Award-Winning Coverage of Sustainable Construction, Products and Lifestyles

# GREEN BUILDER®

Q4 2026 / www.greenbuildermedia.com

## Tomorrow Starts Now

Straddling the old world and new, homebuilders and buyers alike face unknown territory.



Building Science

Annual State of the Industry Report

VISION House Asheville

# 90 MINUTES OF BURN TIME.*

## WOULD YOU BELIEVE IT'S WOOD?




FIREPOINT.ARCLIN.COM

*ON SELECT ASSEMBLIES PER ASTM E-119 IN A THIRD-PARTY ACCREDITED LAB.

# LESS NOISE. MORE SIGNAL.

## A New Podcast Network for the Sustainable Housing Industry



Original video and audio conversations exploring **sustainability**, **resilience**, and **innovation** that shape how homes are designed, built, valued, and lived in.

## THE SHOWS

### The Valuation Metric
with Sara Gutterman, CEO, Green Builder Media

### The Impact Series
with Mike Collignon, Executive Director, Green Builder Coalition

### This Week in Sustainability
with Cati O'Keefe, Editorial Director, Green Builder Media

**WATCH. SUBSCRIBE. SHARE.**

youtube.com/@TheGreenBuilderMediaNetwork

THE GREEN BUILDER MEDIA NETWORK

# Dear Democrats: Get to Work

**The blue wave brings an opportunity to rethink housing policy. Here's where I'd start.**

By Matt Power, Editor-in-Chief

If I had five minutes with the newly elected Democratic majority in Congress, I'd skip the congratulations and get straight to housing. It's a baseline concern for millions of Americans.

Some of the first words from Hakeem Jeffries' mouth, likely the next Speaker of the House, after the election were "We ran on affordability. We won on affordability. And now it's our job to govern on affordability." Let's remind him of that frequently. According to the latest Bureau of Labor Statistics data, Americans now spend nearly 34 cents of every household dollar on housing. What makes a home affordable (or not)? The purchase price, of course; but also the circular bills: energy, insurance, maintenance, taxes and the ever-increasing threat of repairing damage from extreme weather.

Here's my list of recommendations:

**1. Build the Homes People Can Afford, Not Just More Homes.**
Before throwing more money at housing construction, Washington needs to recognize that America doesn't have one housing market. It has hundreds. Builders in parts of Florida, Texas and Arizona are drowning in inventories of unsold homes, even as buyers in California and the Northeast struggle to find anything within reach. Federal housing policy should reflect those differences. In low inventory markets, remove barriers to smaller homes, infill development and missing-middle housing. Where inventories are already elevated, reward affordability—instead of subsidizing the next luxury townhouse project.

**2. Squeeze Zoning Hard.**
In many communities, local rules have made construction of modest homes, duplexes, cottage developments and ADUs a non-starter for builders. Congress can't directly rewrite NIMBY zoning ordinances, but it can leverage change by cutting off (or rewarding) funding. Most large housing projects need financial help for sewers, roads and utilities. Congress can steer the big money to projects that create affordable, high performance homes within easy reach of jobs and services. South Park Cottages near Atlanta, for example, offers a hint at how much "slack" is our outdated housing policies. Its 29-home community shows that buyers will respond even to ultra-compact floorplans, with creative site planning in expensive metropolitan markets.

**3. Reward Performance, Not Just Square Footage.**
I'm not saying every new community has to switch to tiny house footprints. That's just one niche, not the mainstream. But we can build smaller—and better—if buyers perceive they are getting more value per square foot. Smaller footprints can reduce material and construction costs, leaving room for better insulation, efficient equipment and durable products. Here's another example: Habitat for Humanity's 1,290-square-foot Saragossa Innovation Home in Florida, built to DOE Zero Energy Ready Home specifications, demonstrates the principle. Its modeled monthly energy cost was approximately $70. Washington can support this intelligent downsizing of our housing stock, with financing and appraisal practices that recognize the many benefits to buyers and communities.

**4. Undo the Demolition of Energy Tax Credits**
The GOP wiped out a lot of energy efficiency incentives during their two years of slashing public incentives while increasing the deficit by $4.3 trillion. Those energy incentives need to come roaring back. Congress should immediately pass updated credits for heat pumps, insulation, efficient windows and water heaters. The rebate process should be simple, like the Efficiency Maine program in the Northeast.


Matt Power

**5. Treat Insurance as a Housing Affordability Issue.**
In Florida and other disaster-prone states, insurance costs are threatening the financial viability of homeownership. Instead of subsidizing risk indefinitely, the Feds can help homeowners reduce it. That doesn't mean handing out checks directly. It means subsidies and tax credits for fortified roofs, impact-resistant windows, flood mitigation and wildfire-resistant construction. Congress should strongly urge insurers to become part of the solution—offering deeper discounts for building upgrades such as metal roofs, fire-resistant siding, spray foamed roof assemblies, and even tile floors and concrete block walls in flood zones.

**6. Leave Immigrants Alone.**
We can't build affordable housing without enough skilled workers. I've covered this business for 30 years. I don't know if I've ever met an experienced tile subcontractor team that's not Hispanic and highly skilled. You know. You all know this. Yes, we'd love to have more young, local workers joining out team, but the business relies on hard working, incredibly efficient immigrant workers. They shouldn't be afraid to come to work. In fact, we should incentivize them with a faster track to full citizenship once they put in a certain number of years on the job.

**7. Make Factory-Built Housing Easier to Deliver.**
Modular and panelized construction can reduce waste, improve quality control and shorten construction schedules. Yet inconsistent codes, financing practices and local approvals can undermine those advantages.

Washington can help create more consistent pathways for factory-built housing without sacrificing safety or performance.

**8. Invest in Infrastructure That Unlocks Housing.**
A parcel of land isn't buildable simply because it's available. Water, sewer, transportation and electrical infrastructure often determine whether housing can be developed economically.The Feds should steer funding toward the projects that create the best housing, in the most livable area, at the most affordable price point. Not sure how to identify these places? Ask AI.

**9. Build for the Climate We're Actually Living In.**
We know more about flood, wind, wildfire and extreme heat risks than ever before. Yet much of our housing stock remains poorly prepared. Federal programs should reward construction and retrofits that reduce exposure to those hazards. Resilience isn't an environmental luxury. It's a financial necessity.

**10. Publish the Results.**
Finally, give taxpayers a transparent scorecard. How many homes were built? At what cost? How much did energy bills fall? Did insurance become more affordable? Did the programs actually help first-time buyers? If an initiative doesn't deliver, change it.

VISION HOUSE ASHEVILLE



# Housing for a World That Demands More

In Asheville, N.C., Green Builder Media and Alair Homes are building a new kind of VISION House—one designed for a future shaped by climate uncertainty, rising costs, and growing expectations for healthier living.

**VISION House Asheville explores three essential questions:**

- What if **resilience** became a standard feature of every home?
- What if **wellness** was designed into the home from the beginning—not added later?
- What if we measured value by **long-term performance** instead of cost per square foot?

Through advanced building science, climate-ready design, healthy materials, intelligent technologies, and high-performance products from industry-leading manufacturers, VISION House Asheville will demonstrate what housing can become when we build for the future instead of the past.

VISION House
ASHEVILLE

**Follow the journey at:**
**https://www.greenbuildermedia.com/vision-house-asheville**

**THANKS TO OUR GENEROUS SPONSORS**

James Hardie • TimberTech • AZEK • Kohler • DalTile • Kwikset
JinkoSolar • Phyn • Sonos • Savant • DuPont • Aquor • Daikin • Greenfiber
Bromic • Wythe Windows

Resilience. Wellness. Long-term Value.

SAMSUNG

# Build for what's next




## Redefine what's possible

Samsung and Dacor empower Builders and Developers to create connected homes defined by design, intelligence and performance. Backed by decades of experience, we lend a hand at every step, from planning to installation, to deliver smart homes built for real life and the future of living.

©2026 Samsung Electronics America, All Rights Reserved.

samsungbuilder.com



dacor

## EXPERIENCE THE DIFFERENCE

Reimagine your luxury builds with a partner that delivers industry-leading innovation, precision performance and stunning design for every kitchen. Dacor provides dedicated support, designer tools and exceptional warranties at every stage.

Irvine, CA | Chicago, IL | New York, NY
Visit a showroom or find an authorized dealer at dacor.com

# Heat Pumps Gain Ground and Could Ease Grid Costs

## From putting winter grid capacity to work to expanding in colder climates, heat pumps are showing they can play a larger role in the U.S. energy and housing markets—even after federal tax credits ended.



Trane's 20 TruComfort Cold Climate Heat Pump is designed to deliver full heating capacity down to 5°F and operate at temperatures as low as -20°F.

Many utilities have capacity that goes unused in winter. RMI estimates that about 109 million U.S. homes could add heat pumps within today's available winter headroom. In states with summer peaks, winter electricity sales could spread grid costs over more kilowatt-hours. RMI's scenarios show average residential rate reductions of 6% with all-electric heat pumps, or 13% with a mix of all-electric and hybrid systems.

The benefit depends on local grid conditions. RMI recommends incentives and rates tailored to each state's seasonal capacity, with heat pumps installed when air conditioners need replacement.

Trane says its new 20 TruComfort Cold Climate Heat Pump with WeatherGuard maintains full heating capacity at 5°F and operates down to -20°F. Its variable-speed compressor adjusts output in increments as fine as 0.1%, supplies air up to 110°F and is designed to reduce backup electric heat. It can pair with a furnace in a dual-fuel system. Trane says it exceeds the U.S. Department of Energy's Cold Climate Heat Pump Technology Challenge requirements.

Heat pumps accounted for 58% of U.S. space-heating equipment shipments in the first half of 2026, according to the Building Decarbonization Coalition. That record-matching first-half share came despite the expiration of federal tax credits. **GB**

# FEMA Guide Points to Broader Flood-Resistant Building Standards

## FEMA's overview of the updated ASCE 24-24 standard has implications for home elevation, foundations, materials, and utilities.



Flood resilience begins with the site: ASCE 24-24 addresses building elevation, foundations, materials, and utility protection.

Flood-resistant design needs to go beyond the 100-year floodplain. FEMA's new guide to ASCE 24-24 explains how the updated construction standard extends flood-resistant requirements into the mapped 500-year floodplain for most buildings, including homes. It also connects required elevations to a building's use, recognizing that the level of protection needed can vary by occupancy.

The standard covers foundations, flood-damage-resistant materials, and protection for utilities and equipment. These details can affect whether a building remains functional and how much damage it sustains during a flood.

ASCE 24-24 also accounts for at least 50 years of sea-level rise. The standard has been proposed for the 2027 International Codes, offering builders and designers a preview of where flood-resistant construction requirements may be headed.

The standard also exceeds minimum National Flood Insurance Program requirements for new construction and substantial improvements. Builders should check the code and flood maps before setting elevations or placing equipment.

It also addresses wet and dry floodproofing, building access, and loads tied to a building's risk category—details to resolve with engineers and local officials before construction begins. **GB**

# California Law Offers Incentive to Replace Gas Lines With Electrification

## The Home Energy Choice Act gives households facing gas service line replacement a new option: Take a financial incentive to switch to electric appliances instead.



California's new law gives households scheduled for gas service line replacement an incentive to consider switching to electric appliances.

When a gas service line needs replacement, California utilities will have to offer the household a financial incentive to electrify instead. The Home Energy Choice Act, or Assembly Bill 2313, gives residents a choice before a new pipe goes in. They could switch to equipment such as an induction range, heat pump or heat pump water heater.

In Pacific Gas and Electric's service area, replacing a service line typically costs $20,000 to $30,000. Those costs are spread among gas customers over time. The law requires the electrification incentive to be less than the replacement cost, potentially avoiding system spending. The Natural Resources Defense Council estimates that PG&E customers could save $20 million if 1,000 households received $17,500 each instead of new gas lines.

San Diego Gas and Electric and SoCalGas opposed the law. They warned that as customers leave the gas system, remaining customers could shoulder more of its ongoing costs. The law caps programs at 1% of a utility's customers and expires in 2035 unless renewed.

California regulators must still set incentive levels and program rules, including larger incentives for disadvantaged communities. Utility proposals are due for approval by January 1, 2028. **GB**

# RoseVilla Plans Zero-Energy Homes and a Resilience Hub for Seniors

## A Portland, Ore., senior living community is building energy performance into its next phase, with 97 homes planned and construction expected to begin in spring 2027.



RoseVilla's planned expansion pairs high-performance senior housing with a solar-powered resilience hub designed to provide backup power and emergency water during outages.

Independent living depends on more than a well-designed floor plan. Power outages, extreme weather, and wildfire smoke impact everyone, but they can especially disrupt daily routines and safety for older adults. RoseVilla, a nonprofit senior living community in Portland, is treating energy performance and resilience as part of the foundation for its future development.

The community already has two certified zero-energy neighborhoods. Now it plans to add 97 independent- and assisted-living homes, including a mass-timber building and a 12-home neighborhood pursuing full Living Building Challenge certification. RoseVilla is also building a solar-powered resilience hub designed to provide backup power and emergency water during outages. The hub is intended to support the community when regular services are disrupted, adding a preparedness component to the housing plan.

The next homes are expected to break ground in spring 2027. Together, the expansion and resilience hub offer a model for senior housing that considers not only how people live day to day, but how a community can support them when conditions change. **GB**

# GREEN BUILDER®

Volume 21, Issue 5
Q4 2026
Published by Green Builder® Media



**EDITORIAL OFFICES**
PO Box 97
Lake City, CO 81235
303-246-8890
www.greenbuildermedia.com

**GENERAL INFORMATION**
admin@greenbuildermedia.com

**GREEN BUILDER MEDIA LEADERSHIP**
**Sara Gutterman** CEO
sara.gutterman@greenbuildermedia.com
303-246-8890

**Ron Jones** President
ron.jones@greenbuildermedia.com

**Cati O'Keefe**
Chief Marketing Officer / Editorial Director
cati.okeefe@greenbuildermedia.com
513-532-0185

**Jennifer Castenson**
Vice President of COGNITION Smart Data & Market Intelligence
jennifer.castenson@greenbuildermedia.com
202-421-6091

**ADVERTISING SALES**
**Craig M. Coale** Publisher / Vice President of Sales
craig.coale@greenbuildermedia.com
512-629-9019

**CIRCULATION**
**Mary Kestner**
mary.kestner@greenbuildermedia.com

**FINANCE**
**Hannah Judson** Chief Financial Officer
hannah.judson@greenbuildermedia.com
970-397-5483

**EDITORIAL**
**Matt Power** Vice President of Innovation / Editor in Chief
matt.power@greenbuildermedia.com
207-619-2713

**Melissa Smith** Web Editor / Cognition Project Manager
melissa.smith@greenbuildermedia.com

**Samantha Carlin** Design Director
samantha.carlin@greenbuildermedia.com
630-518-0511

**Michele Lerner** Associate Editor
michele.lerner@greenbuildermedia.com

**Grania Power** Copy Editor
power.graniae@gmail.com

**PRODUCTION**
**Mary Kestner** Production Manager
mary.kestner@greenbuildermedia.com


## Need help with your subscription?

For assistance, please contact Mary Kestner, Production Manager
mary.kestner@greenbuildermedia.com

**SUBSCRIPTION INFORMATION**

Subscribe to *Green Builder* magazine and receive valuable information about how to increase your bottom line, differentiate your business and change the world. At $39.95, it's an easy return on your investment. Just go to www.greenbuildermedia.com and click on the subscribe link on our nav bar.

*Green Builder* reduces its environmental impact through the purchase of carbon offsets through the COGNITION Carbon Offset Marketplace. Almost all of the natural resources used to produce *Green Builder* will be returned to the environment by planting trees and restoring watersheds. Also, greenhouse emissions will be mitigated through carbon offsetting (printed on recycled paper).

**NEW! SUBSCRIBE TO OUR NEWSLETTERS**
**www.greenbuildermedia.com/enewsletter-subscribe**

instagram.com/greenbuildermedia

facebook.com/GreenBuilderMedia

LinkedIn

pinterest.com/greenbuilder


ISSN 1559-4971


The trademark and service mark GREEN BUILDER is registered under the U.S. Trademark Act for a variety of goods and services.


www.greenbuildermedia.com/subscribetogreenbuilder
Click above to subscribe to **Green Builder magazine** today!

www.greenbuildermedia.com/about-green-builder-media
Click above to learn more about **Green Builder® Media**.


**GREEN BUILDER®**
Digital Archive

**Looking for specific information about building net zero carbon homes, energy management systems or electrification technology? Trying to remember the details of a great green house featured in Green Builder?**

Now you can find digital versions of those archived stories and issues online—free to our print subscribers. We've been steadily adding past issues to our content archive, and the collection is almost complete. **Just go to our website: www.greenbuildermedia.com,** and click on "Magazine" to find the archived content you need.


**MISSION STATEMENT:** "Our mission is to effect meaningful, positive change for a better world. As advocates for sustainability, we provide mind-expanding information that catalyzes and inspires commitment to sustainable living."



# What If a Home Could Last for Generations?

## Introducing VISION House SHAWOOD

Most homes are built for today. VISION House SHAWOOD is built for what's next. Located in Deerlake Ranch above Los Angeles, this groundbreaking project combines Japanese-inspired craftsmanship, advanced building science, and a new vision for sustainable living. Created with Sekisui House, one of the world's most respected homebuilders, SHAWOOD reimagines what high-performance housing can be.

Precision-engineered. Net-zero ready. Designed for resilience, health, comfort, and longevity. SHAWOOD is about creating homes that feel better to live in—homes that use less energy, adapt to changing conditions, and support the wellbeing of the people inside them.

As communities face rising energy costs, climate pressures, and growing housing demand, SHAWOOD offers a compelling vision of what's possible.





Discover

- The design philosophy behind SHAWOOD.
- How precision construction improves quality and performance.
- The building science powering net-zero-ready living.
- The technologies advancing comfort, resilience, and wellness.
- Why SHAWOOD could help shape the next generation of housing.

VISION HOUSE SHAWOOD®

Follow the progress of VISION House SHAWOOD here:
https://www.greenbuildermedia.com/vision-house-shawood

THANKS TO OUR GENEROUS SPONSORS

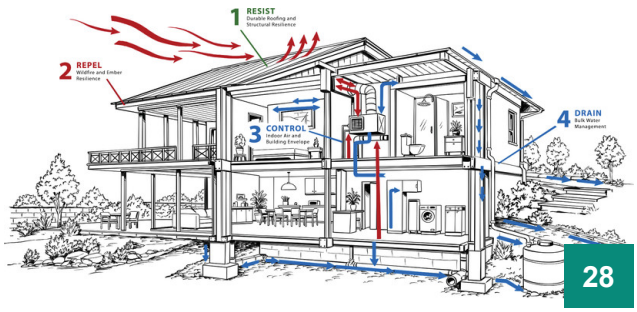
Carrier « Creative Mines « Daltile « Mohawk « Rheem « Sunrun « Westlake

# TABLE OF CONTENTS





12




28



48

## FEATURES


12 **STATE OF THE HOUSING INDUSTRY 2027**

COGNITION Smart Data reveals why buyers are looking beyond first cost to the full value of homeownership.

28 **BUILDING A HOUSE THAT CAN TAKE A HIT**

Five connected systems help homes resist, repel, control, drain and conserve in a changing climate.

36 **TODAY'S HOMEOWNER: SOLVE YOUR BUYERS' MONTHLY PAYMENT DILEMMA**

Lender partnerships and financing strategies can help builders ease affordability barriers.

42 **VISION HOUSE SHAWOOD**

Precision planning and design principles are underpinned by Japanese philosophy at the VISION House SHAWOOD at Deerlake Ranch.

48 **VISION HOUSE ASHEVILLE: WELLNESS BY DESIGN**

Architecture, products and systems demonstrate the connection between a healthy home and a healthier life.


## DEPARTMENTS


**02** Editor's Note
**06** Green Building News
**58** Smart Cities: Cleveland
**60** Ad Index
**64** Tailgate


*"The way out of the affordability crisis is not to do the same thing more cheaply. It is to bring forward the things that people actually value, measure them, finance them, insure them, and build them as standard."*

— Sara Gutterman, State of the Industry, page 12




# SMART SHADES. HEALTHIER HOMES.

## A smarter way to balance wellness, comfort, and energy efficiency.

PowerShades automated shading solutions are engineered to enhance everyday life. Our smart shades can be programmed to automatically adjust to changing light throughout the day—reducing glare, unwanted solar heat gain, and exposure to UV rays. Plus, choose from allergy-friendly, OEKO-TEX 100-certified, and GREENGUARD Gold-certified fabrics designed for healthier homes.

**Learn more at powershades.com**

OEKO TEX® STANDARD 100

GREENGUARD GOLD



# State of the Housing Industry 2027

**Buyers are financially stretched, but they are not shopping for cheap. COGNITION Smart Data shows that consumers have redefined what a home is worth, and that shifting from first cost to full value will lead the way out of the affordability crisis.**

BY SARA GUTTERMAN

Market intelligence generated over the past year by Green Builder Media's COGNITION Smart Data tells a consistent story across every audience we track.

Consumers are stretched, anxious, and in many cases locked out of the housing market, but even with affordability concerns top of mind, they are not asking for cheaper homes. Rather, they are looking for homes that cost less to live in, that protect their health and their families, that keep the lights on when the grid fails, and that build equity rather than quietly eroding it.

They no longer rely on first cost, or lowest price per square foot, as their primary purchase consideration. Instead, they're carefully considering the full value of homeownership.

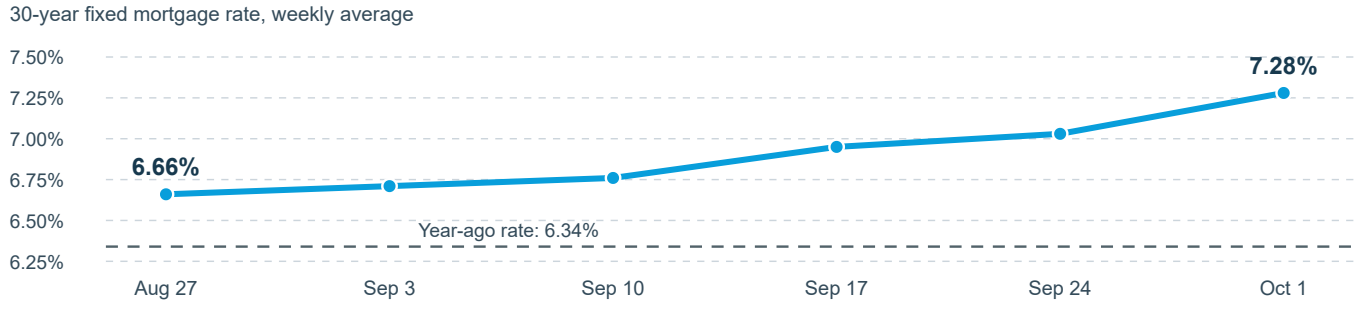
Unfortunately, builders, manufacturers, lenders, insurers, and policymakers haven't moved quite as quickly as consumers, and the lag between exploding consumer demand and the housing sector's response is causing a dramatic rift in the market.

## Frozen Between Aspiration and Reality

The 2026 housing market opened with cautious optimism. Analysts widely expected a stabilization year, with mortgage rates easing toward 6% and pent-up demand slowly returning. It is closing on a very different note.

In September, the Federal Reserve raised its benchmark rate by a quarter point to a range of 3.75% to 4.00%, its first hike of the cycle, citing inflation that remains stubbornly elevated. The bond market had already been moving. Freddie Mac's 30-year fixed rate climbed every week from late August, crossing 7% for the first time since early 2025 and reaching 7.28% on October 1, nearly a full point above the 6.34% buyers saw a year earlier. Forecasters at Fannie Mae and the Mortgage Bankers Association had projected rates near 6.8% by year-end; both forecasts were made before the 7% threshold was breached.

## Mortgage Rates Break 7%




Source: Freddie Mac Primary Mortgage Market Survey

Rates climbed every week from late August, reaching 7.28% by Oct. 1.

# A market under pressure

Existing-home sales fell to a seasonally adjusted annual rate of 3.98 million in August, according to the National Association of Realtors, the lowest pace since June 2025. Harvard's Joint Center for Housing Studies (JCHS) puts that pace near a 30-year low, down from 6.1 million as recently as 2021. Inventory is finally loosening, reaching 1.62 million homes, the highest level since 2019, and the median existing-home price of $429,100 is up 1.6% from a year ago.

New construction tells a similar story of drift. Census data shows new-home sales at an annual rate of 684,000 in August, with 8.5 months of supply on the market. The median new-home price fell 5.8% year over year to $393,700, which says less about falling construction costs than about builders moving down-market and buying down rates to keep homes moving. Total housing starts ran at 1.275 million, essentially flat with a year earlier, though single-family starts rebounded in August.

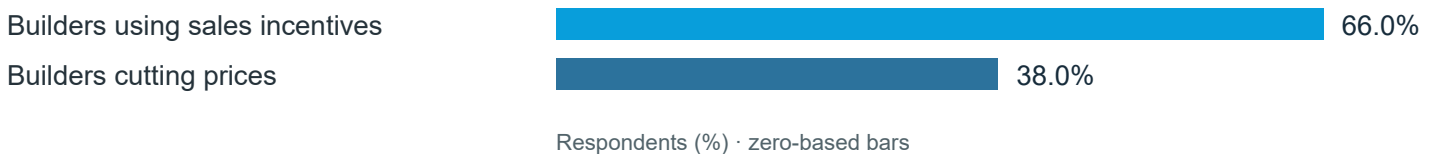
Home prices nationally are holding, barely. The S&P Cotality Case-Shiller National Index rose 1.9% year over year in July, which S&P notes marked the 14th consecutive month of declines in inflation-adjusted terms. Several Western and Mountain markets, including Seattle, Las Vegas, and Denver, are now posting outright annual declines.

## Builders Absorbing the Pressure

Builder confidence reflects all of this. The NAHB/Wells Fargo Housing Market Index fell to 32 in September, its 17th straight month below 40. Thirty-eight percent of builders cut prices, by an average of 6%, and 66% used sales incentives, the highest share since late 2025.

Costs are moving in the opposite direction. The Associated General Contractors of America reports that construction input prices rose 8.9% over the 12 months through August, led by diesel, aluminum, steel, and copper. Tariffs on Canadian softwood lumber now total roughly 45%, and steel and aluminum tariffs sit at 50%. Labor remains the binding constraint: in the AGC and NCCER 2026 workforce survey, 87% of firms reported unfilled hourly craft positions, and 29% said immigration enforcement had affected their projects.

### Builders Reach for Incentives




Respondents (%) · zero-based bars

Average price cut: 6%. Source: NAHB/Wells Fargo Housing Market Index, September 2026.

Two-thirds of builders are offering sales incentives, while 38% are cutting prices.

> "What we have is a mismatch: of price, of product, of buyer, and of place. That mismatch is the real story of 2026."
>
> Sara Gutterman

# The cost of owning

The headline affordability numbers are sobering. According to Harvard's JCHS, the monthly payment on a median-priced home rose from roughly $1,700 in early 2020 to about $3,100 at the end of 2025, and the income required to carry it climbed from $66,000 to more than $120,000. First-time buyers made up just 21% of purchases in NAR's most recent annual profile, a record low, and their median age reached an all-time high of 40.

Insurify projects that the average homeowners insurance premium will exceed $3,000 by the end of 2026, the fifth consecutive annual increase. The U.S. Energy Information Administration expects average residential electricity prices to rise from 17.3 cents per kilowatt-hour in 2025 to 18.2 cents in 2026 and 18.6 cents in 2027, with data center demand adding pressure to regional grids. Property taxes, maintenance, and HOA fees are climbing too. For a growing share of households, the cost of operating a home is rising faster than the cost of buying one.

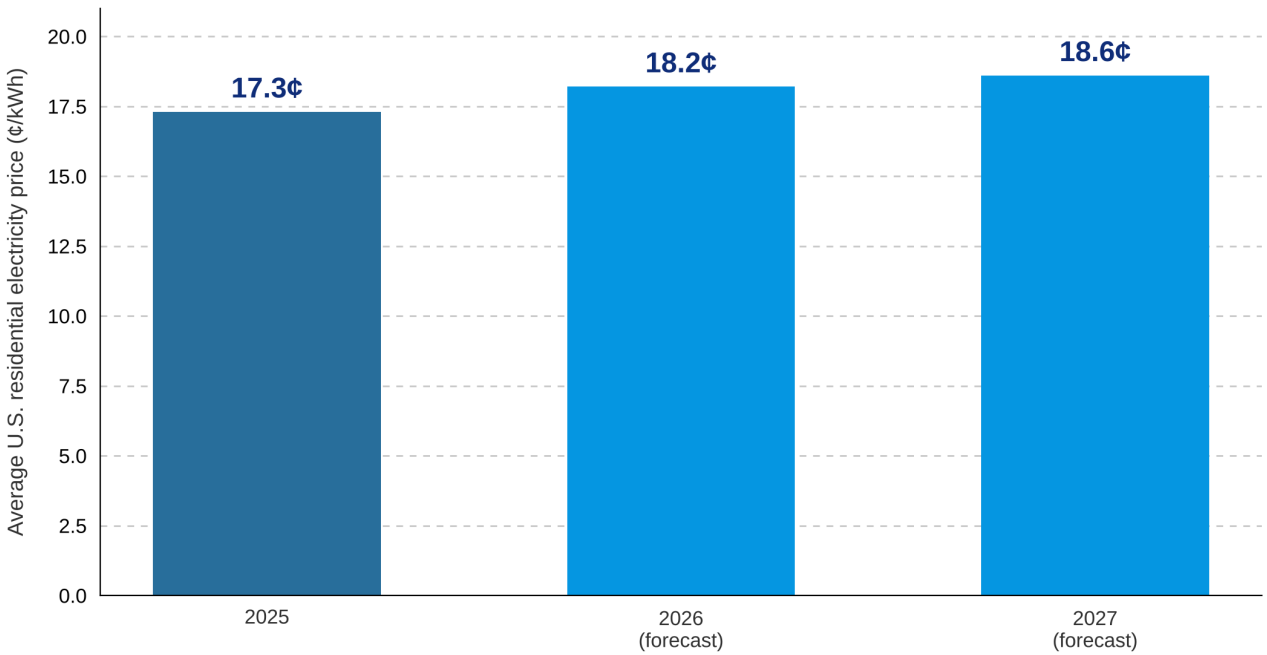
Federal policy is adding to the headwinds. The 45L tax credit for energy-efficient new homes now applies only to homes acquired before July 1, 2026, and residential clean energy credits for homeowners ended in 2025. The policy signal has weakened precisely as consumer demand for performance has strengthened.

## Scarcity and Slack

Harvard's JCHS describes the 2026 market as one showing scarcity and slack at the same time. Sales have been frozen, household formation has slowed, rental vacancies have risen from 5.9% to 7.3%, and homeownership has slipped for a second year.

What we have is a mismatch: of price, of product, of buyer, and of place. That mismatch is the real story of 2026.

## Power Bills Keep Climbing




Source: EIA Short-Term Energy Outlook, Sept. 2026

Residential electricity prices are forecast to rise again in 2027.

# Less house. More home.

Green Builder Media has surveyed consumers for more than 20 years. In 2025, for the first time, all four generations shaping the housing market (Boomers, Gen Xers, Millennials, and Gen Zs) told us they were looking more at the total value of homeownership and ongoing operating costs than at upfront price and cost per square foot. This year, that finding sharpened, even under economic pressure.

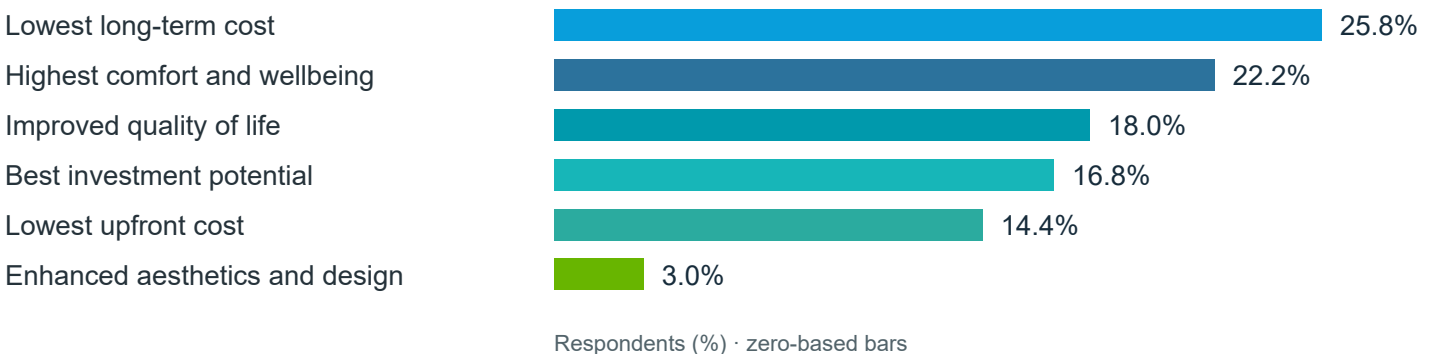
A COGNITION Smart Data survey asked consumers about their mindset when making major home decisions. Lowest long-term cost ranked first, ahead of highest comfort and wellbeing, improved quality of life, and best investment potential. Lowest upfront cost ranked behind all of them. Surprisingly, aesthetics and design barely registered.

More than 80% of homebuyers say energy efficiency influences their purchasing decisions, and buyers consistently rank predictable monthly costs among their top priorities.

## Less House, More Home

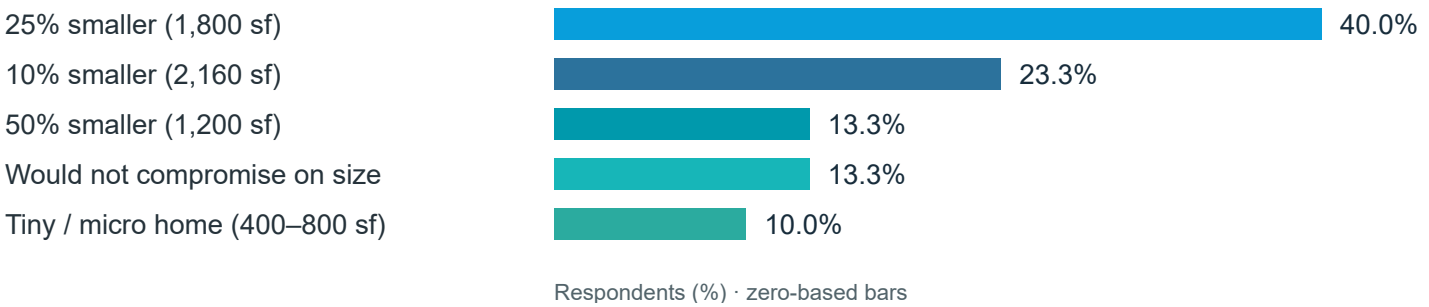
The share of consumers who say they want a smaller home rose from 28% to 38% in a single year, while appetite for larger homes stayed consistently low. In COGNITION's 2026 affordability research, 87% of consumers said they would accept a smaller home in order to own sooner, and 40% would accept a home 25% smaller than the typical new home, roughly 1,800 square feet.

### Long-Term Cost Wins




Buyers now put long-term cost ahead of comfort, investment potential and upfront price.

### Buyers Will Go Smaller

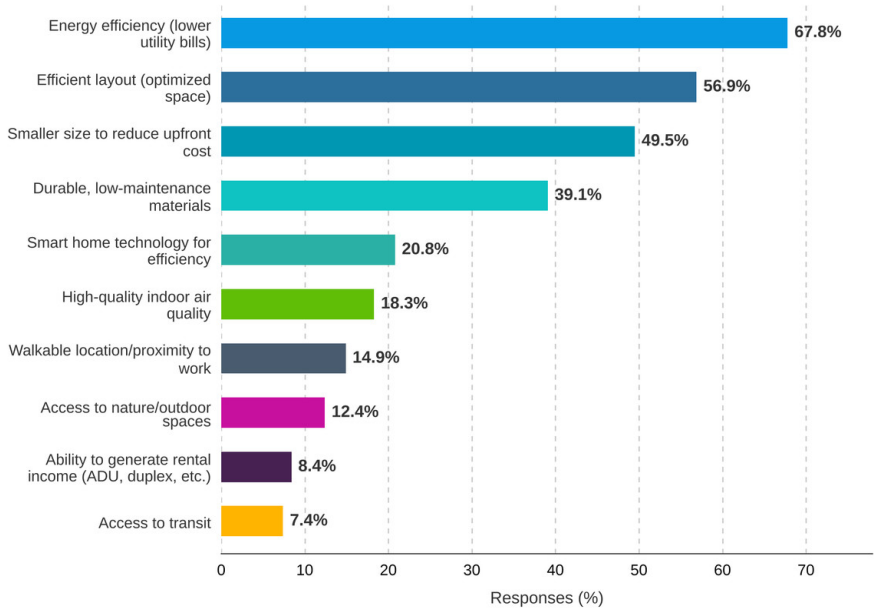



Four in 10 would accept a home 25% smaller if it meant owning sooner.

# Designed to cost less

Buyers are not asking for less of everything. They still want the right number of bedrooms and bathrooms, which 56.7% call the most important factor in choosing a new home. What they are willing to give up is wasted space. When asked which features matter most in a home designed to reduce long-term costs, consumers put energy efficiency first (67.8%), followed by an efficient, optimized layout (56.9%) and a smaller size to reduce upfront cost (49.5%), with durable, low-maintenance materials close behind.

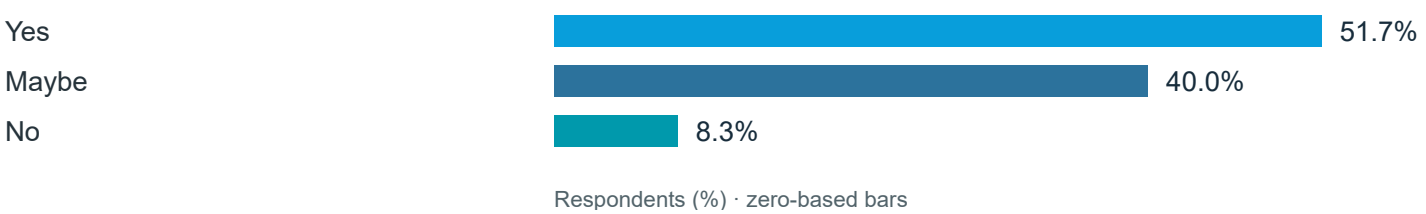
## Performance Beats Square Footage




Energy efficiency and smarter layouts top the list for homes designed to cost less over time.

Consumers are doing the math—they want less house that performs better, because they understand that the mortgage is only part of what they will pay, convincingly illustrated when over 50% of consumers said they consider a home with a slightly higher purchase price but a lower total monthly cost (principal, interest, insurance, utilities, and maintenance combined) more affordable.

## Monthly Cost Changes the Math




More than 9 in 10 buyers say yes or maybe to paying more upfront for lower total monthly costs.

# The financial squeeze

None of this means consumers are comfortable. The opposite is true. COGNITION's affordability research paints a picture of households under real and sustained financial strain.

When asked what keeps them from buying homes and moving more often, consumers pointed overwhelmingly at cost: high home prices (62%), difficulty saving for a down payment (47%), interest rates (43%), insufficient income (40%), and the rising burden of insurance and property taxes (37%). Only about one in six named a lack of homes available to buy. Homeownership is not being thwarted by a shortage of buildings so much as by a wall of cost.

The dream of homeownership itself is intact. Half of renters surveyed expect to buy a home, and another 11.7% probably will, most on a timeline of five years or less. Yet only 10% say they are confident they will be able to buy given today's prices. More than a third of respondents (35%) live with family because they cannot afford to rent, and three in four say they would move, some to another state or region, to find a home they could afford.

## Housing is Eating Up Income

For those who already own, the pressure shows up in operating costs. More than 41% of homeowners say their wages have risen more slowly than their home-related expenses. Over 10% report that their wages actually fell in the past year, and another 34.4% saw increases of less than 3%. Meanwhile, 86.2% say maintenance costs have increased, nearly 59% have seen property taxes rise between 3% and 10%, and most have seen insurance premiums rise, with 18.8% reporting increases of 10% to 20% in a single year. Among those with HOA fees, 86% have seen them go up.

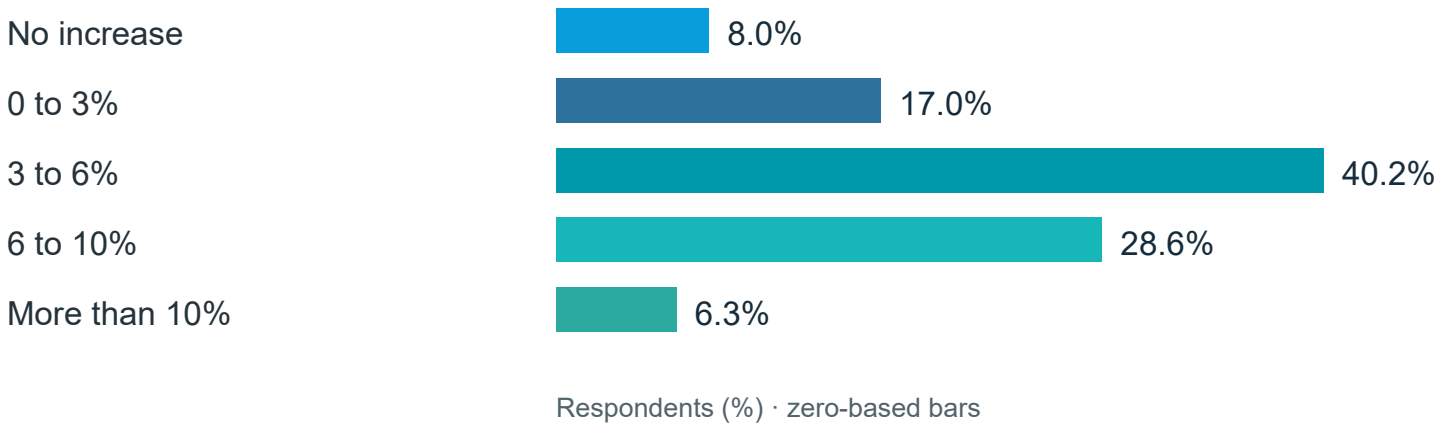
Utility bills are a big contributor to the financial squeeze. Over 40% of homeowners have seen utility costs rise between 3% and 6%, and another 28.6% have seen increases of 6% to 10%. Only 8% report no increase at all.

Homeowners rate this financial and emotional stress at 6.2 on a 10-point scale, and 93.8% believe others are in the same situation. Economic strain seems to be the shared condition of the American homeowner in 2026.

With that said, stretched consumers are not simply cutting back. They are actively managing their exposure to rising operating costs. More than half say they are using less energy and shifting use to off-peak hours, 49.1% are investing in renewable energy products, and 22.3% are improving their home's envelope to reduce leaks. Among consumers who understand what a virtual power plant is, 83.1% would consider living in a community that has one. Among those who know what geothermal is, 88% would live in a home that uses it.

Home owners and buyers are increasingly looking for control: over monthly costs, over exposure to volatile energy and insurance markets, and over the long-term value of their largest asset. In this way, consumers are redefining what home value means, and they are reallocating resources accordingly.

## Utility Costs Squeeze Homeowners




More than 9 in 10 homeowners report higher utility bills.

# The builder–buyer mismatch

Builders understand that affordability is the defining challenge of this market. In COGNITION's recent builder affordability research, 67.1% say the biggest challenge for their buyers is that home prices are too high, and 45.2% name affordability as the primary constraint on the market.

When asked how they are solving for affordability, 52.4% of builders say they are reducing home size. Some are pursuing higher-density product, build-to-rent, modular construction, or accessory dwelling units. 14.3% say they are not pursuing an alternative affordability strategy at all.

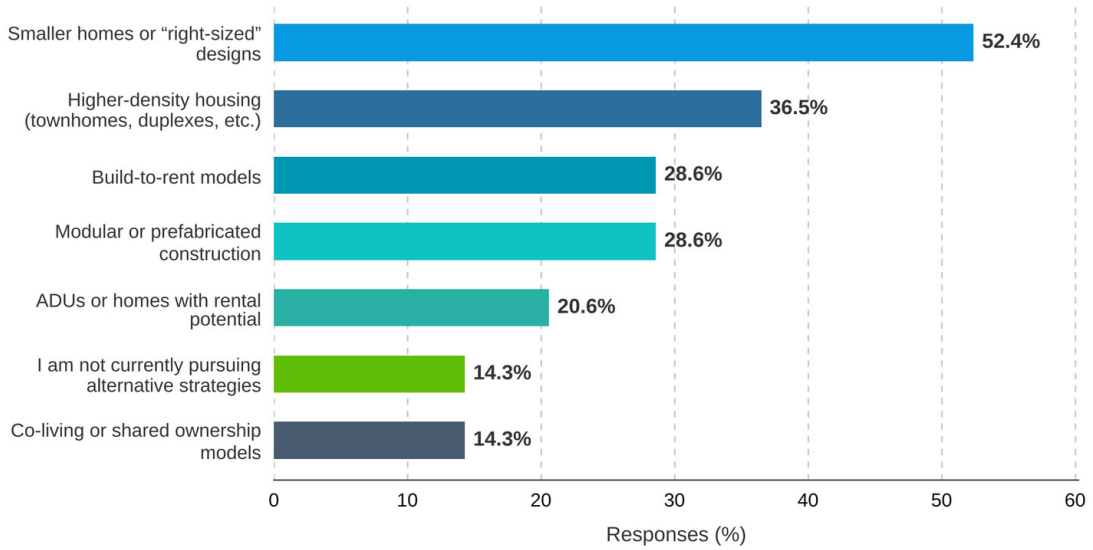
Reducing unnecessary square footage can be part of the solution, and consumers clearly support it, but shrinking without rethinking is not innovation. If we take 500 square feet away and leave the underlying economics, systems, materials, and ownership costs unchanged, we have solved only half the problem. In fact, the habit of subtraction, the endless search for one more thing to strip out, is a large part of what got us into the current affordability crisis in the first place.

The data reveals a perception gap. Only 16% of builders say their homeowners are receptive to homes with higher upfront costs but lower total monthly costs, compared with the 51.7% of consumers who say outright that lower total monthly costs would make a home more affordable, and the additional 40% who indicate that they are willing to be convinced. The data shows that builders are consistently underestimating consumers' awareness of full cost, as well as consumers' willingness to invest in performance to enhance long-term value.

There is also a price gap. More than half of consumers planning to buy in 2027 (53.5%) are targeting homes between $200,000 and $400,000, and only 10.9% plan to spend more than $500,000, while the national average home sells for more than $400,000. Buyers want a traditional product, a detached single-family home in the suburbs for 71.6% of them, at a price point that is disappearing in many metros.

While there are some vast discrepancies, there is also some alignment between builders and buyers. Builders report that their buyers rate energy efficiency (61%) and efficient layouts (60%) as their top two priorities, and when builders are asked to cut costs, the most common requests are to reduce space and adopt more energy-efficient designs.

## Builders Are Shrinking the House




GREEN BUILDER BUILDING A BETTER WORLD

Builders Affordability Survey - May 2026

COGNITION Smart Data

Smaller homes are builders' most common strategy for tackling affordability.

# What people actually value

If consumers are no longer buying square footage, what do they want? COGNITION data points to five primary purchase drivers that create perceived value: performance, health, resilience, independence, and equity.

## 1. Performance: the envelope comes first

Consumers have matured in how they think about efficiency. Asked to rank energy efficiency upgrades, they put upgraded insulation first, followed by windows and roofs. Asked separately what they are actually doing to reduce energy load, they named the same three: high-performance insulation (66.9%), windows and doors (46.8%), and roofs (44.2%), with high-performance HVAC close behind (42.2%). In past years, homeowners told us they were upgrading appliances and thermostats. Now they are going after the envelope. Intent and action are aligning.

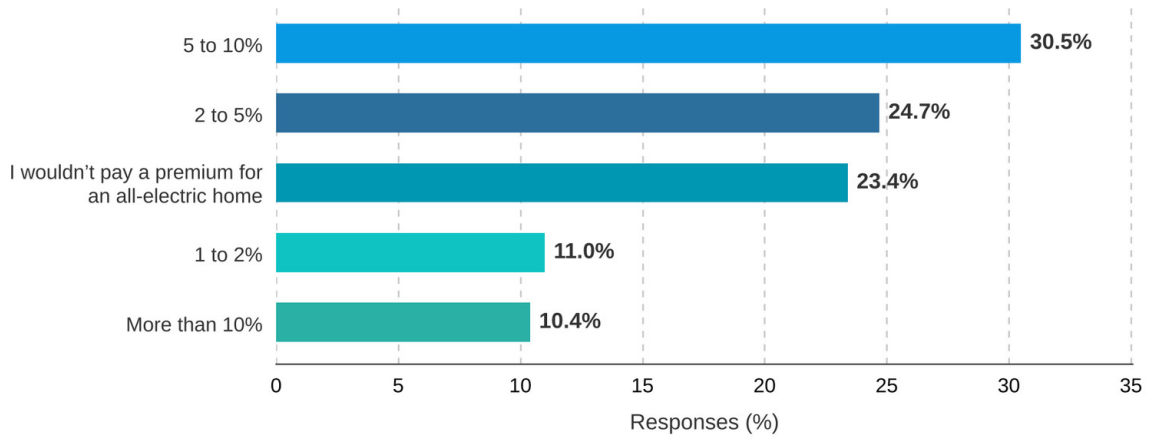
Electrification has followed. Nearly three-quarters of respondents (73.4%) say they would buy an all-electric home, and more than three in four would pay a premium for one, with 30.5% willing to pay 5% to 10% more. The reasons are shifting, too: the share citing a higher-performance, more comfortable home nearly doubled from 10% in 2024 to 18% in 2026, with 5% citing resilience and the ability to run off-grid as their top decision driver.

## 2. Health: the home as a wellness asset

Even before the pandemic, healthy home shifted from a niche concern to a mainstream expectation. Prior to the pandemic, the purview of healthy home was mainly physical health and indoor air quality. Over the past year, younger generations revealed that they now consider emotional and mental health as important as physical health in the home, and they increasingly understand that the air, water, light, and acoustics of their homes shape their physical and mental wellbeing.

Additionally, COGNITION research shows that 67% of homebuyers name advanced ventilation, purification, and filtration as the most important healthy-home feature, and existing homeowners rank indoor air quality upgrades as their second-highest sustainability priority (45.2%), behind only heating and cooling systems. Half of buyers say they would pay $5,000 or more above standard pricing for health-optimized features.

### Buyers Will Pay for All-Electric




GREEN BUILDER BUILDING A BETTER WORLD

Energy Insights - July 2026

COGNITION Smart Data

More than three-quarters would pay a premium for an all-electric home.

# Resilience changes the calculus

Nothing in this year's data moved faster than resilience, and the accelerant was not policy or marketing—it was direct experience. Nearly two-thirds of consumers (61.3%) reported that they have personally experienced a natural disaster or extreme temperatures in their home, and 85.5% experienced at least one climate event in the past year.

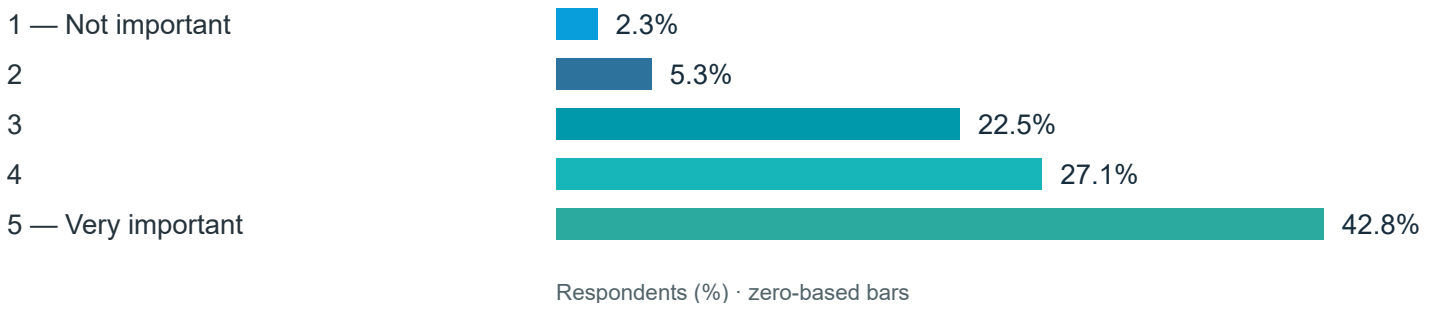
Catastrophic events make headlines, but extreme heat and cold arrive quietly, every season, through utility bills, overworked equipment, and homes that cannot hold a safe temperature when the grid goes down. That experience is reshaping buying decisions. Nearly 70% of consumers rate resilience as important or very important when choosing a home. Among homeowners who have lived through a climate hazard, resilience overtakes saving money as the top motivation for investments like solar (39.2% versus 22.8%).

The insurance bill reinforces the lesson. In COGNITION's resiliency research, 84.5% of homeowners have seen their insurance costs rise over the past three years, more than half (56.9%) by 30% or more, and 8% have seen their premiums double. More than half (51.3%) have seen insurers pull out of their market.

Homeowners are responding with investment, not resignation: 92.8% report that they plan to invest in resilient products that will protect their home from a natural disaster, with 43.4% reporting they'll spend $10,000 or more.

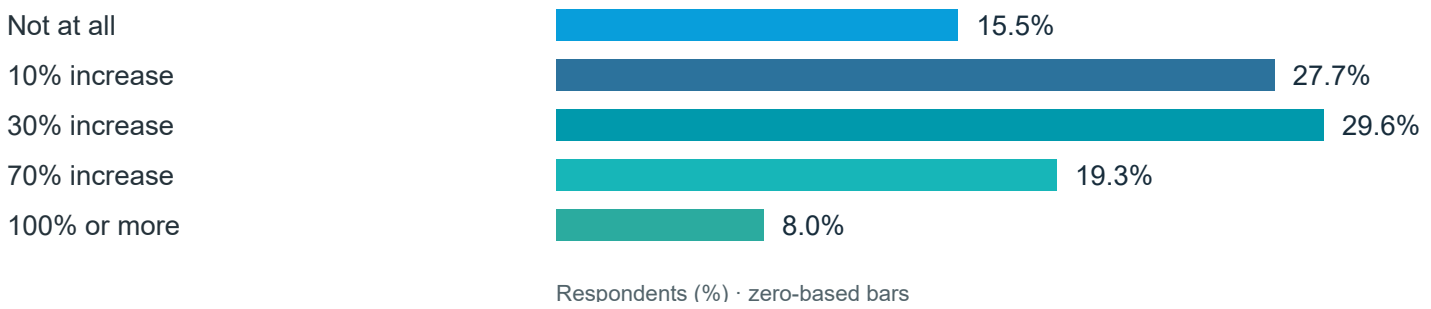
Half of those who have added resilient features have received an insurance reduction, though most of those discounts are small, which tells us the insurance market is not yet pricing resilience anywhere near its true value.

## Resilience Is Now a Buying Priority




Nearly 7 in 10 consumers say resilience matters when choosing a home.

## Insurance Costs Are Surging



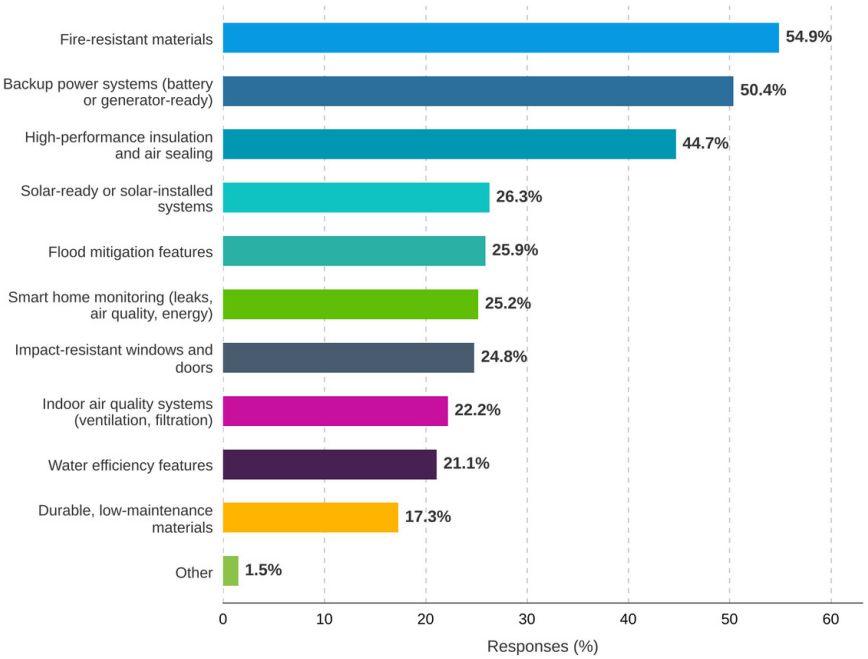

More than half of homeowners have seen premiums rise at least 30% in three years.

# Build it in

Most importantly for builders, consumers increasingly believe resilience should not be an upgrade at all. When asked which features should be standard in all new homes, 54.9% chose fire-resistant materials, 50.4% chose backup power systems, and 44.7% chose high-performance insulation and air sealing.

Builders are feeling the pull: 62.9% have seen an increase in requests for resilient features over the past three years, 63% say rising insurance costs have directly influenced their design decisions, and 84.3% believe resilient homes command a higher resale value.

## Make Resilience Standard




Buyers want fire resistance, backup power, and high-performance envelopes built in from day one.

## From subtraction to reallocation

- Take out what buyers don't value: wasted space, oversized formal rooms, square footage that adds cost but not livability.
- Reinvest in what they do value: a better envelope, heat pump systems, durable materials, healthy indoor air, solar and storage readiness, and resilience.
- Sell the monthly cost of ownership, not just the price, and partner with lenders and insurers who can recognize the difference and offer creative solutions accordingly.
- Design rooms that do the job of two, outdoor space that extends living area, and flexibility that lets the home adapt as households change.

# The self-sufficient home

The demand for backup power points to a broader shift. Homeowners want control over their own energy. In COGNITION's Energy Insights tracking, increasing self-sufficiency has become the dominant motivation for going solar, more than doubling from 23% in March 2025 to 49% in July 2026, while saving money fell from 30% to 17%.

Intent is translating into installation. Among Energy Insights survey respondents, reported solar installations rose from 9% in July 2024 to 47% in July 2026, and battery storage rose from 3% to 45%. Smart electrical panels climbed from 4% to 29%, and demand-side energy management from roughly 2% to 28%. Two years ago, 57% of respondents did not know enough about smart panels to form an opinion. Today, 53% are considering using them. Generation, storage, and intelligent control are becoming the baseline stack of the self-sufficient home.

## Solar Is Becoming About Control

| Response / technology | Jul 2024 | Mar 2025 | Jul 2026 |
|---|---|---|---|
| None of the above | 14% | 16% | 6% |
| Increase self-sufficiency | 25% | 23% | 49% |
| Increase resiliency | 6% | 8% | 9% |
| Reduce environmental footprint | 20% | 19% | 19% |
| Save money | 32% | 30% | 17% |
| Take advantage of tax credit | 3% | 3% | 1% |
| Other | 1% | 1% | 0% |

Self-sufficiency has overtaken saving money as the leading motivation for going solar.

## Home Energy Tech Takes Off

| Response / technology | Jul 2024 | Mar 2025 | Jul 2026 |
|---|---|---|---|
| Solar panels | 9% | 10% | 47% |
| Battery storage system | 3% | 5% | 45% |
| Smart thermostat | 33% | 31% | 36% |
| Energy-efficient appliances | 35% | 34% | 34% |
| Energy-efficient lighting | 33% | 28% | 32% |
| Smart electrical panels | Not asked | 4% | 29% |
| Demand-side energy management | 3% | 2% | 28% |
| Energy-efficient heating / cooling | 17% | 14% | 27% |
| Energy-efficient water heater | 23% | 20% | 24% |
| High-performance windows, doors, insulation and roof | 19% | 18% | 21% |
| Water monitoring / leak detection | 4% | 6% | 16% |
| Electric fireplace | 8% | 8% | 16% |

Solar, batteries, smart panels, and energy management all posted sharp adoption gains.

# Protecting the largest asset

Finally, homeowners are investing to protect and grow their equity. With 78.5% of homeowners planning to stay put next year, often because their current mortgage rate is far below what they could access today, home investments are increasing. Nearly 69% report that they are investing in upgrades, most commonly between $5,000 and $20,000, and two-thirds plan to pay cash rather than take on new debt. Their goals are telling: improving comfort (33.1%), increasing the home's value (19.0%), and making the home safe to age in place (18.4%). The top product priorities for those upgrades are heating and cooling systems (50.3%), indoor air quality systems (45.2%), and windows, doors, and siding (39.6%).

This is why 54.9% of builders in COGNITION's 2027 outlook research expect the industry to shift toward more remodeling and home improvement work next year. The value conversation is not limited to new construction, it applies just as much to the existing housing stock, where most Americans will live for decades to come.

## The Way Out Is Not the Way In

For decades, the housing sector has responded to affordability pressure with the same instincts: build faster, build smaller, cut costs, substitute cheaper products, squeeze the margin somewhere else. When affordability gets worse, we reach for the same levers again, until there is nowhere left to squeeze.

That approach inevitably becomes a vicious race to the bottom that nobody wins. Builders are forced into impossible tradeoffs. Manufacturers compete primarily on price and commodify their offerings. Lenders and insurers inherit assets that are more expensive to operate, maintain, and protect. And the homeowner gets a less expensive house on closing day only to discover that it is anything but inexpensive to own. Cheap upfront almost always means expensive forever.

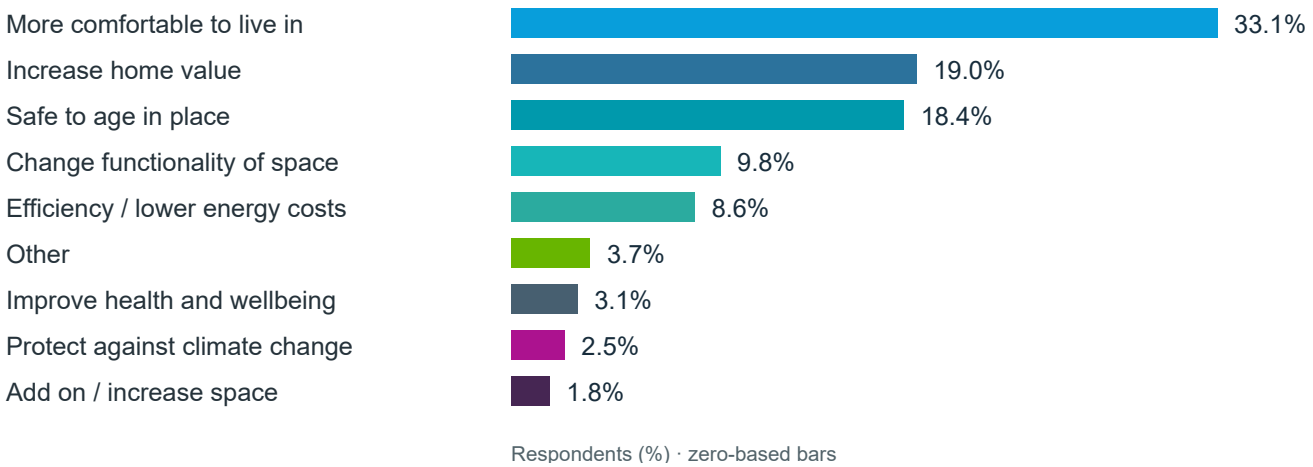
The evidence for a different path is accumulating. Realtor.com estimates that buyers of new homes save roughly $25,000 over the first decade of ownership compared with buyers of older homes, through lower utility bills and fewer major repairs. Meanwhile, rising construction-defect litigation involving moisture intrusion, roofing failures, and mold is a reminder of what happens when labor shortages, compressed schedules, and cost pressure collide. Everyone pays for that: builders through warranty claims and reputational damage, homeowners through repair bills and health concerns, and insurers and lenders through greater risk.

## Measuring What Matters

The affordability crisis is rooted in an inaccurate and outdated valuation metric. We price homes by size and upfront cost, so size and upfront cost are what the market delivers. We are not adequately measuring resilience, indoor air quality, performance, durability, energy independence, long-term cost stability, or peace of mind. We are measuring the visible layer of value while ignoring the experiential layer.

This is why Green Builder Media has advanced Value Per Square Foot, a framework that evaluates homes across seven pillars: energy, water, health and wellness, resilience, decarbonization, equity and investment, and community. Our thesis is that if we change what we count, the market will reward developing, designing, building, appraising, financing, and insuring homes that people actually want and can afford to keep.

## Homeowners Are Investing in Comfort




Comfort leads the reasons for upgrading, followed by home value and aging in place.

# Cautious optimism

That correction cannot fall on builders alone. Appraisers need to account for energy performance, health outcomes, and resilience when valuing homes. Lenders can recognize lower operating costs in underwriting, so that efficiency and resilience upgrades do not raise a buyer's effective monthly cost. Insurers can reward hardened construction with discounts that reflect the actual reduction in risk, not fractions of a percent. Realtors can add performance to the listing. And states, utilities, and local governments can offer durable incentives, streamlined approvals, and zoning that allows right-sized, missing-middle homes in the places people want to live.

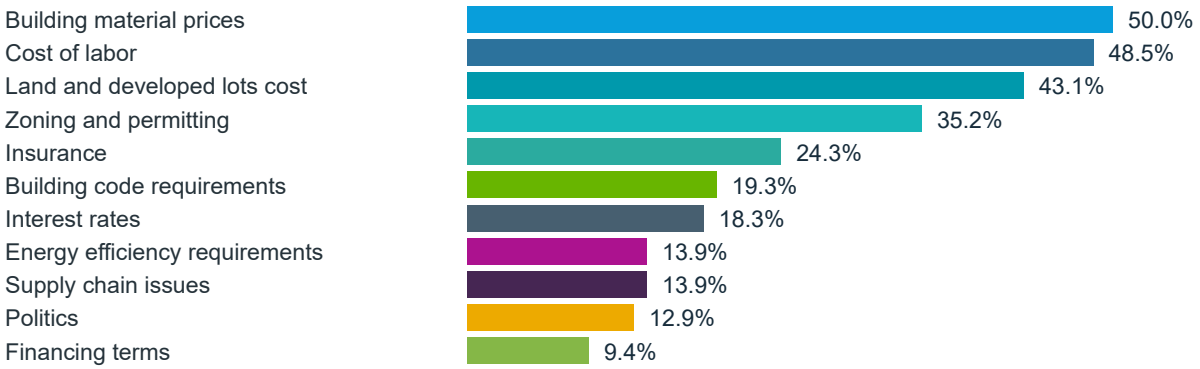
## Clear Messages

COGNITION's 2027 outlook research shows a sector under pressure but leaning forward. Builders name building material prices (50.0%), labor costs (48.5%), and land and lot costs (43.1%) as their top challenges for next year, followed by zoning and permitting (35.1%) and insurance (24.3%).

Yet the same builders see opportunity, and the most common one is not cost-cutting. It is trying new building materials and products (56.4%), followed by improving marketing and sales (53.0%), land acquisition (44.5%), adopting technology (37.1%), and advancing energy efficiency (36.1%). Most plan to reinvest 5% to 10% of revenue in their businesses next year, and they want more data: 73.3% want better information on material and labor costs, and 55% want deeper consumer insights.

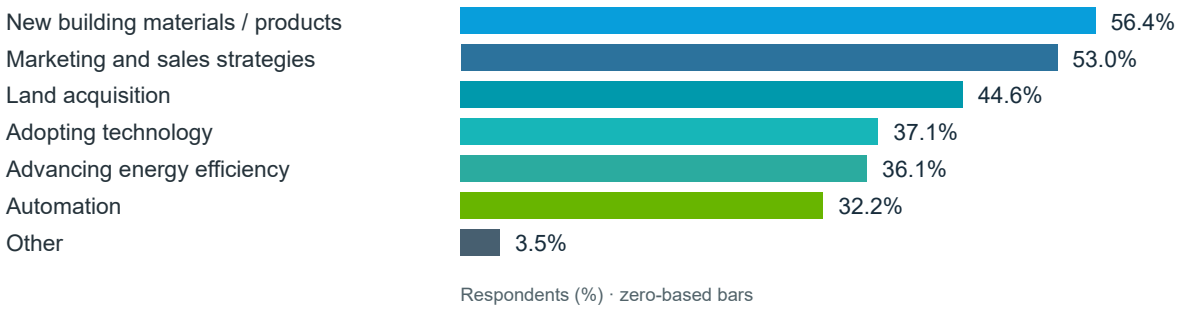
Builders are also telling manufacturers what they need: products that help lower costs (54.5%), are easier-to-install, (39.1%), and are higher quality (31.2%). Builders who depend on referrals for leads cannot afford callbacks, and they want a voice in the products that carry their reputations—32.7% want to be included in product development.

## Costs Dominate the 2027 Outlook




Materials, labor, and land top builders' list of challenges for the year ahead.

## Builders Bet on Better Products



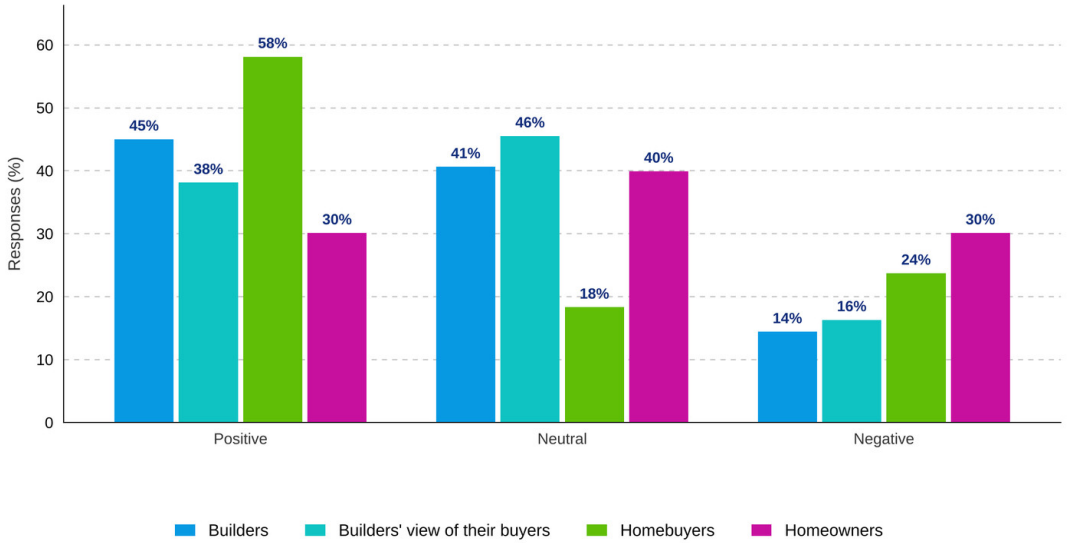

New materials and products rank as builders' biggest opportunity for 2027.

# Innovation in service of value

From a sales perspective, the message is clear. The value proposition has to change. Stop selling home features have and start selling lifestyle benefits: the comfortable bedroom on a freezing night, the hot water without the eye-watering bill, the lights that stay on when the grid goes down, the insurance premium that does not double. Consumers do not wake up wishing for R-30 insulation. They wake up wishing for stability.

Sentiment heading into 2027 is cautious all around. Builders are more optimistic than the people they serve, with 45.1% feeling positive about next year and 14.4% negative, while homeowners are more guarded, with 39.9% neutral and 30.1% negative.

## Builders See More Upside Than Buyers




Builders enter 2027 more optimistic than homeowners, who remain notably cautious.

## Embracing Change

If the industry is going to deliver more value without simply raising prices, it must break out of the stagnant, decades-old mold and embrace innovation, digitization, and enabling technologies to enhance operational efficiencies.

According to a white paper from Suffolk and MIT, Construction in the Age of AI, the construction industry spends less than 1% of revenue on information technology, compared with roughly 3% in automotive and aerospace. Seventy-five percent of projects run late or over budget. Construction costs have risen 1% to 3% a year for two decades, and project data remains fragmented across owners, designers, contractors, subcontractors, and regulators.

The report identifies six areas where the industry can create measurable time and cost efficiencies:

| Opportunity | Potential time savings | Potential cost savings |
|---|---|---|
| Design automation | Up to 39% | Up to 21% |
| Offsite manufacturing | Up to 32% | Up to 14% |
| Permitting | Up to 24% | Up to 8% |
| Scheduling | Up to 18% | Up to 11% |
| Skilled labor and subcontracting | Up to 17% | Up to 13% |
| Supply chain and procurement | Up to 15% | Up to 10% |

Source: Suffolk and MIT, Construction in the Age of AI. Estimates are directional, not construction-validated benchmarks.

# Meeting the moment

The authors point out that design automation emerges as the strongest upstream enabler, including generative design, AI-assisted BIM, clash detection, and design for manufacture and assembly. They also spotlight that some of the most immediate gains are in permitting, where more than 20,000 U.S. jurisdictions operate without a common data standard, and they highlight enabling technologies like those that check plans against codes to clear the backlogs that add time and carrying cost to every project.

No doubt, enhanced technology tools can eliminate inefficiencies, improve decision-making, and allow scarce skilled labor to become more productive and better coordinated. COGNITION's 2027 outlook data shows that 39.1% of builders expect more automation and technology adoption in 2027 and 37.1% see technology adoption as a major opportunity.

With that said, efficiency just to boost business profits can't be the only end goal. If digitization takes 17% out of the cost of building a home, the industry faces a choice about what to do with it. One option is to pass it all through as a lower price and repeat the race to the bottom faster. The better option is reallocation: invest part of what efficiency frees up to improve the building envelope, mechanical systems, IAQ products, and resilience that lower a household's total cost of ownership and improve the value for decades. That is how technology can become a consumer-facing affordability solution rather than just a margin-boosting strategy.

## Delivering Value

Heading into 2027, the housing market is certainly facing headwinds: rates above 7%, sales near generational lows, rising input costs, a constrained workforce, and households stretched by insurance, utilities, taxes, and maintenance. It would be easy to respond the way the industry always has, by cutting, shrinking, and subtracting until the numbers pencil.

But the data tells us that consumers, in indisputable numbers, want something different.

The way out of the affordability crisis is not to do the same thing more cheaply. It is to bring forward the things that people actually value, measure them, finance them, insure them, and build them as standard. That is the shift from price per square foot to value per square foot, and from first cost to full cost.

We have spent decades asking how much house we can deliver for the money. The more important question now is how much life we can deliver within the house.

## Sources


COGNITION Smart Data: Full Cost Not First Cost Will Unlock Future Housing Affordability (June 2026); 2027 Outlook Report (Oct. 2026); A Growing Resiliency Economy (2026); Energy Insights (July 2026); Controlling the Indoor Environment; Affordability Survey (May 2026).

Freddie Mac Primary Mortgage Market Survey (Oct. 1, 2026); Federal Reserve (Sept. 2026); Fannie Mae and Mortgage Bankers Association forecasts (Sept. 2026).

National Association of Realtors: Existing-Home Sales (Aug. 2026); 2025 Profile of Home Buyers and Sellers.

U.S. Census Bureau: New Residential Construction and New Residential Sales (Aug. 2026).

S&P Cotality Case-Shiller Home Price Indices (July 2026).

NAHB/Wells Fargo Housing Market Index (Sept. 2026).

Associated General Contractors of America: construction input prices (Aug. 2026); AGC/NCCER 2026 Workforce Survey.

Harvard Joint Center for Housing Studies: The State of the Nation's Housing 2026.

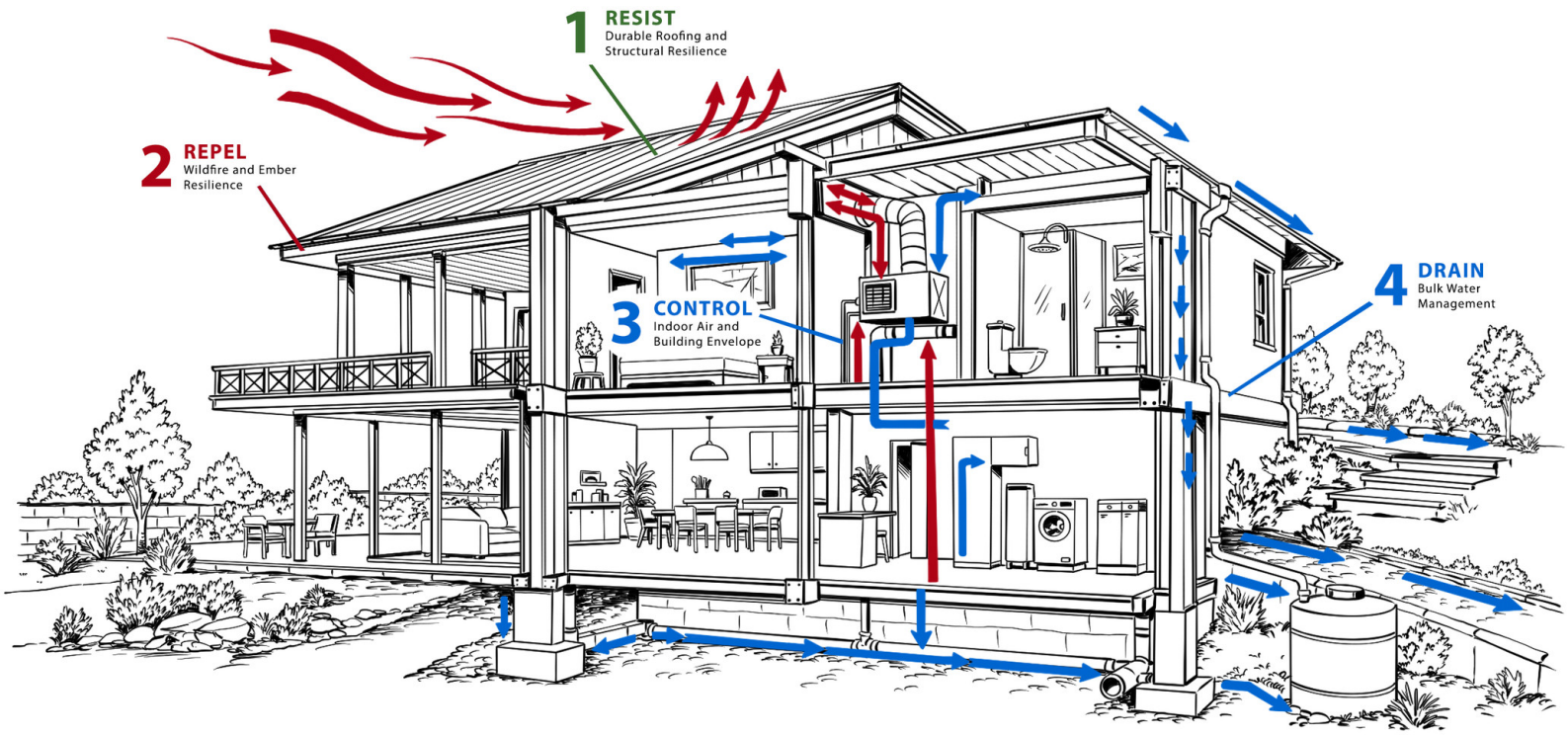
Insurify home insurance projections (2026); U.S. Energy Information Administration Short-Term Energy Outlook (Sept. 2026); Realtor.com.

Suffolk and MIT: Construction in the Age of AI: An Industry White Paper and Research Roadmap (2026).

# BUILDING A HOUSE THAT CAN TAKE A HIT

Resilient homes aren't defined by a single product. Building science shows how the roof, envelope, ventilation, and water systems can work together to keep a home functional when conditions turn extreme. Here are the 5 principal areas to address in your homes now.

## BY MARY SALMONSEN




Roof, envelope, air and water strategies work together to resist, repel, control, drain and conserve. Credit: Sabo

### ROOF HEAT: STANDARD VS. COOL

STANDARD ASPHALT

**180–200°F**

Typical heat-tolerance range

COOL ROOF SYSTEMS

**Up to 50°F cooler**

Lower peak roof-surface temperature

Source: article text; cool-roof reduction attributed to Lawrence Berkeley National Laboratory. Peak conditions vary.

# RESILIENCE BY DESIGN

*"Roof-covering fasteners help resist local uplift of tiles, panels, shingles, hips, ridges and perimeter components,"*

— Wade Shepherd

Over 1,800,000 new single-family homes are expected to break ground in the U.S. between 2026 and 2027, according to the National Association of Home Builders' 2026 Housing Outlook.

At the same time, severe and costly extreme weather events are only increasing in frequency. The National Oceanic and Atmospheric Administration recorded 27 extreme weather events leading to over one billion dollars in damages in 2024 — and that number has risen significantly over time, up from ten in 2014 and six in 2004, adjusted for inflation.

What this means is that the houses built today, and the buyers moving in, will face increasingly frequent and devastating extreme weather events over the course of the next several decades. Fortunately, building technologies have evolved as the climate has changed. Resilient building components are less expensive and more widely available than ever, and new developments mean that even a slight cost increase can prevent future callbacks or catastrophic failure.

A number of builders, architects and product manufacturers have already risen to this challenge, applying new technologies to home products and systems that have already shielded families from the worst. When you analyze their best practices, it comes down to this: A resilient home has to do five things well: resist, repel, control, drain, and conserve.

## RESIST: Start at the Top

In 2025, when the Eaton Fire tore through Altadena, California, embers from one of the city's thousands of destroyed homes flew onto a homeowner's stone-coated steel roof.

While the embers scorched the roof's stone granules, they did not catch on the steel underneath, according to a later case study from the roof's manufacturer, Westlake Royal Building Products. This, combined with the stucco exterior and other fire-resistant materials, is believed to have saved the home and stopped the flames from spreading to neighboring houses.

Fire ratings developed by ASTM International (formerly the American Society for Testing and Materials) are the gold standard in determining a roof system's ability to stand up to wildfires, with Class A being the best. The roofing in question—Westlake's Unified Steel—carries a Class A fire resistance rating. It also boasts the highest level of impact resistance (Class 4) under the standards developed by Underwriters Laboratories (UL).

The roofing also has high wind resilience as part of a complete roof assembly, including fasteners and tie-downs, according to Wade Shepherd, senior business development manager at Westlake Royal Building Products. "Roof-covering fasteners help resist local uplift of tiles, panels, shingles, hips, ridges and perimeter components," Shepherd says. "Structural tie-downs address the building load path by helping transfer wind forces from the roof framing into the walls and foundation. Both are essential to long-term weather resilience." ASTM International standard ratings for wind resistance on roof shingles range from Class A up to Class H, which can resist wind forces of 150 or more miles per hour.

These developments in roofing for resistance to fire, impacts, and wind which made all the difference in the case of the Altadena wildfire are also benefitting other communities as the frequency and severity of natural disasters increase.

"I had the opportunity to visit Sarasota shortly after Hurricane Milton, [and] what stood out was how little damage I saw on many tile roofs," Shepherd says. "In many cases, the visible damage appeared limited to accessory components rather than large-scale roof-cover loss. That observation reflects how much roofing codes, fastening practices and installation requirements have evolved since Hurricane Andrew in 1992."

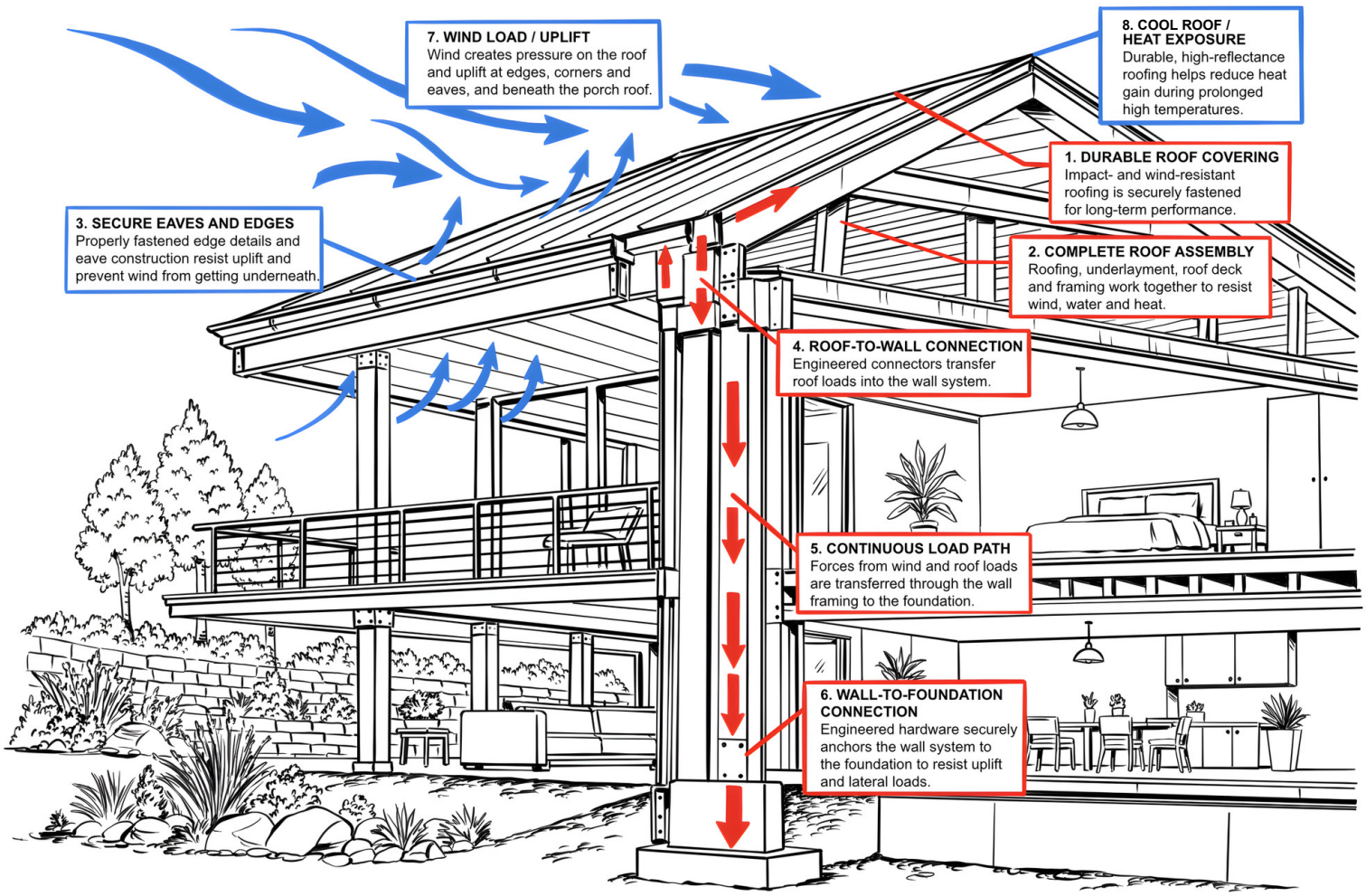
Even without the extremes of a wildfire, however, today's roofing faces another heat-related obstacle — high surface temperatures over a long period of time.

Standard asphalt shingles have a heat tolerance between 180–200°F, or 82–93°C, after which they may soften, lose granules or rapidly age. Recent extreme temperature highs, 120°F or higher, can send roof temperatures up over 190°F for several days, causing potential permanent damage.

Cool roof systems can reduce a roof's maximum surface temperature by up to 50°F under peak conditions, according to a Lawrence Berkeley National Laboratory study. This prevents the shingles from reaching dangerous temperatures and reduces the heat load on underlayments.

Depending on the climate, these systems could also reduce air conditioning costs by 10-15% for buyers, and extend the lifespan of the roof by up to a decade.

# RESIST: Resilient Roofing Systems




A high-performance roof isn't just a tough surface. Forces have to travel through a continuous load path from roof covering and framing through the walls to the foundation. Credit: Sabo

## REPEL: Armor the Exterior

The roof isn't the only part of the home that needs to be able to stand up to a fire. Anything outside or surrounding the home could be a potential vector for combustion. There are many ways to mitigate the risk, however.

At the immediate exterior, fire-resistant siding materials can complement a resilient roof, including fiber cement, cultured stone veneer, brick or treated wood. "What science is showing us is that the exterior materials that are chosen is a really big deal," said Michele Steinberg, wildfire division director at the National Fire Protection Association. "What we're looking for is those noncombustible and ignition-resistant materials and preventing ember entry."

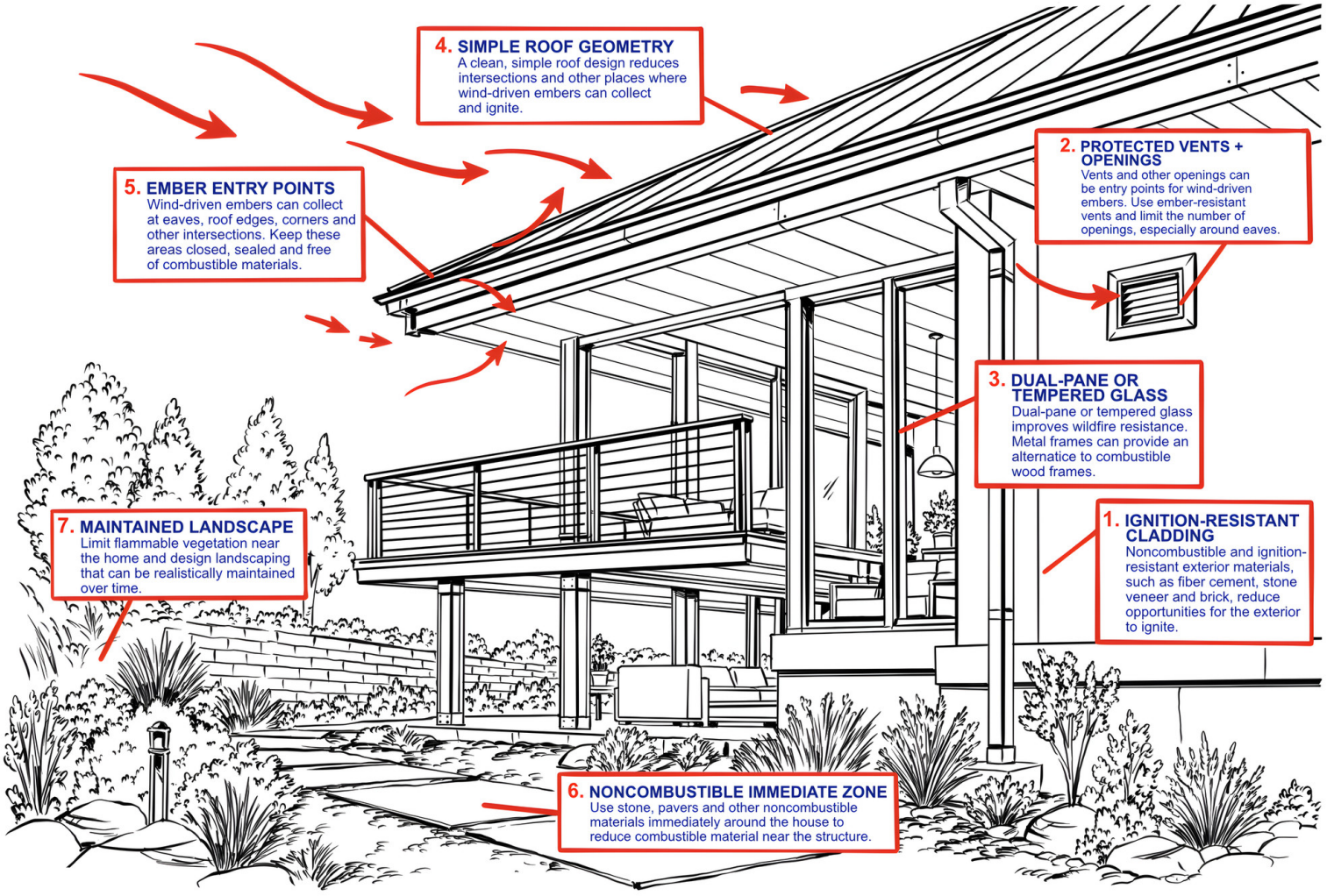
Steinberg also notes a new body of research on the role of windows in preventing wildfire intrusion. "Having dual-paned or tempered glass is very important, but just as important is the assembly," Steinberg said. This can include specifying metal frames for windows rather than wood frames.

However, she does caution against exterior fire sprinkler systems, which are sold as a means of preventing wildfire spread.

"There's no research, no testing, no strong evidence that that is going to perform to some standard. There really is no standard," Steinberg says. "I'm not saying that they couldn't possibly work, or that it doesn't have a benefit, but we don't have evidence for that yet."

In "Designing With Fire in Mind: Three Steps to a Safer New Home," the NFPA outlines its Firewise Communities Program, a set of design principles that aim to provide simple and easy means to reduce a home's wildfire risk. In some cases, these principles do not

# REPEL: Whole-Home Fire Readiness




Wildfire resilience depends on stopping ignition before it reaches the structure. Noncombustible and ignition-resistant materials, protected vents and openings, and defensible space around the home help prevent wind-driven embers from entering, collecting or igniting vulnerable parts of the building. Credit: Sabo

require buying specialty products. Instead, risk is mitigated by arranging standard offerings in a different manner.

Highlights include:

Plan a fire-resistant landscape. This includes limiting the amount of flammable vegetation near the home and using non-combustible landscaping materials like stone pavers.

Use simple roof designs. This can reduce the number of spaces embers can enter.

Consider home openings as potential entry points for embers. The NFPA suggests avoiding gutters wherever practical , incorporating ventless products in the home or installing vents under eaves.

Consider future home maintenance. Make sure the landscaping is easy for the homeowners to care for.

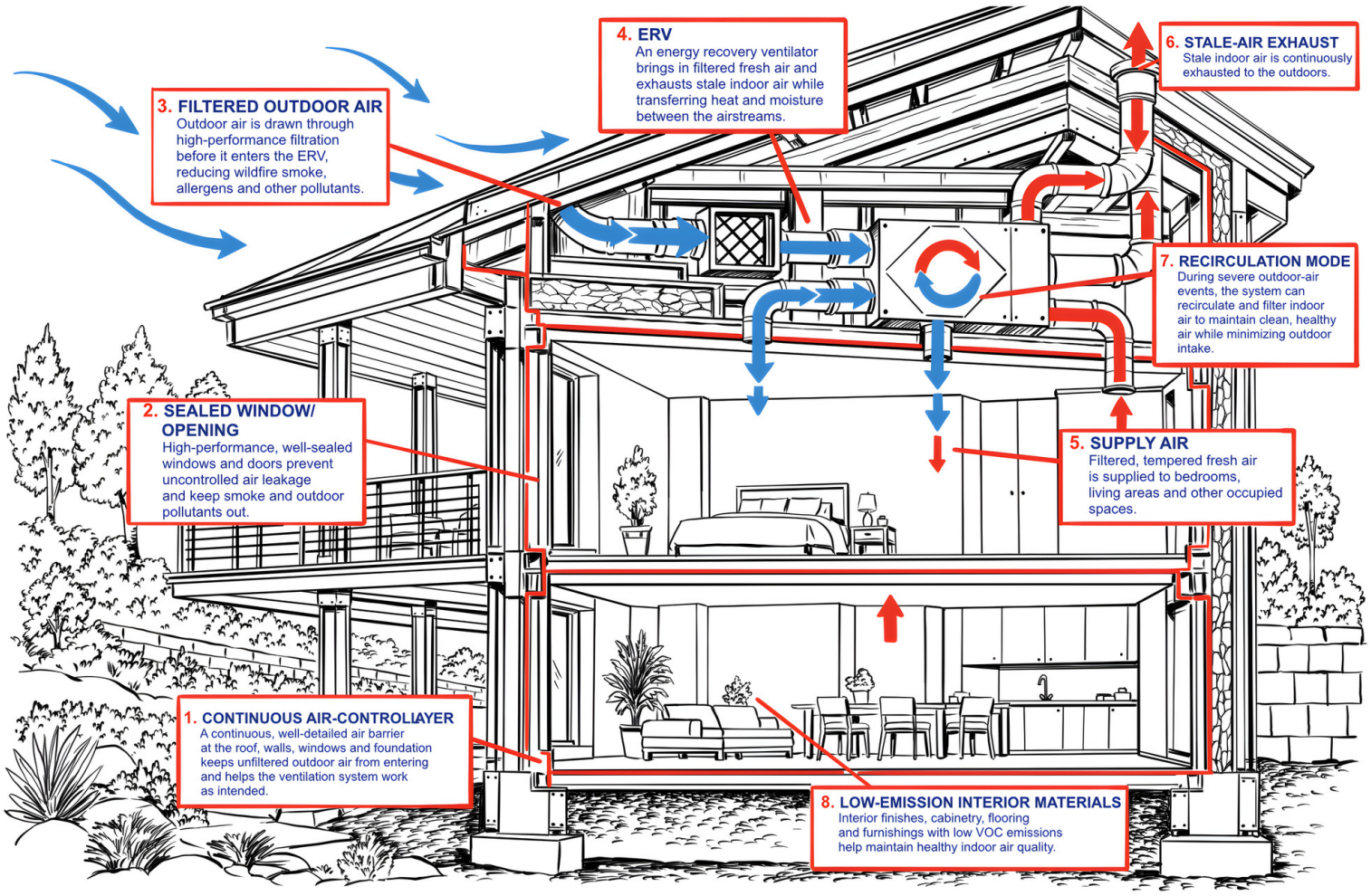
## CONTROL: Weigh Your Options

Air currents can bring dangerous air quality into homes thousands of miles apart, as was observed with the spread of wildfire smoke over the past summer. The 2025 edition of ASHRAE code 62.2 raised its minimum air filter level from MERV 6 to MERV 11, specifically to catch wildfire smoke particles.

Builders have a variety of strategies to choose from to keep their interior air quality high. Alair Asheville|Red Tree, Green Builder's partner for VISION House Asheville, combines design considerations and whole-home filtering tech for its strategy.

"Healthy indoor air starts with a tight, well-sealed building envelope that prevents uncontrolled outdoor air from entering the home," says Brandon Bryant, president and partner at Alair Asheville|Red Tree. "From there, we use energy recovery ventilation

# CONTROL: Build a Controlled Air Environment




A tight building envelope limits uncontrolled air infiltration, while balanced mechanical ventilation brings fresh air in and moves stale air out through intentional pathways. Filtration helps remove smoke, particulates and other outdoor pollutants before incoming air reaches occupants, allowing the home to maintain healthier indoor air even when outdoor conditions deteriorate. Credit: Sabo

systems [ERVs] to continuously bring in fresh, filtered air while removing stale air. Together, these strategies create a balanced, controlled indoor environment throughout the home."

ERVs consistently exchange stale air within the home for fresh air outside. Panasonic's Intelli-Balance Elite Plus+ 150 ERV also offers a recirculation mode that filters and returns indoor air. It requires the optional FV-SCVE2 wall control and compatible ducting. This mode cannot be selected with DC4 or DC5 duct configurations.

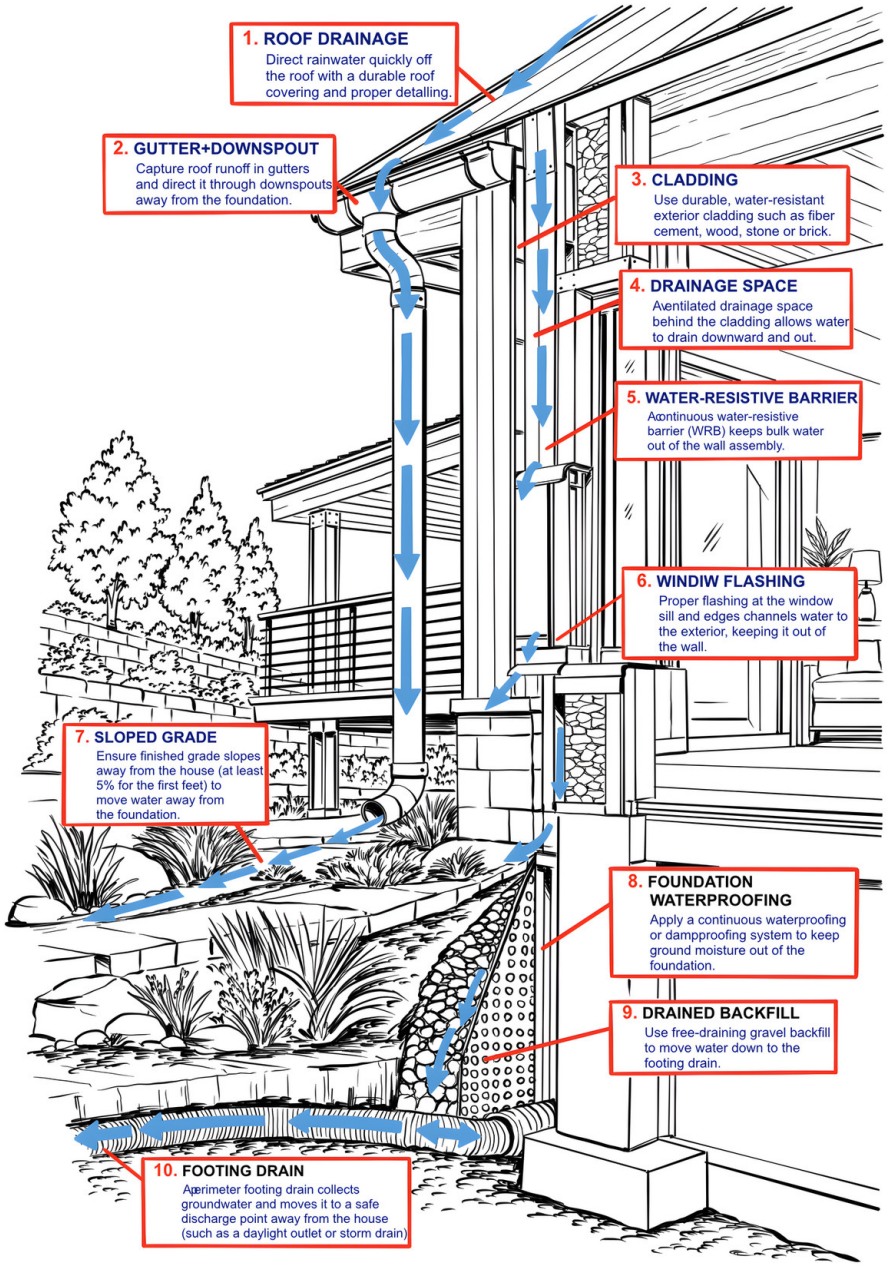
In addition, for filtration to be at its most effective, builders must also consider diffusion, the system of home vents through which air is managed. "If you can't control how air enters a home, you can't control what's coming with it. Everyday activities like cooking, showering, and cleaning also affect air quality, which is why balanced ventilation and proper air exchange are so important," Bryant says.

Year-round, interior product choices can also go a long way toward maintaining consistent indoor air quality. When you make your product choices, be on the lookout for:

- Low-VOC paints, seals, and adhesives.
- Low-VOC vinyl plank flooring.
- Low-VOC carpeting, or use as little carpeting as possible.

"We take a holistic approach by carefully selecting low-emission materials, including cabinetry, flooring, finishes, paints, stains, and adhesives," Bryant explains. "We also encourage homeowners to consider furnishings and other products they bring into the home, since these can contribute to indoor off-gassing as well."

# DRAIN: Give Water Somewhere to Go




Bulk water resilience requires managing water from every direction. Roof drainage, properly flashed wall assemblies, site grading and foundation drainage move rainwater down, out and away from the structure, while flood-resistant design elevates vulnerable equipment and accounts for rising water before it reaches critical building systems. Credit: Sabo

## DRAIN: The Right Flow

When it comes to building durability, water doesn't need to arrive as a flood to cause serious damage. Wind-driven rain, roof runoff, poor site drainage and water that finds its way behind exterior cladding can lead to rot, mold and deterioration if the home isn't designed to move that water away from the structure.

The basic building-science principle is straightforward: Drain water away, keep it out of the building assembly and give anything that does get wet a way to dry.

That begins at the site. Finished grades should slope away from the foundation, while gutters, downspouts and other drainage strategies should move roof runoff well beyond the building perimeter rather than allowing it to collect against foundation walls.

Above grade, the exterior wall should be treated as a layered water-management system rather than relying on siding alone to keep the building dry. Cladding serves as the first line of defense against rain, but water that gets behind it must be directed back outside by a properly integrated water-resistive barrier, flashing and drainage plane. Roof-to-wall intersections, windows, doors and other penetrations deserve particular attention because they interrupt that drainage system and create potential pathways into the assembly.

In areas subject to intense storms and wind-driven rain, those details become even more important. The objective isn't simply to specify materials that can tolerate water. It is to design the entire enclosure so that water has a predictable path down and away from the home.

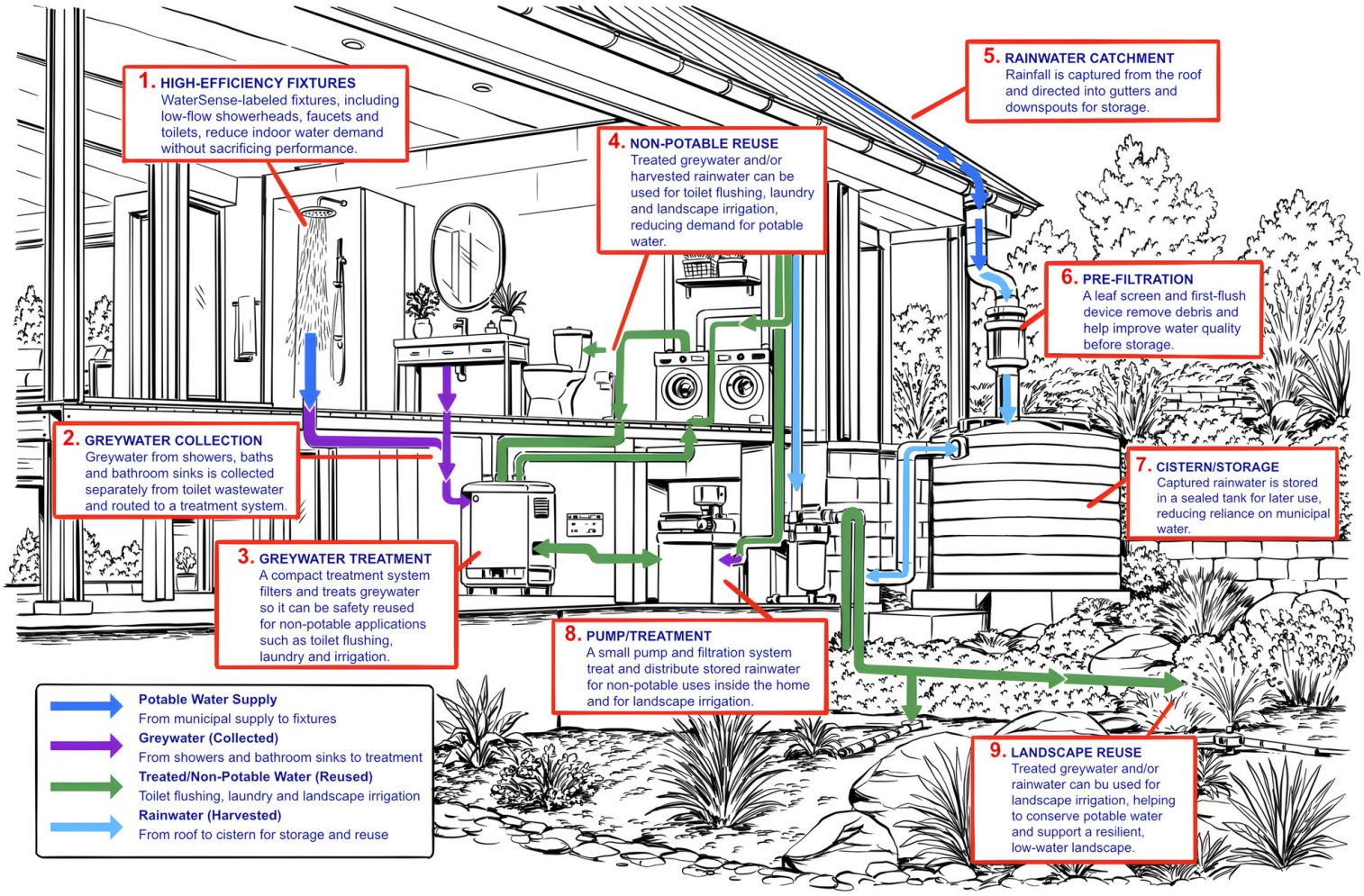
That same thinking extends below grade, where foundation waterproofing or damp-proofing, footing drains and properly drained backfill can help prevent groundwater from moving into basements and crawlspaces.

A resilient home, in other words, doesn't assume that it will stay perfectly dry. It anticipates where water will go when it inevitably reaches the building, and directs it somewhere safe.

## CONSERVE: An Obvious Priority

Just as dangerous as too much water is its opposite — too little. As of September 2026, nearly 60% of the

# CONSERVE: Water Conservation for the Long Game




Water resilience starts with reducing demand. High-efficiency fixtures and water recirculation and reuse systems reduce the amount of potable water a home needs, helping conserve available supplies and maintain performance during drought and water-supply disruptions. Credit: Sabo

continental United States faces drought conditions, affecting over 100 million U.S. residents, according to the NOAA's drought monitor. Reducing a home's water use under all circumstances can keep residents comfortable in the tightest situations and contribute to sustainability goals.

At VISION House Asheville, the team specified high-efficiency, water-conserving plumbing fixtures by Kohler to increase the home's water efficiency. Among them is the Kohler Anthem EvoCycle, a shower system that gives users the option to cycle some used water back through the showerhead. When active, this system saves an estimated 80% of the water used in a typical shower, according to the manufacturer.

"One of the biggest [water] users in the home is showers," says Samantha McLelland, Enterprise Program Manager of Sustainability and Water Strategy at Kohler. "On average, they use 17-20% of a household's water. Having a product like the EvoCycle is significant to helping homes and communities be more resilient."

While the Anthem EvoCycle comes at a higher price tag than typical shower systems, water-saving fixtures are available across every price point. Builders can look out for products with the EPA's WaterSense label, or aim to earn the WaterSense label for their homes. Homes built to this standard save up to 30% on water usage compared to the typical home, according to the agency.

For builders, the next frontier in water efficiency goes beyond specifying lower-flow fixtures. New systems and design practices are making it possible to capture, treat and reuse water within the home—or prepare a home to do so in the future.

One of the simplest opportunities for this comes before the drywall goes up. Rather than sending all wastewater into the same drainage system, builders can separately pipe appropriate greywater

sources, such as showers and baths, and provide dedicated non-potable supply lines for future reuse. That allows a water-recycling system to be installed initially or added later without requiring a substantial replumbing of the house. Hydraloop, for example, publishes "Recycle Ready" plumbing configurations specifically for new construction.

Builders can also turn greywater recycling into an "appliance" to help homeowners reuse their water. Newer systems are taking much of the complexity out of onsite water reuse. Hydraloop's H300 automatically treats water from showers and baths for reuse in toilets, washing machines and landscape irrigation. Designed for homes with one or two bathrooms, the unit can treat up to 360 liters per day and, according to the manufacturer, reduce total fresh-water consumption by up to 45%. The system is certified to NSF/ANSI 350R and doesn't rely on replaceable filters or chemicals for its treatment process.

Not every greywater strategy requires a sophisticated indoor treatment system. Aqua2use offers greywater diversion systems that capture water from showers, baths and laundry, filter out debris and redirect the water for landscape irrigation. An underground version is designed specifically for builders and plumbers and can be incorporated into new construction below grade, providing a simple route to water reuse when treated indoor reuse isn't necessary.

Rainwater harvesting is evolving, too. Today's more sophisticated systems combine roof catchment, pre-filtration, storage, pumping and treatment rather than simply collecting runoff in a barrel or cistern.

Rainwater Management Solutions, for example, sizes residential systems using roof area, rainfall data, anticipated water demand and intended end uses, and then integrates components such as pre-tank filtration, above- or below-ground storage, pumps, carbon and particulate filtration and UV treatment as needed.

The larger opportunity is to think about water the way that high-performance builders already think about energy: reduce demand first, then capture and reuse resources that would otherwise leave the site. Planning those pathways during design can make sophisticated water conservation far easier—and less expensive—than trying to add it after construction.

## Future Proof Multi-Tasking

A house that survives and even thrives through disaster, or even just a particularly rainy season or extended heat wave, is valuable.

A recently released report from COGNITION Smart Data reveals that experience changes priorities, when it comes to the increasing prevalence of climate disasters and stressors. It found that among consumers, resiliency (27.5%) is now almost as important as saving money (33.6%) as a motivation for adopting solutions like solar—a dramatic change from even three years ago. Among those who have lived through a climate hazard, the old order flips entirely: resiliency becomes the top priority (39.2%), and saving money drops to 22.8%.

*"The larger opportunity is to think about water the way that high-performance builders already think about energy: reduce demand first, then capture and reuse resources that would otherwise leave the site."*

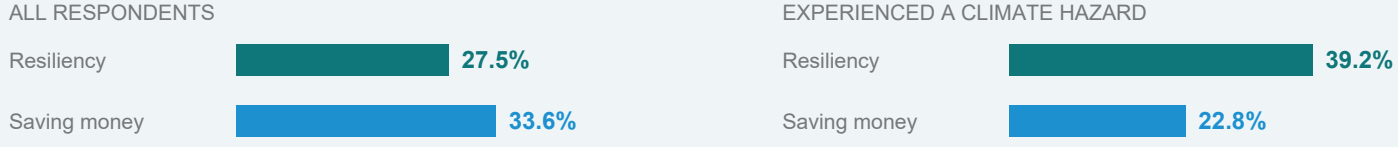
"Once a homeowner has gone a week without power, or evacuated and watched their house be threatened from afar, the calculus is forever changed," notes Jennifer Castenson, the report author and Vice President of Cognition Smart Data.

"A high-performing home that uses fewer resources means lower monthly expenses and, in some cases, potential insurance savings," says Jacob Atalla, Vice President of Sustainability at KB Home, a longtime partner of the WaterSense program. "At a time when affordability is a major concern for buyers, we will continue looking for every opportunity to reduce not only the purchase price of a home, but the ongoing cost of living in it." GB

*Mary Salmonsen is a residential construction industry journalist with a decade of experience covering single-family and multifamily construction. She has served as associate editor of Builder and Multifamily Executive magazines, as well as a reporter and founding staff member at Multifamily Dive. She has also contributed to B2B publications across a variety of industries.*

### WHAT MOTIVATES RESILIENCE?

Priority when adopting solutions




Source: COGNITION Smart Data report, as cited in the article. Bars use the same scale.

Part 3

TODAY'S HOMEOWNER



CREDIT: Adobe Stock

# SOLVE YOUR BUYERS' MONTHLY PAYMENT DILEMMA

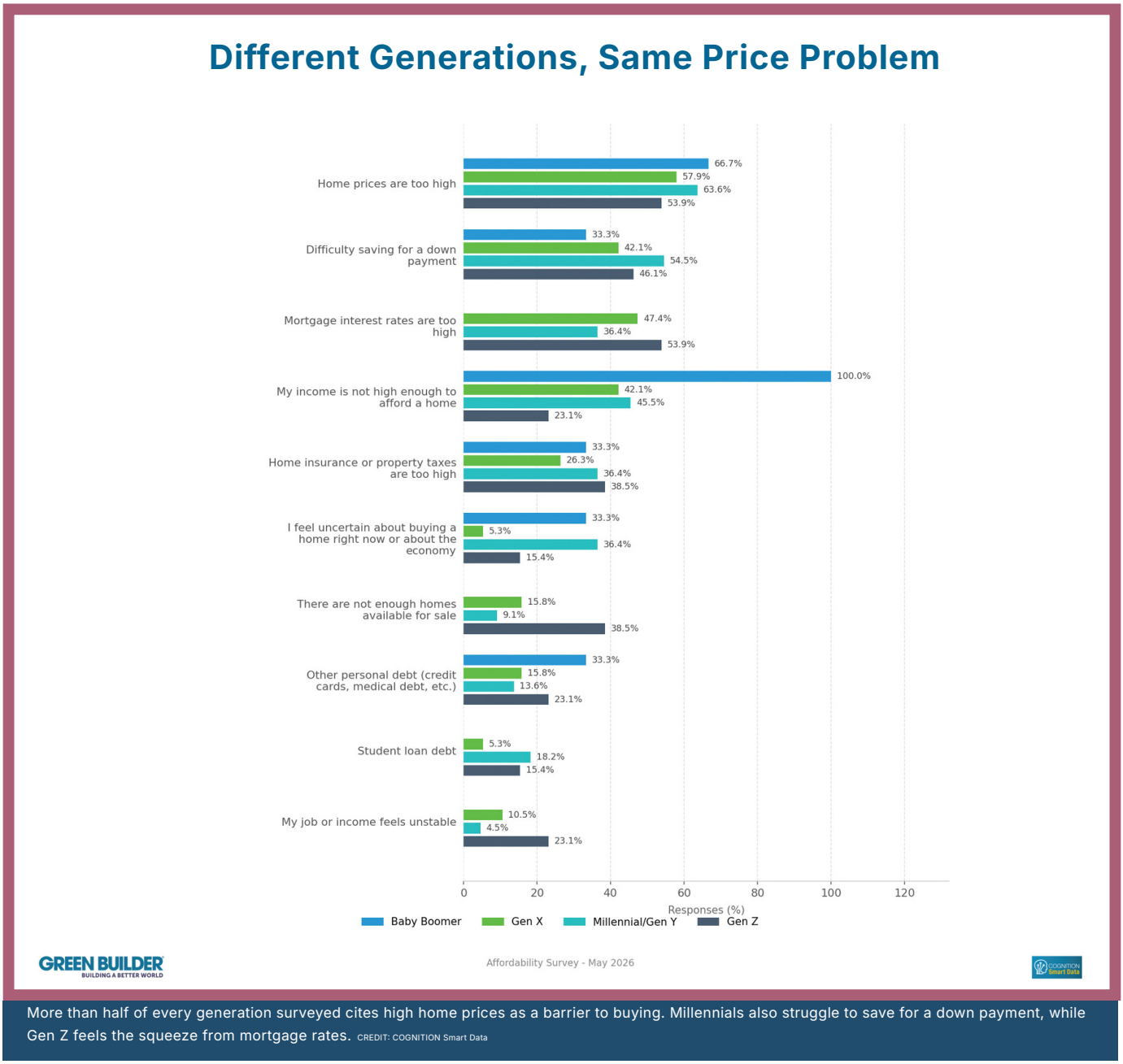
## Lender partnerships can help builders to ease financial burdens for their buyers.

**BY MICHELE LERNER**

Affordability anxiety can stop prospective homebuyers from so much as looking at homes. Even when they're renting, living with their parents or in a dysfunctional older home with leaky windows and soaring energy costs, potential buyers sometimes eliminate themselves from the buyer pool out of fear of high costs.

Builders who can overcome affordability barriers with mortgage buydowns, programs that wrap energy efficient upgrades into the mortgage, and other incentives are better positioned to gain market share and loyal customers.

"One important shift that builders can help people make is to get across the key point that what it will cost to live somewhere is more important than mortgage rates or home prices," says Don Worthington, division president of PRMI Home Financing. "Many builders do a really great job building a high performance home and saving energy, but they also need to explain and demonstrate what that means for affordability."




More than half of every generation surveyed cites high home prices as a barrier to buying. Millennials also struggle to save for a down payment, while Gen Z feels the squeeze from mortgage rates. CREDIT: COGNITION Smart Data

A recent survey by Green Builder Media's **COGNITION Smart Data**™ found that the top four obstacles currently preventing buyers from purchasing a home are high prices, difficulty saving for a down payment, high mortgage rates and incomes not high enough to afford a home.

Builders surveyed cited that they hear the same challenges from their buyers: prices are too high (65%), mortgage rates are too high (51%), it's too hard to save for a down payment (51%) and incomes are not keeping pace with costs (43%).

One place to start is the misconception that existing homes are cheaper than new homes. In August 2026, the median sales price of an existing home was $429,100, according to the **National Association of Realtors**, while the median sales price of a newly built home that month was $393,700, according to the **Census Bureau**.

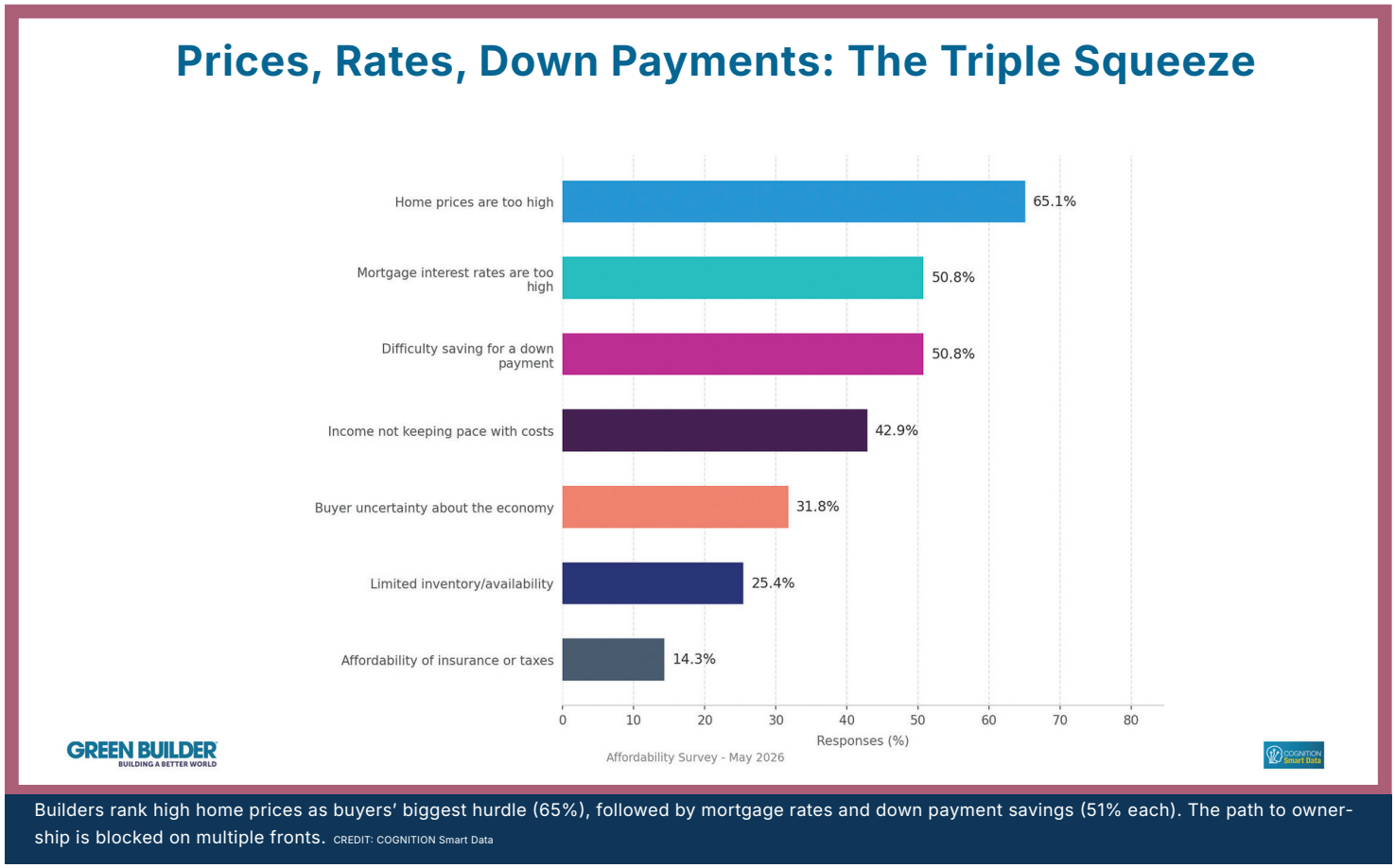
While price matters and monthly costs are key, what grabs the most attention is a steep drop in mortgage rates.

## MORTGAGE RATES BELOW 4% BRING IN BUYERS

Nearly one in seven listings for newly built homes mentioned a mortgage interest reduction in August, with an average advertised rate of 3.92%, according to **Realtor.com**.

"Builders are offering temporary buydowns as a way to market a lower interest rate," says Kelly Zuccarelli, head of business development, Wells Fargo Home Lending. "Wells Fargo also offers a 'Spec Lock' product that allows a builder to lock a rate for 90 or 120 days before having a buyer, combined with a permanent buydown. This can make the offer more attractive to buyers and serve as a valuable marketing tool for builders."

For builders, a mortgage rate buydown is preferable to a




Builders rank high home prices as buyers' biggest hurdle (65%), followed by mortgage rates and down payment savings (51% each). The path to ownership is blocked on multiple fronts. CREDIT: COGNITION Smart Data

price cut to incentivize buyers. A **study by the American Enterprise Institute** found that lowering the rate by one percentage point costs about 3.2% of the sale price, which on a $380,000 house would be about $12,000. To get a similar monthly payment decrease with a price cut, builders would need to cut the price by at least 10% - or $38,000 in this case. In addition, price cuts may lead to expectations for lower prices for all buyers.

When comparing a buydown and a possible price cut – each costing a builder $20,000 on a $400,000 home, a buydown is usually the better option for purchasers, Worthington says. In that example, a price cut would lower the monthly principal and interest by $114, compared to a $288 drop with a rate buydown. The savings add up over the years too, he says. A price cut would save the buyers $13,700 over 10 years, while a buydown saves $34,500.

"A temporary buydown can be a good way to attract buyers and help them with affordability in the first year or two, but the buyers still need to qualify for the loan at the higher long-term interest rate," says Teresa Lopez, vice president of the Federal Savings Bank. That protects the buyers from being unable to afford the higher payments that kick in when the mortgage rate buydown ends, she says. However, some rate buydowns are permanent.

Other popular incentives builders can offer to attract buyers and increase affordability, according to Zuccarelli, include closing cost assistance, design center credits, appliance packages and price incentives.

However, a high performance house, built above minimum code requirements, can generate more savings overall than any of these incentives. This is the case because a high performance home delivers lower energy costs, a higher appraised value and possibly even insurance premium savings, Lopez says. Builders can educate buyers about these affordability benefits in lieu of or in addition to any special incentive programs.

In addition, builders may want to ask their lender partners or remind their buyers to ask their lender for a trained green appraiser to maximize the value attributed to high performance homes. "Green appraisals are designed to recognize energy-efficient and sustainable property features," Zuccarelli says. "While adoption varies by market, these appraisals can help provide additional support for valuation when a property's energy efficient features contribute measurable value compared to similar homes."

## OPERATING COSTS VS. UPFRONT COSTS

While prices and mortgage rates matter, long-term value is far more important than the upfront cost of a home and interest rates. Green Builder Media's **Value Per Square Foot Metric**™ focuses on overall quality and performance and calculates total ownership value by factoring in utility bills, ongoing maintenance, insurance premiums and climate-risk exposure.

"Beyond the mortgage payment itself, buyers should account for ongoing homeownership expenses, including property

taxes, homeowners insurance, utilities, HOA dues when applicable and maintenance costs," Zuccarelli says.

In addition to those expenses, lenders and builders can help their customers estimate utility bills, which is particularly important for high performance homes, Lopez says.

"A high performance home built to save energy with a tight envelope including SIPS and high-performance insulation should have a HERS rating done to get a baseline for an appraiser," Lopez says. "You need to save energy first, before you make energy by adding solar. Then you can ask the HERS rater to estimate the rate with a solar system."

> *"You need to save energy first, before you make energy by adding solar."*
>
> — Teresa Lopez

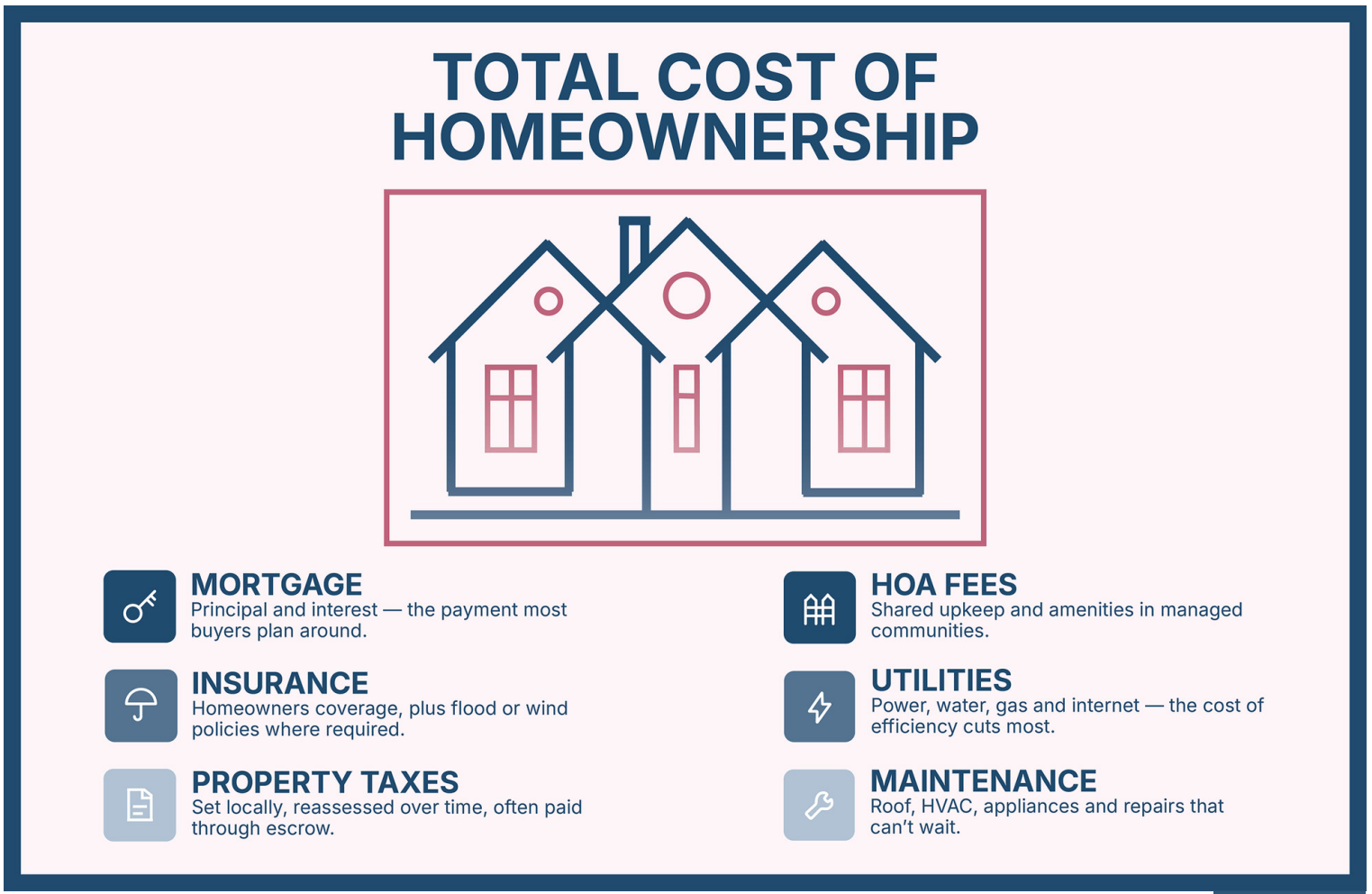
Lopez does an analysis she calls "PITI+Energy" to analyze borrower monthly payments based on their principal, interest, taxes, insurance and utility bills, to understand their budgets.

"Loan approval decisions are based on debt-to-income ratios that consider recurring debts such as auto loans, student loans, credit card balances and other installment debt, but they don't include utility bills," Zuccarelli says. "These ratios can show whether there is sufficient disposable income to cover other reasonable expenses. Credit history, current housing expenses, down payment amount and appraised value are also part of the credit decision process."

Some lenders do look at utility bills and other metrics to qualify borrowers, particularly for their proprietary "non-qualified" or "non-QM" loans that don't conform to the standards established by Fannie Mae, Freddie Mac, FHA and VA loan programs.

"Because of high interest rates and affordability issues, we're seeing an increase in non-QM loans, which are unique programs for people who might not be able to qualify for a traditional loan program," Worthington says. "These are people who may have nontraditional income because they're self-employed or own a business, but they can afford to buy a home and want to maximize their housing budget."

Worthington's company, PRMI Financing, offers a "Lowtility" loan program, which calculates a borrower's principal, interest, taxes, insurance and utility costs. The loan




CREDIT: Samantha Carlin

# ESTIMATING SOLAR ROI



REAL SCENARIO

### Which Would You Choose?

**625** Credit Score
**$330,000** Sales Price
**$330,000** Appraised Value

WHAT THEY GOT

- $45/month less than the traditional mortgage
- Kept $23,100 in their savings
- An electrified house that makes its own power
- No solar lease or lien

| 625 CREDIT SCORE | Traditional Conventional | Lowtility + DPA + Solar |
|---|---|---|
| Loan Amount | $313,500 | $353,489 |
| Interest Rate | 6% | 6% |
| Mortgage (P&I + MI) | $2,226 | $2,281 |
| Utility Payment | $200 | $100 |
| TOTAL MONTHLY | $2,426 | $2,381 |
| CASH FOR DOWN PAYMENT & CLOSING | $23,100 | $0 |

Estimating the real value of adding solar capabilities to the home needs to happen in conjunction with overall home performance.
CREDIT: lowtility.com

program allows borrowers to qualify for a larger mortgage to pay for energy efficiency upgrades or solar power. The extra borrowing power to make these upgrades comes directly from the estimated decrease in their utility bills.

"You can compare this to a car purchase: if you buy a car that costs $500 per month and need $400 per month to buy gas, that's a total cost of $900," Worthington explained. "If you buy an EV and don't need to buy gas, you can afford a $700 payment and save another $200 per month. Loosely applied to housing, that concept means your energy efficiency affects the affordability of your house."

According to Worthington, eliminating $300 in monthly utility costs can empower homebuyers to borrow $50,000 to $65,000 more with a 30-year fixed-rate loan and pay the exact same amount in monthly housing bills.

## MORTGAGE LOAN OPTIONS

The most popular loan programs for buyers of newly built homes today are conventional, FHA and VA financing, according to Zuccarelli.

"The mix often varies by market, home price point and buyer needs," she says. "Key drivers include affordability, down payment requirements, interest rate considerations and eligibility for builder-sponsored incentives."

The **average down payment** for most buyers is 15%, according to Realtor.com. Loan programs are available with down payments as low as 3%, but Zuccarelli points out that deposit requirements and down payment percentages vary by builder and market and are influenced by home price, loan program and local market conditions.

In addition to traditional mortgage programs to buy a home,










These are the game changers. With technology such as induction cooktops, smart electrical panels and EVs rapidly flooding the mainstream, solar's intrinsic value keeps increasing.

CREDIT: Adobe Stock, LG, Schneider Electric, Chevrolet.

some loan programs are available that take into account energy efficiency improvements.

"Several mortgage programs allow borrowers to finance certain energy-efficient improvements, including solar systems and other sustainability-focused upgrades, as part of the overall home financing package," Zuccarelli says. "Program availability and eligibility vary by loan type and lender."

For example, the **Fannie Mae HomeStyle Energy** loan program and the **VA Energy Efficient Mortgage** are only available for making improvements to existing homes, not for new construction. The **Freddie Mac GreenChoice Mortgage** and the **FHA Energy Efficient Mortgages** program can be used to finance a high performance newly built home, particularly if you want to add a solar system to the home. Worthington says there are pros and cons to each program, including limits on eligible improvements and costs, which your buyers will want to discuss with a lender.

Financing solar power with a mortgage can make the difference between a buyer's solar system functioning as an asset or an obligation, Worthington says.

"If homeowners want to produce electricity, they can pay cash for the solar equipment or buy through their mortgage, which makes the solar equipment an asset that's part of the home's appraised value," he says. "If buyers finance their solar through a financing company, it becomes an obligation and something they need to get future buyers to take on when they eventually sell."

Wrapping solar costs into a mortgage has become easier from a numbers perspective in recent years because of higher utility costs and lower solar costs, Worthington says.

"Real estate agents and builders can use these mortgages as an affordability tool," Worthington says.

As today's homebuyers struggle with challenges related to affordability, high performance home builders can develop partnerships with loan experts to educate customers about their financial options. **GB**

*Michele Lerner writes about housing and real estate for GREEN BUILDER.*



Shawood, Sekisui House's home brand was introduced to the U.S. market in 2021 and operates across 16 states as one of the largest homebuilders in the country

CREDIT: SEKISUI HOUSE

# ENGINEERING FOR PERFORMANCE & ARCHITECTURAL BEAUTY

## Precision planning and design principles are underpinned by Japanese philosophy at SHAWOOD at Deerlake Ranch.

**BY MICHELE LERNER**

The homes designed and built by Sekisui House, a global residential builder, epitomize the synergy between architecture and engineering. There are also synergies between the company and Green Builder Media.

Sekisui House and its SHAWOOD brand focus on building homes that are durable and resilient and support wellness in every aspect of their owners' lives, while Green Builder Media's mission is to support sustainable homes for better living.

At VISION House SHAWOOD at Deerlake Ranch in Chatsworth, California, Green Builder Media and the SHAWOOD brand of

Sekisui House are working together with manufacturers to showcase homes of exceptional livability and performance.

"SHAWOOD's philosophy is centered on creating homes that support long-term safety, comfort and wellbeing, bringing together Japanese design principles with precision engineering and resilient construction," says Paul Peterson, chief operating officer for Sekisui House, U.S. "At SHAWOOD at Deerlake Ranch, that philosophy is adapted specifically to the Southern California landscape: the homes are designed around light, balance and connection to the surrounding canyon environment, with expansive windows and open atriums framing sunlight, sky and mountain views."

Green Builder Media created the metric of Value Per Square Foot™, which focuses on the true value and cost of homeownership rather than the upfront cost to build and buy a house. Through the VISION House SHAWOOD project, Green Builder Media will showcase how homes built with a focus on long-term value enable homeowners to lower operating costs, utility bills and insurance premiums; enhance efficiency, wellness, resilience, safety and independence; and reduce their carbon footprint.

"What makes SHAWOOD different is that design and engineering are considered together from the outset; our proprietary post-and-beam structure provides a strong, precision foundation



## Framing for Resilience and Biophilic Design

In every development, Sekisui House stays true to their core value of building homes that are not only resilient, durable and high performing, but also grow more beautiful over time. An essential element that provides the durability and design options for VISION House SHAWOOD and other Sekisui House homes is the company's proprietary framing system.
"Our post-and-beam framing system is manufactured with a level of precision you simply cannot achieve with conventional on-site framing," Peterson says. "The wood posts, beams and metal joints are engineered and pre-cut before they ever arrive at the jobsite. On the ground, this significantly shortens certain phases of construction, reduces material waste and eliminates variability from house to house."

The innovative building practices are a result of more than 30 years of research and development, Peterson explained.

"The system includes fire-resistant exterior panels and advanced safety reinforcements designed to address the state's distinct environmental challenges," he says.

The benefits of the Sekisui House framing system go beyond initial construction.

"The framing influences both how the home performs and how it feels," Peterson says. "Structurally, SHAWOOD's direct foundation connections, proprietary metal joints and tight construction tolerances are intended to create a stronger and more resilient structure. Architecturally, post-and-beam construction allows for wide-open spaces and expansive floor-to-ceiling windows, helping make SHAWOOD at Deerlake Ranch's light-filled interiors, open volumes and connections to the landscape possible."

Sekisui House's framing system begins with engineering the structure for the individual home and creating posts and beams from layers of wood selected and graded for strength, Peterson explains.

"Each beam is then precision-cut off-site, including the holes and slits needed for its metal fittings, and the proprietary joints are prepared according to the home's specific design," he added. "At the site, posts are securely connected directly to the foundation using metal fittings, and the posts and beams are then assembled using SHAWOOD's proprietary metal-joint system and pins. Because the major components arrive pre-engineered and pre-cut, less fabrication is required in the field, helping improve accuracy, consistency and construction efficiency."




SHAWOOD's proprietary metal joints and pins connect precision-cut posts and beams to support a strong, resilient structure.

CREDIT: SEKISUI HOUSE

while enabling open spaces and greater architectural flexibility," Peterson says.

Those elements enhance resilience, durability, wellness and long-term value.

"SHAWOOD at Deerlake Ranch is designed around the idea that the home should support wellbeing throughout different stages of life," Peterson says. "The homes' architecture brings nature indoors, with gathering spaces introducing natural light and spaces for serenity. Great rooms feature soaring ceilings and flow to covered outdoor patios, while primary suites incorporate spa-inspired baths and customizable wellness features."

This approach by SHAWOOD connects particularly well with Green Builder Media's health and wellness, resilience, investment and community pillars, which are part of the Value Per Square Foot metric.

"Biophilic design, daylight and nature-inspired spaces support wellbeing, while SHAWOOD's precision framing, direct foundation connections and durable Bellburn ceramic exterior panels support resilience and longevity," Peterson says.

## LIVING WELL AT VISION HOUSE SHAWOOD

Every element at SHAWOOD at Deerlake Ranch and other SHAWOOD communities is carefully vetted to ensure that the entire home lives up to the company's "Living Well" standards. These standards include:

- **Healthy Home:** For SHAWOOD, a healthy home supports physical comfort and overall wellbeing through the way that the spaces are designed and experienced, Peterson explains. "At SHAWOOD at Deerlake Ranch, expansive windows, atriums, natural light and nature-inspired interiors help connect residents with the outdoors, while spa-inspired primary suites and customizable wellness features create additional opportunities for restoration within the home," he says.



Shawood offers walk-throughs of its under-construction communities to showcase the company's unique laminated timber with precision metal joints and open-concept floorplans.

CREDIT: SEKISUI HOUSE

Daltile's durable interior and exterior tiles, porcelain slabs and quartz countertops, which will be used in multiple areas at SHAWOOD at Deerlake Ranch, are allergen-free, resistant to mold and bacteria, formaldehyde-free and VOC-free. Mohawk, a company committed to sustainable, low-maintenance products, will provide flooring at VISION House SHAWOOD that is easy to keep clean and pet-friendly.

- **Work+:** "Work+ is about giving residents spaces that can accommodate the different ways life happens at home," Peterson says. "SHAWOOD at Deerlake Ranch plans incorporate dual offices and flexible spaces designed for work, creativity and connection, alongside fitness rooms and studios."

- **Home Oasis:** At SHAWOOD at Deerlake Ranch, the idea of the home as an oasis is expressed through a strong connection to the surrounding landscape, Peterson explains. "Clearview architecture, open atriums and covered outdoor patios bring nature into daily life, creating dedicated spaces for serenity and restoration," he says. "The community extends that experience beyond the home through mountain views, hiking trails, a pool and other outdoor amenities."

  Creative Mines will include their manufactured stone and wood products in the house, which include natural elements and contribute to the biophilic design of the home. Their products are durable, low-maintenance and fire resistant.

- **Soothing Spaces:** SHAWOOD creates soothing spaces through daylight, openness, natural materials and visual connections to nature. "SHAWOOD at Deerlake Ranch's light-filled interiors, soaring ceilings, atriums and spa-inspired retreats are all designed to create a sense of



Engineered before they reach the jobsite, SHAWOOD's pre-cut posts and beams reduce field fabrication, improve consistency and help minimize material waste.

CREDIT: SEKISUI HOUSE

calm, while the surrounding canyon setting gives residents privacy and access to nature," Peterson says.

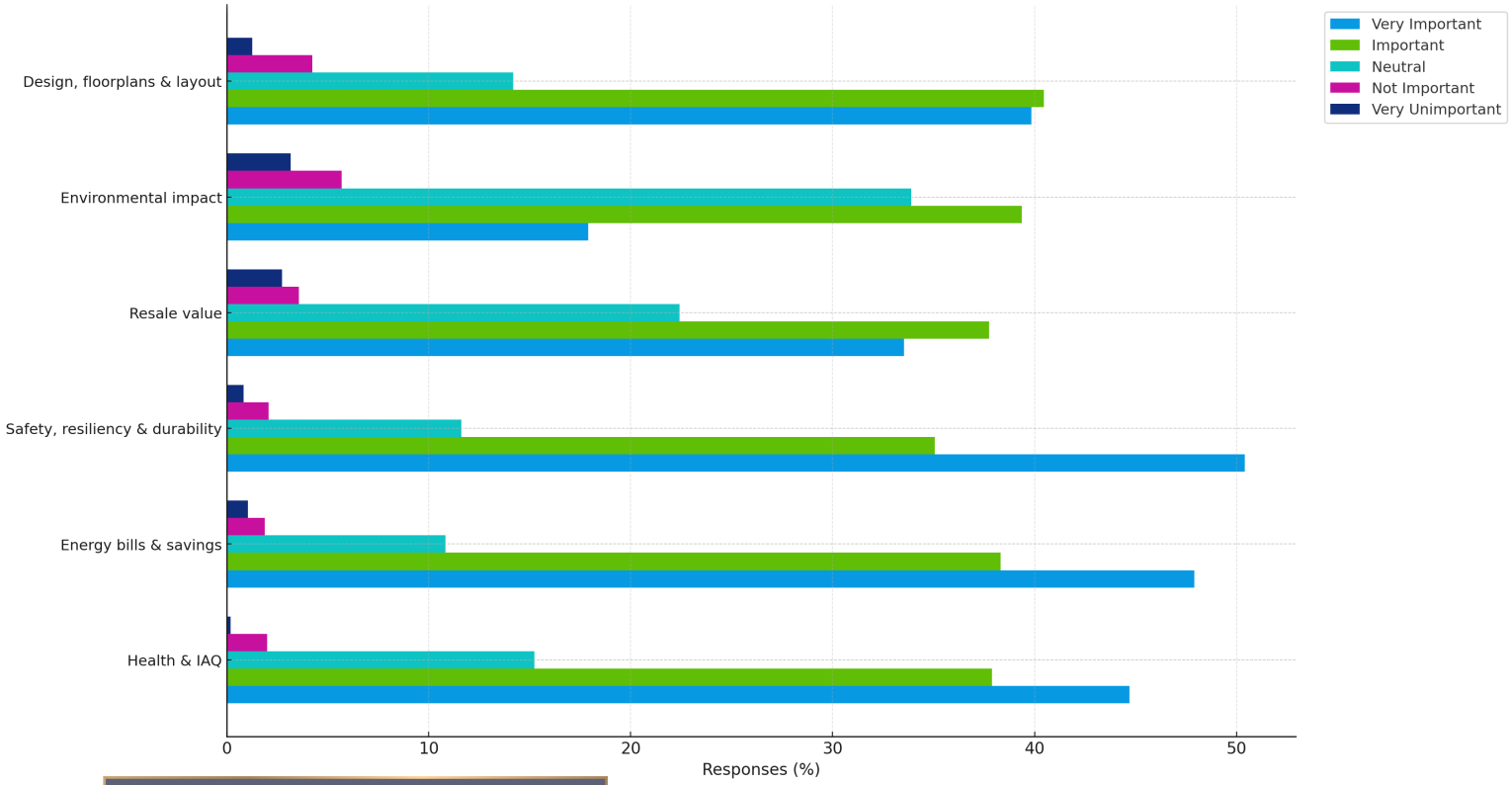
- **Conscious Comfort:** The term "conscious comfort" combines the experience of the finished home with the engineering behind it, Peterson explains.

"At SHAWOOD at Deerlake Ranch, precision-engineered framing, direct structural connections to the foundation, metal joints and durable Bellburn ceramic wall panels are designed to provide safety, strength and long-term performance," he says. "Those systems work alongside flexible floor plans and wellness-focused design so that comfort is built into both the structure and the everyday living experience."

Conscious comfort for residents at SHAWOOD at Deerlake Ranch will also be enhanced by efficient systems that work together for temperature control, clean air, energy efficiency and resilience for peace of mind and financial security.

For example, Carrier's high performance variable speed heat pump and smart thermostat will deliver exceptional comfort, efficiency and intelligent control of the heating, air conditioning and ventilation systems. Westlake Roofing's resilient concrete tile roof and Rheem's efficient heat pump water heater will add to the energy efficiency and comfort in each home. In addition, Sunrun will provide solar, storage, smart panel and EV charging

## Safer, Healthier Homes With Lower Bills




Safety, resilience and durability, energy savings, and healthy indoor air lead respondents' priorities when buying or remodeling, with more than 80% rating each important or very important.

CREDIT: COGNITION SMART DATA

Source: COGNITION Smart Data

solutions, all of which generate financial savings, control over energy costs and a feeling of security in case of power outages.

### INTENTIONAL DESIGN DURABILITY

Delivering on each category of Living Well: Healthy Home, Work+, Home Oasis, Soothing Spaces and Conscious Comfort depends on coordinated planning; from before the first shovel of dirt is turned to the day homeowners move in, and beyond.

"These qualities cannot simply be added after a home is built; they depend on decisions made at the earliest stages of engineering and design," Peterson says. "SHAWOOD's framing system provides the structural strength and flexibility that make expansive windows, open interiors and indoor-outdoor connections possible, while precision manufacturing and durable materials support resilience and longevity."

Today's homebuyers understand the importance of resilience, safety and durability, all of which contribute to the sense of comfort offered by a home. In a recent Green Builder Media COGNITION Smart Data™ survey, buyers' top priorities besides safety and resilience were energy bills and savings, along with health and indoor air quality. The home design and floor plan is another important factor in the decision to buy or remodel a home.At VISION House SHAWOOD at Deerlake Ranch, the homes are designed to meet all those priorities and more.

"Integrating those elements from the outset allows the finished home to balance safety, adaptability, comfort and wellbeing while creating value rooted in long-term performance," Peterson says.

*Michele Lerner writes about housing and real estate for GREEN BUILDER.*

Follow along at **https://www.greenbuildermedia.com/vision-house-shawood**. **GB**


**THANKS TO OUR GENEROUS SPONSORS**

Carrier • Daltile • Rheem • Sunrun • Mohawk • Westlake • Creative Mines

VISION House
ASHEVILLE

# WELLNESS by Design

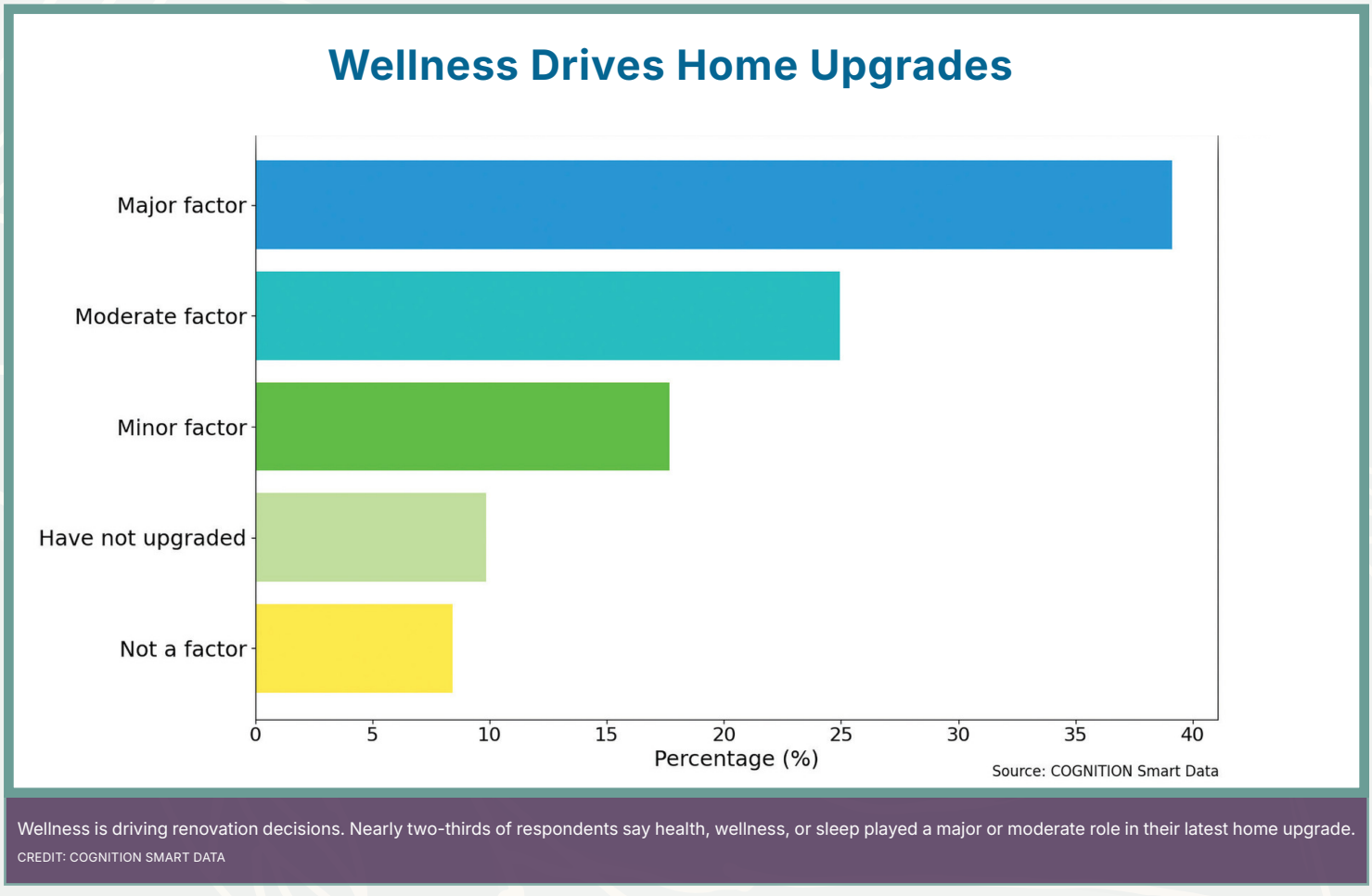


## Through architecture, products and systems, VISION House Asheville demonstrates the home and health connection.

**BY MICHELE LERNER**

When people shop for a home today, they're looking for more than just a floor plan and a price point: they're looking for a sanctuary where they can live their best lives. They want a home that makes it easier to feel physically, mentally and emotionally healthy.

In Green Builder Media's **COGNITION Smart Data**™ surveys, 65% of buyers said that health, wellness or sleep considerations were a major or moderate factor in their home upgrade or renovation decisions. While physical, mental and emotional wellness matters most when people think about a healthy home, they also consider spiritual wellbeing, family and social connections, longevity and aging, climate protection and financial wellbeing to be important.




Wellness is driving renovation decisions. Nearly two-thirds of respondents say health, wellness, or sleep played a major or moderate role in their latest home upgrade.

CREDIT: COGNITION SMART DATA

All of those factors and more are incorporated into the design and construction of VISION House Asheville, a partnership between Green Builder Media and **Alair Asheville | Red Tree**, a member of **Alair Homes**, North America's largest custom home building and renovation network.

The custom home in the Beaverdam community will showcase how wellness architecture, innovative products and building science can generate a healthy, high-performance home that will be resilient to climate impacts.



After Hurricane Helene devastated communities across Western North Carolina, the Alair Asheville | Red Tree team stepped up to support recovery efforts, lending their time, skills, and resources to help neighbors rebuild.

CREDIT: Alair Asheville | Red Tree

"After Hurricane Helene in 2024, we wanted to rejuvenate our community and we decided to work on a custom home that would demonstrate resilience and wellness design," says Brandon Bryant, president and partner, Alair Asheville l Red Tree. "We wanted to show that homes can be restorative, a place where you can refuel that provides physical, mental, spiritual and emotional benefits, not just shelter."

The **VISION House Asheville**, which will serve as an educational tool for more than 80 Alair locations across the U.S. and Canada, starts with the premise that homes can be intentionally designed to elevate wellness through healthy materials, indoor air quality, lighting systems, acoustics and biophilic design, which connects indoor and outdoor living spaces for healthier living.

"While this is a custom home, we want to demonstrate that building a healthier environment can be attainable, not limited to affluent households," Bryant says. "It's important for people to be able to see themselves in a home like this. A lot of the design elements don't cost a thing, yet this home offers a place where someone can come home from work or school and naturally breathe better air, eat healthier foods that they've grown in their own home and drink cleaner water."

The peace that comes with knowing you don't have to conduct constant maintenance on your house is part of the VISION House Asheville's wellness story. Products chosen for the exterior, such as James Hardie Fiber Cement siding, TimberTech decking and Kwikset door hardware, help keep upkeep to a minimum. The door hardware offers built-in Microban antimicrobial technology that inhibits the growth of damaging bacteria, which helps keep the hardware up to 99% cleaner than untreated surfaces, says the manufacturer.

CREDIT: Alair Asheville | Red Tree



Natural light, wooded views, and a dedicated exercise space brings everyday wellness home at VISION House Asheville. Sonos audio and Savant lighting controls pair calming soundscapes with daylight and adjustable lighting to support relaxation and renewal in the dedicated wellness room. Greenfiber insulation provides sound attenuation in addition to insulative properties. CREDIT: NO TRIANGLE STUDIO

## LEAN ON ARCHITECTURAL DESIGN FOR WELLNESS

The VISION House Asheville's floor plan provides indoor-outdoor connections, places for privacy and solitude as well as social experiences with friends, neighbors and family members. In addition, the house is designed for resilience, which can relieve owners' mental and financial stress. For example, the home includes lots of large windows from Wythe Windows for natural light, but protects them with overhangs and covered areas. The roof is optimized for additional solar panels from Jinko.

Large corner windows are placed in the primary

suite and in the lower level, located on the north side of the house, to bring in extra natural light. In the "exhale" room, designed for meditation and quiet activities, the floor plan includes additional windows for light. The VISION House Asheville will include automated lighting and GE Proseo Shades from Savant, which can be programmed to follow circadian rhythms to allow residents to waken naturally with morning light and relax with gradually reduced lighting in the evening.

"Throughout the house there are visual connections to nature wherever possible," says Gina Taterus, lead interior designer for Alair Asheville | Red Tree. "The house is designed with large rooms without cutting off any views because we know from research that seeing nature, even from inside a home, can reduce stress and lower your heart rate."

The biophilic design in the house includes thermal and air flow variability, which helps people feel calm and focus better, according to Taterus.

"The windows are operable, so when we can have the windows or the slider doors in the back open, you're getting things like birdsong coming in and breezes, which help reduce stress and have overall wellness benefits," she says.

In the back of the house,



Future proof in the kitchen. VISION House Asheville pairs natural materials and abundant daylight through windows with a built-in hydroponic garden that puts fresh food within reach. The space will feature Kohler plumbing fixtures, including cast iron products featuring up to 80% recycled material, and Daltile's Relicca and Nu Bare tile lines, alongside ONE Quartz Surfaces for durable, low-maintenance kitchen and bathroom countertops.

CREDIT: NO TRIANGLE STUDIO



This living room was designed to restore. With warm natural finishes, expansive windows and outdoor connections, it creates an inviting place to unwind and gather. The Wythe high-performance windows keep outdoor particulates outside, which matters enormously near roadways and during wildfire smoke events.

CREDIT: NO TRIANGLE STUDIO

landscape architect Jennifer Verprauskus, owner of Bare Root Designs, is creating connections to nature with wandering paths, little bridges over rain gardens and a two-level deck.

"While you want to see outside from inside, I think it's vitally more important for us to invite you to come outside, instead of inviting the outside in," Bryant says.

Along with the serene backyard, Bryant says they're spending twice as much on the front of the house including landscaping, a courtyard and a porch.

"We designed the front porch to be eight feet deep so it's usable space, but since it faces due south, we also added overhangs for shade," Bryant says. "Asheville gets lots of heavy rain, so we designed the home so the water flows into gutters and into the rain garden. We want to give this house the best chance to be a 100-year house."

The front porch is meant to encourage residents to interact with their neighbors and friends. Sonos is installing speakers on the front porch so residents can set the mood, and the courtyard will have a fire pit for another natural element that organically connects people to the earth, Taterus says.

## INTERIOR WELLNESS FEATURES

Throughout the home, Taterus chose products with low VOCs and healthy finishes to limit indoor pollutants. In addition, she chose natural materials as often as possible to keep the biophilic design consistent. In the kitchen, for example, she chose white oak flooring and cabinets and natural quartzite stone counters.

"We're having a rammed earth-style range hood made with plaster in natural colors, which will look very organic," Taterus says. "We've added refined lighting in polished nickel which is a little more upscale to contrast with the organic pieces."

A unique feature in the kitchen will be a hydroponic garden tucked into a cabinet so residents can grow their own vegetables, herbs and fruit.

"We want to make healthy eating as easy as possible, so not only is the food right there, but we're also installing an induction cooktop with sous vide cooking options," she says. "We'll have a full house water filtration system, which means not just drinking water, but the water you cook with and bathe in will be filtered."

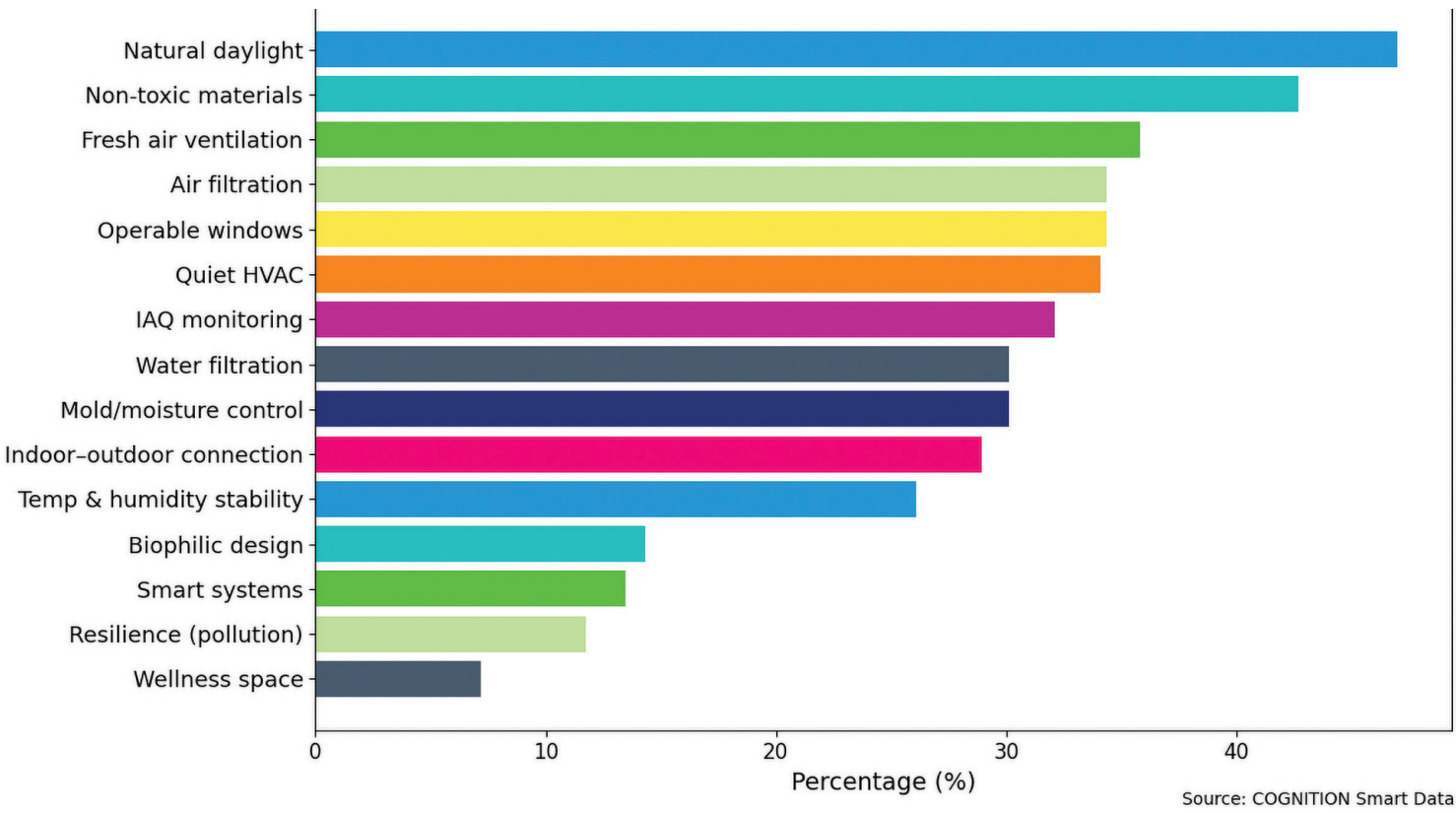
In the bathrooms, Taterus chose a large-scale tile by **Daltile** that minimizes grout lines, is easier to clean and durable. Daltile's countertops will be used in the bathrooms and kitchen.

"In the primary bathroom, we're installing **Kohler's Anthem shower**, which has a digital control with a rain head and handheld shower," Taterus. "In the lower level bathroom, we're installing **Kohler's Anthem EvoCycle system**, which reduces water usage by up to 80%. It has a pump system and filtration system that filters out waste particles and soaps, reuses part of the water and adds in fresh water."

An innovative feature from Kohler, its **Dekoda system**, is an add-on to their Veil toilet in the primary bathroom that monitors multiple health indicators from bathroom activity.

Also from Kohler, Taterus added the **Aquifer beverage system**, which provides flat or sparkling water and hot water from the tap, to a coffee bar.

Research demonstrates the importance of good sleep and stress reduction to improve physical, mental and emotional health. At VISION House Asheville, multiple features contribute to a calm, quiet home, including triple pane windows from **Wythe** and insulation




Wellness is driving renovation decisions. Nearly two-thirds of respondents say health, wellness, or sleep played a major or moderate role in their latest home upgrade.

CREDIT: COGNITION SMART DATA

# The Business Case for Wellness

Rather than a collection of wellness gadgets and the latest trends such as infrared saunas and cold plunges, a home designed for wellness can systematically support a healthy lifestyle for homeowners.

"You can't really place a value on your health, and if your home is helping keep you healthier, it's automatically more valuable to you than a less healthy home," Taterus says. "You don't even really have to spend much more money. It's just thinking about and making smart decisions about the way a home is designed. If you think about what you put into your body, the things that touch you and surround you, that impacts your physical and mental health."

While you can't automatically assign a percentage increase in price to a home that makes people feel better, a home built with wellness in mind may increase resident satisfaction, which adds to the architect's and builder's reputation. Healthy living can support aging in place, potentially reduced health care costs, and improved sleep quality, which in turn generates physical and mental health benefits.

"We all know from science that if you see healthy food, you eat healthy food," Bryant says. "Instead of thinking about buying that $6,000 sleep number bed, maybe we should start talking first about the lighting we're putting in homes, the shading and where the windows are placed. Let's talk about the air quality and about getting sunlight quickly, early in the morning, and about the importance of drinking 8 to 12 ounces of water before you do anything else. You can see that when you water plants, they just bounce back, right? People need light, air and water, too."

Designing a home that automates healthy habits and provides a calm, restorative setting doesn't have to be reserved for the wealthiest households: it can become the default in design.

from **Greenfiber**, both of which contribute to noise reduction from outside sources.

"The Sonos audio system can be used for background music to relax you, and you can use it to create a customized sleep playlist or just calming sounds to help you sleep," Bryant says.

## ESSENTIAL WELLNESS FEATURE: INDOOR AIR QUALITY

Green Builder Media's Cognition Smart Data finds that homebuyers' top non-negotiable wellness feature is natural light, followed by non-toxic materials, fresh air ventilation, air filtration and operable windows. Clearly, today's buyers understand the importance of indoor air quality.

At VISION House Asheville, an all-encompassing approach to better indoor air quality includes designing a tight house, preventing chemicals from getting into the house through material choices, and then controlling temperature and humidity with a heating, air conditioning and ventilation system from Daikin.

"We're doing the basic things like vented bath fans to the exterior and installing an ERV," Bryant says. "A dehumidification system will be connected to the HVAC system, with **Daikin's controls**, but **Savant** will have everything on one app. That way all these systems are working behind the scenes without the homeowners needing to know how everything works."

The combination of architecture, products, systems and building science will all work together to improve daily life for residents of VISION House Asheville and similar homes.

Follow along at **https://www.greenbuildermedia.com/vision-house-asheville**. GB

# Thank You to Our Generous Sponsors:

SAVANT

KOHLER

PHYN

greenfiber creators of SANCTUARY

WYTHE WINDOWS

JinKO

TimberTech EVERYTHING WOOD SHOULD BE

SONOS

DUPONT

daltile

DAIKIN

BROMIC HEATING

AZEK

JamesHardie

aquor water systems

Kwikset



COGNITION
Smart Data

# Market Intelligence That Drives Sales

In today's volatile housing market, gut instinct isn't enough. To outpace competitors, win buyer loyalty, and future-proof your business, you need real-time intelligence that reveals what's driving decisions right now.

**That's where COGNITION Smart Data comes in.**

Green Builder Media offers market intelligence for every impact on homebuilding and homeownership. Putting it all in one platform and eliminating the need for multiple log ins and extra costs to your organization.

**Why COGNITION?**

- **Local, regional & national insights** into homebuyer behavior, purchase drivers, and priorities.
- **Deep intelligence** on resiliency, sustainability, electrification, efficiency, water, healthy homes, solar + storage, and smart technologies.
- **Proven tools** to refine messaging, augment positioning, prepare for code changes, and leverage rebates & incentives.
- **Lead-generating insights** that drive purchase intent and ROI.

## One platform, one low annual cost for marketing, sales and business strategy.



## What users are saying

"I thought it was a treasure trove of information, especially for the builder, developer community. For me, the most useful pieces included the Market Heat Maps for various technologies, including solar, batteries, and heat pumps, etc. The alignment with the state and local regulations and laws was also very useful to demystify the market levers. The Key Evidence section was also neat to have in one place, including the interest rate environment, HMI, and the 30-year fixed mortgage rates."

**— COGNITION user**

COGNITION Smart Data helps you understand and navigate market dynamics so you can optimize all aspects of your business.

# Book a demo today

greenbuildermedia.com/cognition-smart-data



A rendering of the envisioned Midline Business District shows how former industrial land can be transformed into a more vibrant, connected district that combines economic development with green space, mobility, and a more people-centered public realm. Credit: Vocon and The Cleveland Foundation

# Cleveland Turns Industrial Legacy Into Community Comeback

## A sweeping redevelopment effort will transform more than 350 acres of neglected industrial land into housing, jobs, and green space.

**BY JENNIFER CASTENSON**

Last summer, Cleveland's Mayor Justin Bibb announced The Cleveland ERA, or Economic Resurgence in Action, an effort that seeks to revitalize nearly every aspect of the city's economic life—from job creation to housing development and from supporting small businesses to connecting to the rest of the world.

The effort aims to raise $100 million to remove development barriers, reform construction permitting, and ensure residents have a voice as neighborhoods change. Much of the project is about reimagining more than 350 acres of blighted and long-neglected industrial area within the city to bring in new industry, income, and economic support for Cleveland's sustainable development.. With the increased risk of energy disruptions, there are considerable operational risks for businesses that require continuous power to operate.

### REBUILDING AN INDUSTRIAL ENGINE

Long-vacant buildings are being developed into new manufacturing facilities. For example, one historically significant former steel manufacturing facility is being renovated for MMY, a UK-based modular housing manufacturer. Once renovated, it is expected to create more than 150 jobs and support more affordable housing built to the LEED Platinum standard in Cleveland.

The selection of MMY to take over this facility marks a major step forward in Cleveland's effort to reduce the time and cost of building new homes by using innovative construction methods.

MMY was selected via The Cleveland ERA's "Off-Site Construction Manufacturing in Cleveland" request for proposals. MMY's investment, and its affordable green housing products, will support further development of the city's Housing Innovation District. In this area, which spans multiple neighborhoods, housing production will be accelerated through modern zoning, incentivized permitting, innovative construction techniques, and new infrastructure investments.

"This is far more than the rehabilitation of a historic building—it represents the opportunity to reconnect Cleveland's industrial legacy with its economic future by creating a site that will attract investment, support housing production, and generate jobs for decades to come," says Brad Whitehead, managing director of






Green Builder Media's Jennifer Castenson speaks with (L to R) Cleveland City Council Member Richard Starr and Cleveland Mayor Justin Bibb about the revitalization of the city's older building stock. Credit: Violet PR

Long-neglected industrial buildings and brownfield sites illustrate the scale of the challenge facing Cleveland's Midline area, where decades of industrial use left properties in need of extensive remediation and redevelopment. Credit: Patrick Fenner

Cleveland's Site Readiness for Good Jobs Fund.

"Mayor Bibb has built the Midline as the largest industrial development in Cleveland's history," says Catherine Kliorys, a senior portfolio manager at environmental science firm Verdantas, which was contracted to do the project's remediation. "The partnerships and the organization that they have initiated [make for] the most exciting brownfield redevelopment synergy that we've ever had in Cleveland. It's a national example for Rust Belt real estate, where the market doesn't bear this development, the timing, and the cost to amass these kinds of resources."

## CLEANING UP A CENTURY OF AN INDUSTRY

However, the environmental remediation of the site presents big challenges, including asbestos abatement, and buildings that aren't ready for modern-day functions. Verdantas is taking these challenges head-on and even examining crushed cement piled in the area to determine if it can be reused for new development.

"These old buildings have high ceiling heights, wide column widths," Kliorys says. "Think of all of the goods that are being transferred, like through Amazon. They're not using a five-story industrial brick building. We're figuring out what the market can bear in unique spaces, what needs to be done to demolish these structures in proximity to the rail, and to get them ready for business to come in."

Verdantas is identifying and substantiating remediation efforts to address environmental impacts dating back to 1912, when the area was first used for industrial purposes and environmental regulations were virtually nonexistent. "I think the environmental justice equation here is that the residents that have borne the burden of this for so long will get to experience the benefits of this project as things start to come online and jobs and investment are created along with green space, recreational opportunities, and really improving the quality of life for these residents," Kliorys says.

## STITCHING NEIGHBORHOODS BACK TOGETHER

Another aspect of social revitalization and increasing quality of life for Cleveland residents is the site's location. Situated in a historic area, it's in a walkable location and close to public transportation.

LAND Studio is a consulting group helping the project navigate the transformation with residents in mind. "Our role in projects like this is to help ensure that major investment translates into a better everyday experience for the people who live around it—connecting neighborhoods to public space, jobs, mobility, culture, and one another," says Keisha Gonzales, executive director and CEO at LAND Studio. "We believe the public realm isn't something that comes after economic development; it's part of the infrastructure that makes equitable, community-centered development possible."

A greenway will be another contribution of the project to community wellbeing, with more than two miles of trails, about 10 acres of public green space, and four parks. "There are physical gaps in the neighborhood and community," Gonzales added. "There's an opportunity to reconnect people to one another and places and spaces that contribute positively to mental and physical wellbeing. Specifically for the Greenway, [there are opportunities for Cleveland residents] to safely walk and to commute to work in alternative ways. It's a way to physically stitch back neighborhoods and tie people back to one another in a vibrant, sustainable way of living."

As a smart city, Cleveland is strategically approaching the opportunity presented by The Cleveland ERA project to boost manufacturing, workforce development, and urban reinvestment—understanding that there is value in rebuilding the relationships between employment and neighborhoods. **GB**

# AD INDEX


**Arclin**
Would you believe it's wood?
firepoint.arclin.com
COVERS 2 AND 4

**Carrier**
Cool where you need it. Ducts not included.
Carrier.com/ductless
COVER 3

**COGNITION Academy**
Sustainable Education & Training
greenbuildermedia.com/cognition-academy
PAGES 62–63

**COGNITION Smart Data**
Market Intelligence That Drives Sales
greenbuildermedia.com/cognition-smart-data
PAGES 56–57

**Dacor**
Experience the difference.
dacor.com
PAGE 5

**Green Builder Media Network**
Less noise. More signal.
youtube.com/@TheGreenBuilderMediaNetwork
PAGE 1

**PowerShades**
Smart shades. Healthier homes.
powershades.com
PAGE 11

**Samsung**
Build for what's next.
samsungbuilder.com
PAGE 4

**VISION House Asheville**
Housing for a World That Demands More.
greenbuildermedia.com/vision-house-asheville
PAGE 3

**VPSF Calculator**
Analyze a home's real value—not just its price.
valuepersquarefoot.com
PAGE 61

**VISION House SHAWOOD**
What If a Home Could Last for Generations?
greenbuildermedia.com/vision-house-shawood
PAGE 9


## COMING NEXT ISSUE

# GREEN BUILDER®

## Leading from the Front

For the New Year, we'll join some of the nation's best builders and most innovative product makers for a "Leading from the Front" exploration.

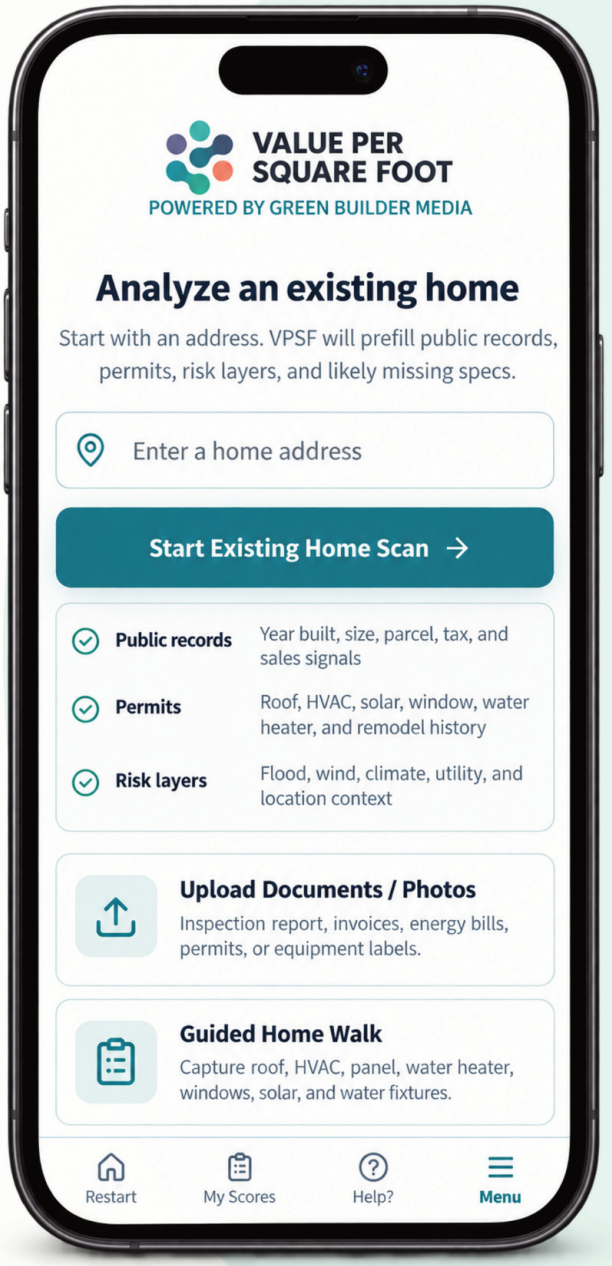
COMING SOON:

# The VPSF Calculator

The ultimate simple, fast way to estimate a home's performance on key sustainability benchmarks.

**Now in Beta testing.**

Optimized for
**Mobile Phones**

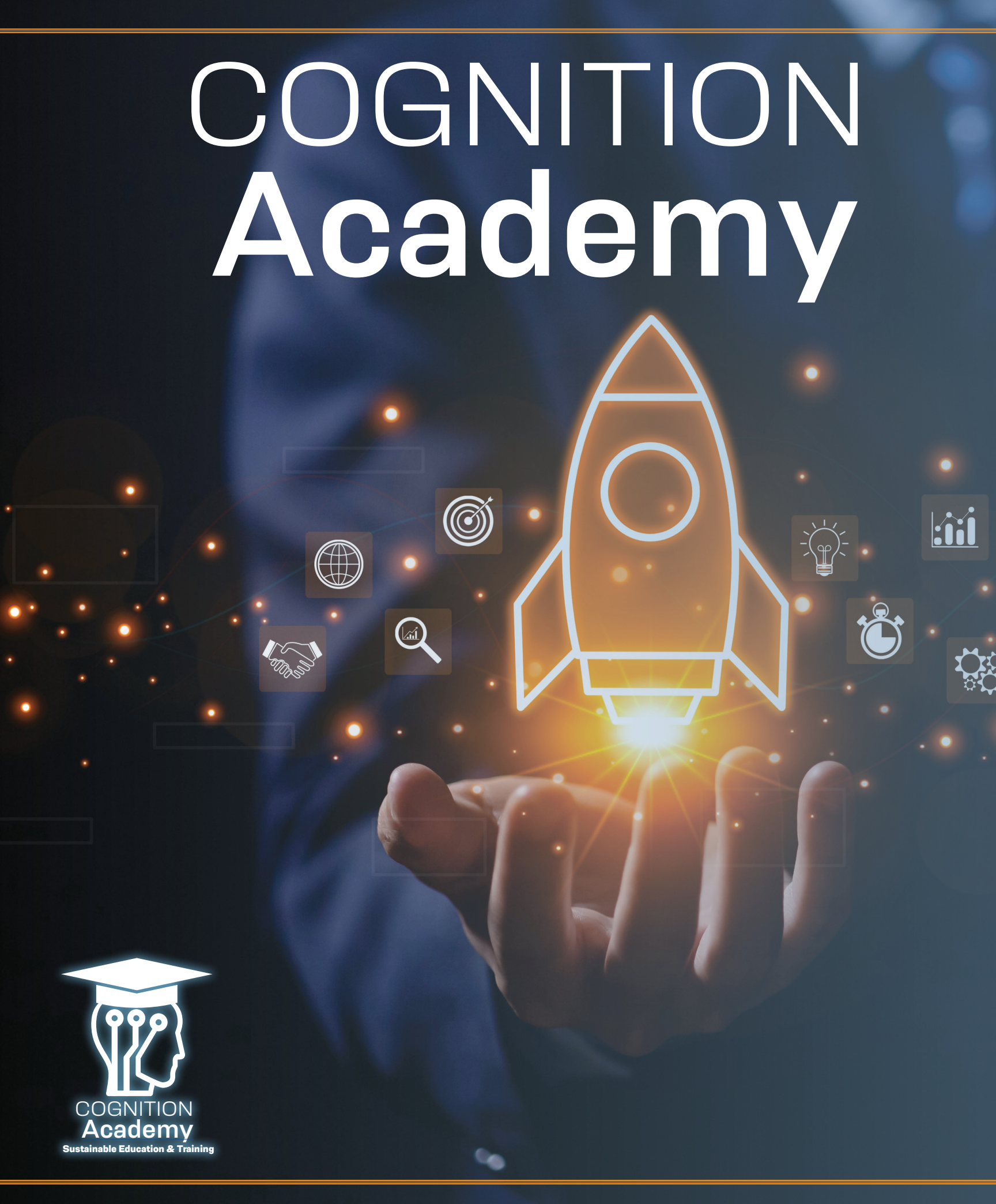



AI-enhanced screen preview.

Try it yourself at

**valuepersquarefoot.com**

# COGNITION Academy



COGNITION
Academy
Sustainable Education & Training

**Market forces, policy shifts, and new consumer priorities are converging to reshape how we design and build homes—*and how we value them***

Electrification is scaling. Net zero is becoming mainstream. Artificial intelligence is transforming decision making and optimizing resources. And consumers are redefining value through the lens of wellness, resilience, and total cost of ownership. **COGNITION Academy**, Green Builder Media's educational platform, is your ticket to staying on top of market transformation and ahead of the curve. Whether you're diving into the basics of green building or seeking advanced strategies to achieve net zero carbon goals, **COGNITION Academy** will empower your team members every step of the way.

## Our dynamic curriculum covers exciting areas such as:

- **Decarbonization**
- **Net zero energy**
- **Electrification**
- **Climate responsive design and resiliency**
- **Healthy home**
- **Solar + storage**
- **Connected living**
- **Water conservation**
- **Sustainable materials**

**COGNITION Academy** is here to guide you through it all. Our cutting-edge curriculum explores the frontiers of sustainability, equipping your team members with the expertise they need to become invaluable resources for your customers and boost your sales effectiveness.

**Start future-proofing your business** and prepare yourself for the transformative journey ahead--**the future of sustainability begins now**. **ENROLL TODAY!**

**https://www.greenbuildermedia.com/cognition-academy**

# More Than a Building

## People need houses, but houses need people too.



*Ron Jones*
*Co-Founder and President*
*Green Builder® Media*
*ron.jones@greenbuildermedia.com*

A quick search suggests that there are somewhere in the neighborhood of three-quarters of a million people in the United States who are "unhoused." I must admit that I expected that number to be larger, perhaps due to the high visibility of the country's "homeless" population, magnified by plenty of media coverage regarding the issue.

Whatever the accurate number is, we can all agree that it is far greater than it should be. For most of us, it is hard to get our minds around the uncertainties these unfortunate fellow citizens face, or the challenges the situation presents for all levels of government, and society in general. So far, it seems, no one has been able to come up with a workable, long-term solution for the problem.

More surprisingly, the results of a similar search indicate that there are a staggering 15 million vacant homes in America. Of that number, almost five million are seasonal properties used part-time, vacation homes, and cabins. Of the remainder, only about 2.5 million are available for rent and fewer than 800,000 are for sale on the market. Others are undergoing repairs or held off-market for legal or personal reasons, or kept vacant by investors.

So, the arithmetic says that for every homeless person in the country, there are roughly twenty vacant houses. What is wrong with this picture? I suppose there are as many theories and opinions as people who think about this sort of thing.

I do want to make it clear that I'm not trying to suggest that we don't need to continue to build new homes. First off, roughly 350,000 homes require replacement each year due to losses caused by fire, severe weather, flooding, and simple obsolescence. And not all existing residential structures are in locations that are considered desirable for one reason or another.

Beyond that, home building represents roughly 16 percent of the U.S. economy and employs an estimated nearly 3 percent of the total employed civilian workforce. It is hard to imagine a scenario where we won't require a considerable number of newly built homes every year.

All of these facts are interesting, in and of themselves, but they don't tell the whole story.

Whenever I go into a vacant home, whether it is aged or modern, opulent or modest, and regardless of where it is located, I feel a sadness and an undeniable sense of emptiness. Even in a professionally furnished and beautifully staged model home in a brand-new subdivision, there is just something missing.

**"The silence of a vacant house is deafening and unsettling. Houses need the sounds of people's voices, of laughter, the routine commotion of occupancy, perhaps the sounds of music."**

We don't build houses just for the sake of doing so. We build them because people need them and because of that, they need people. The silence of a vacant house is deafening and unsettling. Houses need the sounds of people's voices, of laughter, the routine commotion of occupancy, perhaps the sounds of music.

When actively building homes for clients, I was always amazed upon seeing the lights on for the first time as I approached for a visit after their move-in. Viewing their furnishings and other belongings in the context of their space, hearing their chatter or the barking of the family dog, reassured me that we had done something together that was worthwhile, something that mattered.

There is a good reason why it is recommended that a seller bake cookies when a prospective buyer is coming for a tour. The barren rooms and hallways of an empty house are no match for the sights and sounds and smells of an occupied home. Without people to fill its spaces, a house is simply a container.

Some people say that a number of the unsheltered people in the country choose to be. I won't dispute that even though I have no credible evidence either way. What I do know is that I experience the same feeling that something is just not right whenever I witness a person living on the streets as I do when I see a house that is dark and silent and empty.

I can't help thinking that we need both fewer unhoused people and vacant houses. **GB**



Performance™ Floor
Console Indoor Unit
45MBFA

Carrier

For the World We Share

# Cool where you need it. Ducts not included.

Carrier ductless systems combine high-efficiency performance with flexible installation options—making them a sustainable solution for homes, multifamily properties, and light commercial spaces of all shapes and sizes.

**Carrier.com/ductless**




THE STRUCTURAL PANEL THAT DOES DOUBLE DUTY.
ARCLIN
FIREPOINT™
Superior fire resistance without panel strength reduction.
FIREPOINT.ARCLIN.COM