needs of the aging population, improve energy efficiency and electrification, better prepare the nation's homes against disaster, and, ultimately, ensure safe and habitable housing conditions for all. With increasing demand and a strong foundation of high housing wealth and aging homes, residential remodeling is expected to remain a formidable economic sector in both the near and the longer terms.

Table A-1

Home Improvement Expenditures by Project Type: 2023

	Homeowners Reporting Projects (000s)	Average Expenditure ($)	Total Expenditures (Millions of $)
DISCRETIONARY	**7,329**	**16,554**	**121,325**
Kitchen Remodels	**2,483**	**16,383**	**40,674**
Minor	1,919	7,084	13,592
Major	564	48,010	27,082
Bath Remodels	3,734	9,032	33,723
Minor	2,873	4,136	11,882
Major	861	25,377	21,841
Room Additions	882	27,131	23,926
Kitchen	86	39,408	3,406
Bath	164	20,704	3,405
Bedroom	278	17,607	4,903
Recreation	93	17,174	1,594
Other	495	21,472	10,618
Outside Attachments	2,282	10,082	23,003
Porch, deck, patio, or terrace	1,931	8,309	16,049
Garage or carport	473	14,716	6,954
REPLACEMENT	**21,833**	**9,030**	**197,145**
Exterior	8,245	9,862	81,312
Roofing	4,150	11,041	45,825
Siding	1,132	8,346	9,445
Windows or doors	3,946	5,610	22,135
Chimney, stairs, or other exterior improvements	926	4,219	3,907
Interior	7,247	5,638	40,858
Insulation	1,528	2,263	3,458
Carpeting, flooring, paneling, or ceiling tiles	5,472	4,570	25,007
Other major improvements inside home	1,292	9,592	12,393
Systems and Equipment	16,557	4,528	74,975
Internal water pipes	1,794	2,696	4,838
Plumbing fixtures	4,959	1,834	9,095
Electrical wiring, fuse boxes, or breaker switches	3,298	2,718	8,964
HVAC	4,810	8,398	40,393
Central air conditioning	3,406	7,379	25,133
Built-in heating equipment	2,995	5,095	15,260
Other equipment and appliances	10,001	1,168	11,685
Water heaters	3,929	1,491	5,858
Built-in dishwashers or garbage disposals	4,262	710	3,025
Security systems	3,467	808	2,802
OTHER	**9,747**	**8,874**	**86,498**
Disaster Repairs	1,085	22,100	23,982
Outside Property	8,999	6,947	62,516
Septic tanks	274	6,871	1,883
Driveways or walkways	2,297	4,465	10,254
Fencing or walls	2,850	3,753	10,697
Swimming pools, tennis courts, or other recreational structures	721	14,510	10,459
Sheds, detached garages, or other buildings	1,483	7,115	10,555
Landscaping or sprinkler systems	3,520	3,698	13,017
Other major improvements to lot or yard	858	6,586	5,652
TOTAL	**25,775**	**15,712**	**404,969**

Notes: Homeowner numbers do not add to total because respondents may report projects in more than one category. Major remodels are defined as professional home improvements of more than $30,000 for kitchen projects and more than $15,000 for bath projects, and DIY improvements of more than $12,000 for kitchen projects and more than $6,000 for bath projects.
Source: JCHS tabulations of HUD, 2023 American Housing Survey.

Improving America's Housing 2025 was prepared by the Harvard Joint Center for Housing Studies. The Center strives to improve equitable access to decent, affordable homes in thriving communities. We conduct rigorous research to advance policy and practice, and we bring together diverse stakeholders to spark new ideas for addressing housing challenges. Through teaching and fellowships, we mentor and inspire the next generation of housing leaders.

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INTERACTIVE DATA & RESOURCES

Data tables, interactive charts, and additional detail on historical home improvement expenditures are available at www.jchs.harvard.edu/improving-americas-housing-2025.

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