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LIVING LARGE:

A Legacy of Broken Systems

Americans won't embrace smaller homes until they trust society again.



America builds big houses. We've heard many reasons why: Consumers want it all. Builders make better margins. It's a cultural expectation. But what if the deeper reason for our square footage fetish stems from anxiety, not from entitlement?

Before I explain, consider the miniscule housing sizes people accept in certain other countries. In Sweden or Norway, for example, many buyers seem satisfied living in 500-square-foot condos. In the U.S., the average new home size is closer to 2,000 square feet.

This matters, because downsizing home square footage offers a hedge against climate disruption. Building science has shown that when you double a code-built home's floorspace, you may triple its operational carbon footprint.

But when you compartmentalize the space of a modern home, the dots start to connect. Here, households are expected to privately absorb the volatility that other societies socialize. The extra bathroom and back bedroom represent a backup eldercare facility, or a college rebound living space. Another room serves as an office, because work is unstable and worker protections scant. The walk-in pantry promises rainy-day food storage, as Americans buy in bulk due to rising inflation and uncertainty. The home itself serves as an investment vehicle, as rents rise, pensions dry up, and social security and Medicare face political expulsion. Home equity offers a shield against medical bankruptcy.

In other words, in a low-trust society, space itself becomes insurance.

I'm not saying that every homebuyer consciously shares these anxieties, but the data shows an inverse correlation between house size in countries with stronger social safety nets and higher institutional trust.

For example, in Norway, **almost 80 percent of citizens trust their government**. In the U.S., the figure hovers around 38 percent. Similar ratios apply to judicial systems, healthcare, retirement and other "infrastructure" of life.

Advocates for smaller housing often frame the issue as environmental virtue, aesthetic minimalism, or anti-consumer enlightenment. But that misunderstands the psychology of scarcity. People don't downsize when they feel insecure. They downsize when they believe the future is predictable, and they have ample resources in other forms to manage

Big dreams. Families may not warm to smaller home sizes while they feel vulnerable to unexpected expenses and risks. SOURCE: ISTOCK/IP GALANTERNIK D.U.

life's slings and arrows.

Minimalism is psychologically easier when you possess strong social capital, portable income, good health insurance and confidence in institutions. The tiny-house movement, for example, attracts highly educated people with unusually high confidence in their ability to navigate instability. For the median American family, smaller housing can feel dangerous.

Ironically, many European countries that Americans romanticize for their compact urban living achieved those conditions only after decades of massive public investment in housing, infrastructure and social insurance. Sweden's postwar housing programs were among the most ambitious in the world, explicitly designed to stabilize everyday life and reduce household vulnerability.

Americans often want the spatial outcomes of high-trust societies without building the institutional foundations that make them psychologically tolerable. That's why the conversation around housing size keeps going nowhere.

You cannot sustainably persuade people to live smaller while simultaneously telling them they are on their own.

Until Americans regain trust that institutions can reliably provide stability — whether through healthcare, education, transportation, retirement systems or housing protections — large homes will continue serving as private shock absorbers for public uncertainty. That's not good news in terms of resource consumption and climate impacts, but it's the end result of a political structure that increasingly burdens the majority of its citizens, rather than making their lives better. **GB**



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Wildfires Still a Nationwide Threat

Due to continued drought, up to 80,000 wildfires could ignite in the U.S. this year.

AccuWeather predicts 65,000 to 80,000 wildfires will ignite across the U.S. during the 2026 fire season. While it may not be a record year—the forecast calls for 5.5 million to 8 million acres burned, more than the 5,131,474 acres burned in 2025 and on par with the historical average of 7,000,514—this is not necessarily good news. The prediction shows fewer fires but more acres burned, meaning the wildfires that do occur could become large, scorching extensive areas before being contained or extinguished. Larger wildfires on average burn hotter, meaning they can cause more-severe and long-lasting damage to ecosystems.

California, the state which annually has the most wildfires in the U.S., is expected to see fire danger increase in interior and lower-elevation areas where grasses dry out and become more flammable as the summer progresses, according to AccuWeather Meteorologist Brandon Buckingham.

Record-breaking heat and a meager snowpack from the winter season will do the state no favors. Several late-season storms were not enough to



Fire force. Wildfires are once again expected to be a threat to homes, businesses and wildlife in 2026, especially in California. CREDIT: ISTOCK/24K-PRODUCTION

erase drought or wildfire concerns. But they were enough to cause an uptick in vegetation heading into the summer. As this spurt of growth dries out, it becomes more fuel for potential fires, Buckingham adds. **GB**

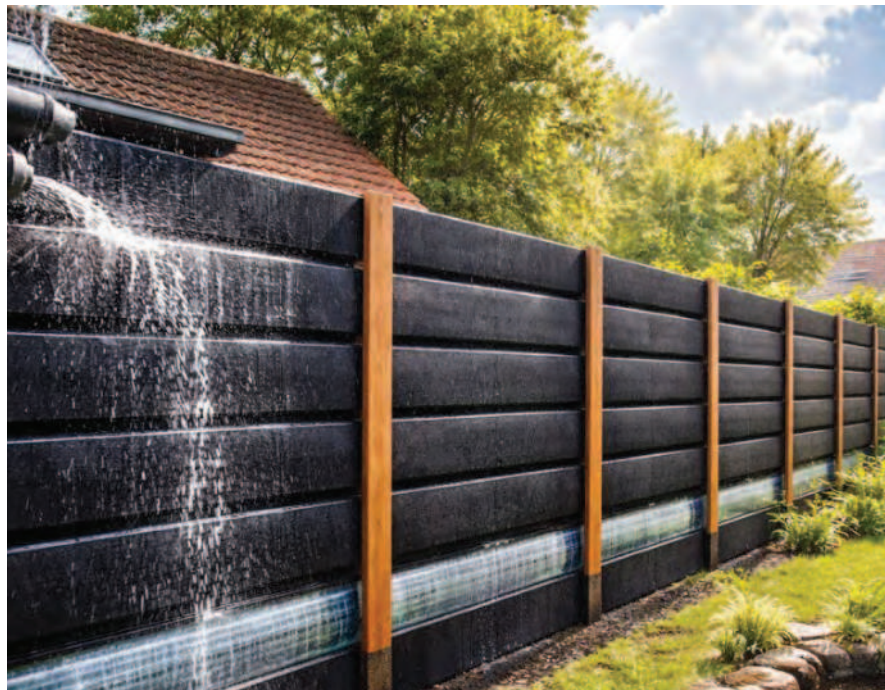
Rainwater Fence Does Dual Duty

A new rain fence offers an easy way to collect winter water for use during drought.

A “rain fence” is helping homes in the Netherlands store rainwater in garden fences to reduce pressure on drains during downpours and preserve water for the garden during droughts. The system utilizes a series of plastic blocks in between rattan fence panels linked to the drainage from the roof to control the flow of rainwater. It is capable of storing up to 570 gallons (2,160 liters) of water, according to contractor [Woonstichting 'thuis](#).

The Netherlands has been experiencing a continual increase in extreme weather—hot and cold—for the past 25 years, according to the Royal Netherlands Meteorological Institute KNMI. A rain fence would be invaluable in areas where drainage is inefficient and fresh water is wasted, KNMI notes.

In a report in The Guardian, Matthijs Hulsbosch, a property and sustainability manager at Woonstichting 'thuis, said that rain fences can also make homes more resilient. “If water cannot drain away and it gets into the building, then we have a problem,” he said. “We can fix leaks,



Rainwater minded. Rain fences are becoming a logical way to save water for summer and prevent damage to homes during winter. CREDIT: COURTESY OF CP3

but it might be better to prevent them through these kinds of ideas, and save a great deal of money and inconvenience.” **GB**

Construction Industry Not Ready for AI

Trade workers think AI will be a necessity by 2031. But currently, there are very few who know how to use it.

While 90 percent of construction professionals believe AI will be indispensable within five years, only 8 percent currently use AI on the job, according to a survey by construction tool maker **DEWALT**. The primary barrier is a lack of formal, job-relevant training: 87 percent of respondents say AI education must be part of trade schools' and technical programs' curricula, while 59 percent expressed a need for hands-on training directly tied to real construction tasks.

Currently, tradespeople rely heavily on self-directed resources such as YouTube (40 percent) and online platforms like Coursera (39 percent) for AI education. Video tutorials are also popular, with 42 percent of respondents citing them as a preferred learning method. Among early adopters, the top benefits cited for AI use include increased productivity (35 percent), cost savings (34 percent), and improved quality control (35 percent).



AI alert. Within a few years, AI will be an almost inescapable tool for trade professionals. But learning how to use it may take a while longer.

CREDIT: ISTOCK/WANAN YOSSINGKUM

“As jobsites become increasingly complex and technology-driven, the need for practical AI training has never been more important,” says Bill Beck, president of Tools & Outdoors at Stanley Black & Decker. “Trade professionals are eager to develop and apply AI skills that will enhance their effectiveness and adaptability on the jobsite. Yet, too many still lack access to this essential training.” **GB**

Can Solar Save Cuba?

Nation sets sight on photovoltaic power for every 1 in 4 residents by 2030.

In response to a massive energy shortage triggered by a U.S. embargo, Cuba is on a high-speed move away from fossil fuels and conversion to solar power. According to a report by CNN, the small nation of 10 million people has gone from purchasing \$3 million in solar panels in 2023 to \$117 million in 2025. Renewable energy now makes up 10 percent of the country's power, up from 3 percent in 2024. The government wants to increase that total to at least 24 percent by 2030.

Cuba has also opened its first 50 solar parks this year, with a goal of reaching 92 by 2028, according to President Miguel Diaz-Canel. If the goal is met, solar energy generated will increase from 1 gigawatt now to 2 gigawatts—enough to power 1.5 million homes, CNN reports.

It will cost \$8 billion for Cuba to generate roughly 93 percent of its electricity from renewables, meaning it would no longer need to import oil and gas for electricity. A 100 percent renewable electricity system would cost \$19 billion. “The billion-dollar question is who pays for it,” notes Jorge Piñon, a senior research collaborator at the University of Texas's Energy Institute. “You have the state that's broke. You have the Cuban consumer that can't afford it. So who's left?” **GB**



Electric eco-leader. A national energy shortage has made solar the Cuban government's future power of choice. CREDIT: ISTOCK/DANCINGMAN

GREEN BUILDER®

Volume 21, Issue 3
May/June 2026
Published by Green Builder® Media

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ISSN 1559-4971

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"Standing out requires precision and authenticity to communicate your story meaningfully. How? Get specific."

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Green Builder Coalition



This Week in Sustainability

with Cati O'Keefe, Editorial Director,
Green Builder Media



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1

ENERGY

High-performance envelope
Efficient systems
Lower utility bills
Renewable energy



2

RESILIENCY

Climate-resilient design
Durable materials
Storm, fire & flood protection



3

HEALTH & WELLNESS

Fresh air ventilation
Low VOC materials
Comfort & well-being



4

WATER

Water-efficient fixtures
Rainwater management
Conservation & reuse

THE SEVEN PILLARS

— VALUE PER SQUARE FOOT —

We're formulating a new metric to compare conventional homes with high-performance housing. It rests on **seven principles**.

BY GREEN BUILDER STAFF

For decades, the housing market has relied on a deceptively simple metric: price per square foot. It's a number that's easy to calculate, easy to compare, and easy to misunderstand. Bigger homes often appear to deliver better "value," while smaller or more efficient homes can seem overpriced because they "cost more per square foot." But that metric is deeply misleading. It ignores the full cost of owning, operating and maintaining a home over time.

We've gathered a group of industry experts to challenge this outdated notion in 2026. Our concept of Value Per Square Foot (VPSF), which grew out of our "Leading from the Front" groups last year, reframes the conversation, asking: How well does a home perform relative to its size? Instead of focusing

solely on upfront cost, VPSF accounts for long-term operational expenses—energy bills, insurance, maintenance, durability and even health outcomes.

This shift matters, because homes are not static assets; they are dynamic systems. A cheaper home that leaks energy, requires frequent repairs or faces rising insurance premiums can quickly lose its initial cost advantage. Conversely, a well-designed home that minimizes energy use, resists climate risks and reduces maintenance can deliver substantial lifetime savings—without necessarily increasing upfront construction costs.

We're still fine tuning the VPSF framework, and we welcome you to join the conversation. Our modeling of "seven pillars" integrates energy efficiency, resilience, indoor health, carbon impact, water use, financial risk

and community context into a single scoring system. Ultimately, we're trying to build tools to compare homes on an "apples to apples" basis, based on their lifetime return on investment (ROI), not square foot cost.

The intention? To redefine what "affordable" really means. We're not sweeping affordability challenges under the rug. We're offering ways to build smarter homes that hold their value. In other words, if a home costs less to live in, requires less energy, water and maintenance, it's an asset that has value much greater than its competitors.

Let's break down the seven pillars, so you can see how we're establishing our VPSF benchmarks. Perhaps you'll discover the ones where your homes or your building products have perfect synergy.



At face value. A high-scoring Value Per Square Foot (VPSF) home features as many cost-saving elements as possible, such as solar panels, carbon-absorbing siding, multi-pane windows, an electric vehicle charging station, and an energy-efficient HVAC unit.

VALUE PER SQUARE FOOT (VPSF) INDEX [v1.0]	
Category	Maximum Points
Energy	200
Resiliency	200
Health & Wellness	200
Decarbonization	150
Water	100
Equity & Investment	100
Community	50
TOTAL	1,000

FINAL VPSF SCORE INTERPRETATION		
Score	Classification	Market Meaning
850-1,000	Exceptional	Future-proof asset
700-849	High Performance	Low risk, low-cost home
550-699	Good / Efficient	Above-market quality
400-549	Code Plus	Typical new home
< 400	High Risk	High operating + insurance cost

Seven shades of say. Instead of the traditional price-per-square-foot metric, the Value Per Square Foot (VPSF) index gauges a home's true affordability on seven long-term operational elements (energy, resiliency, health & wellness, water, decarbonization, community, and equity & investment). Points are assigned in each category; the combined total gives a better view of how the dwelling ranks overall and vs. other homes in terms of its cost of ownership.

THE SEVEN PILLARS

— VALUE PER SQUARE FOOT —



Power installed. The addition of solar energy access plays a big part in the impact of a HERS index upon a home, accounting for up to 20 percent of its total score. CREDIT: ISTOCK/ANATOILY, GLEB

Utility bills have risen in importance in the public mind—because they’re becoming much more impactful. In some parts of West Virginia, for example, energy bills now exceed mortgage costs, despite it being a high-energy access state. Energy performance is the most quantifiable driver of housing value, with direct, recurring impacts on household costs.

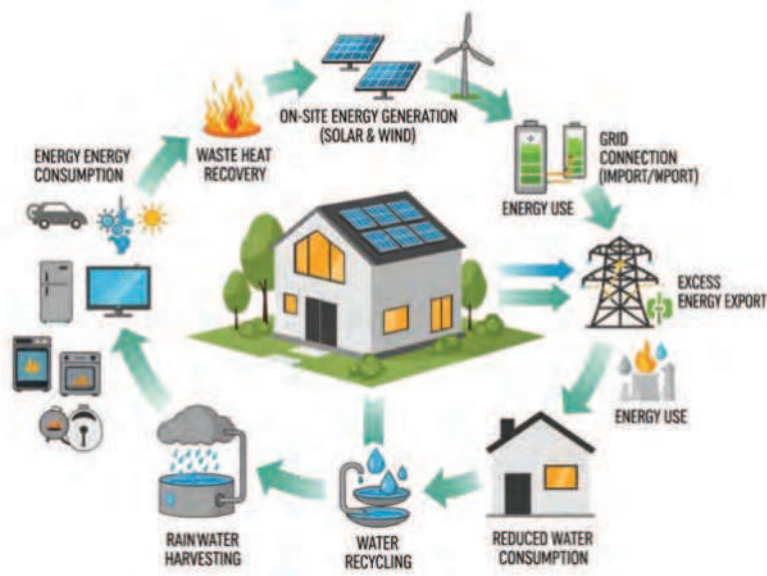
According to the U.S. Department of Energy (DOE), high-performance homes can reduce energy use by 40 to 60 percent compared to typical new construction, fundamentally altering long-term affordability.

In practical terms, energy performance behaves more like infrastructure than an upgrade. A low Home Energy Rating System (HERS) score, solar generation and electrified systems cut monthly costs. They also position homeowners to ride out future shifts in energy pricing and policy.

As utility costs rise, and move toward dynamic pricing, the matter becomes even more urgent. Homes that can respond to those changes will steadily outperform standard construction.

CONSTRUCTION SPECIALTIES

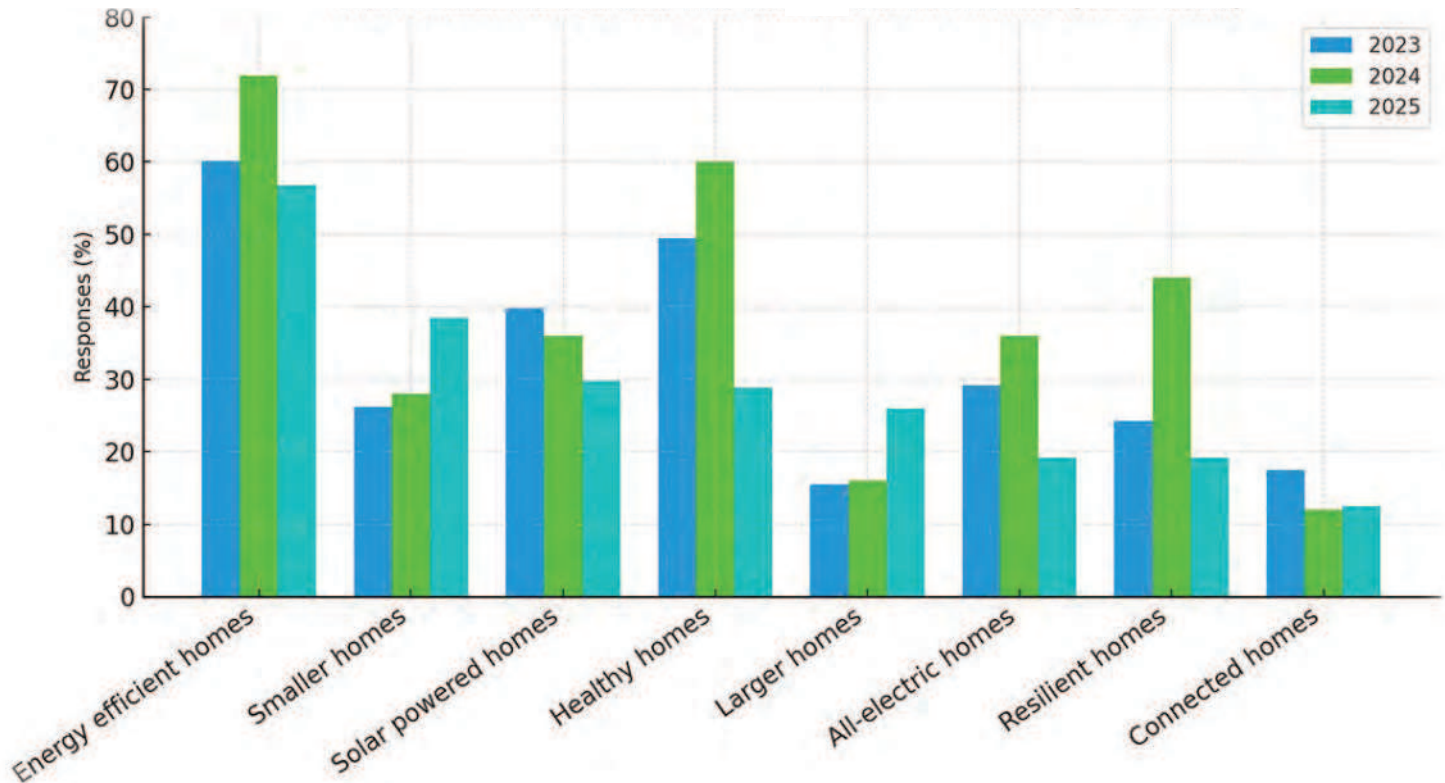
The HERS Index is the industry standard by which a home’s energy efficiency is measured compared to similar homes. The lower the score, the more energy-efficient the home. A typical resale home in the United States is rated at 130 on the Index, while a standard new home that conforms to the



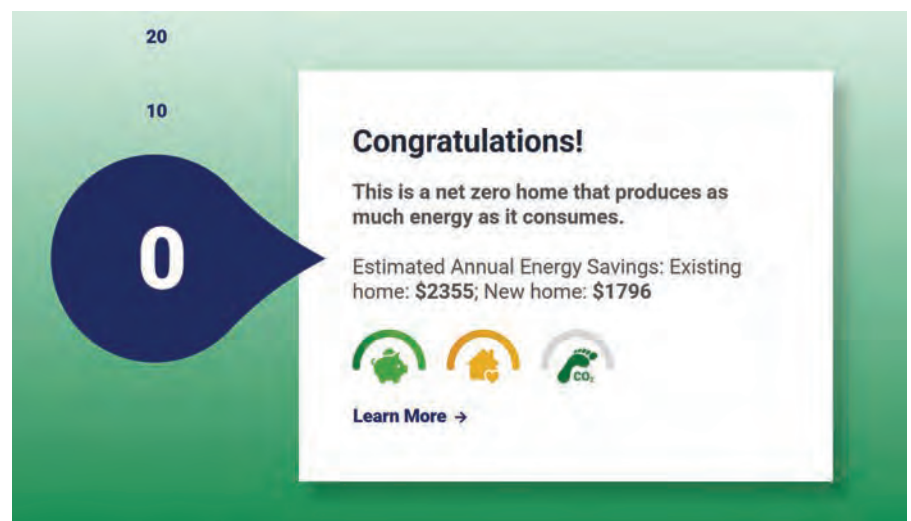
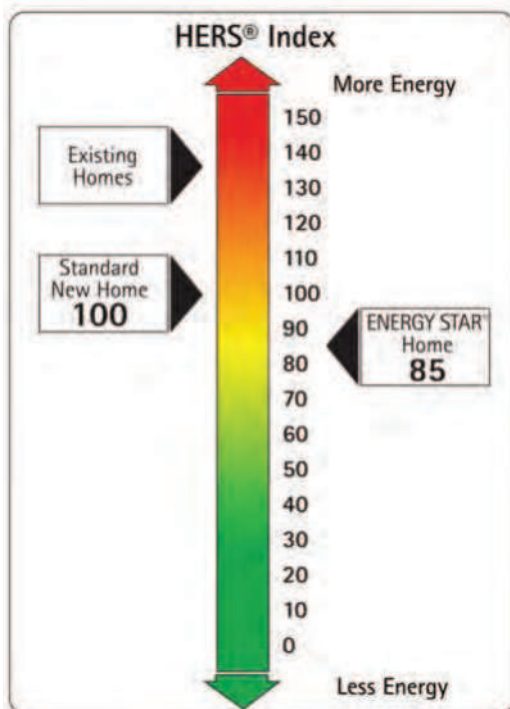
A steady flow. Energy management extends to all parts of a home, from its initial generation to recycling in various forms.

CREDIT: COURTESY OF HUTTER ARCHITECTS/CREATIVE COMMONS 4.0

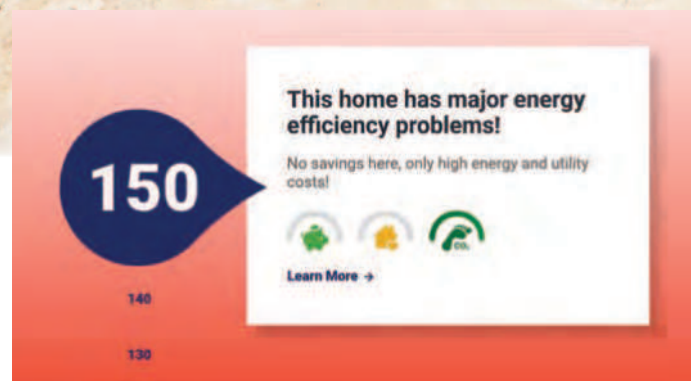
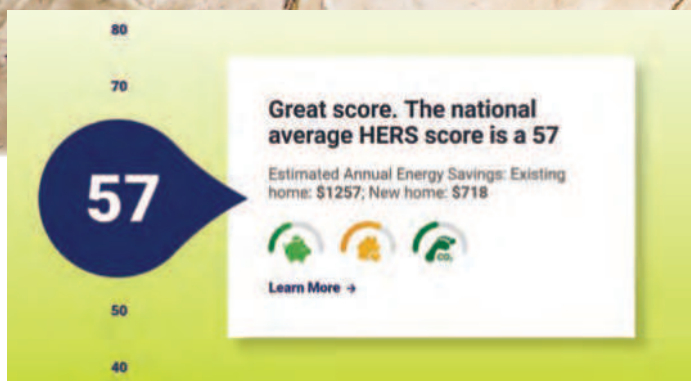
HOW CONSUMER DEMAND HAS CHANGED IN THE MARKET (2023-2025)



Dominant priority. Public interest in energy efficiency has ebbed and flowed slightly, dropping from a high of 72 percent in 2024 to 57 percent in 2025. But it has been a leading purchase driver year over year since 2023 and is expected to remain top of mind in 2026 and beyond. SOURCE: COGNITION SMART Data



Less is more. Unlike many scoring tools, it's not good to have a high HERS score. A zero means the home is net zero—producing as much energy as it uses—while the top total of 150 means there's no energy efficiency, period.



current International Energy Conservation Code (IECC) standards scores 100, DOE notes. Effectively, a home scoring 130 is 30 percent less efficient than the standard new home.

The HERS index is a natural tie-in to the Value Per Square Foot (VPSF) Index, which emphasizes the long-term operational cost of a house vs. simply looking at how much physical home a buyer is getting for the money.

According to Gene Myers, CEO of Thrive Home Builders, price per square foot ignores critical aspects of a home that are important to customers, including costs to operate and maintain, sustainability, durability, and health in the home.

“Emphasizing value per square foot enables a customer to trade off less important features for more important ones,” Myers says. “For example, one might forgo expensive finishes like upgraded carpet that may only last a few years for energy efficiency that will pay off over the entire life of the home.”

ENERGIZING THE GRID

For some homes, energy efficiency goes further. In 2018, DOE launched “Creative Communities,” a project that combines energy efficiency and demand flexibility with smart technologies and communications. Homes in this network are grid interactive efficient buildings (GEBs), designed to be self-sufficient in the event of an outage caused by excessive strain on the local electrical grid.

As with other residential properties, a GEB-attached home would score well on HERS and VPSF indexes. During the opening of one Creative Community in 2023, Alejandro Moreno, assistant secretary of DOE’s Office of Energy Efficiency and Renewable Energy (EERE), said the project will deliver a more-resilient and resourceful power grid, and reduce the overall cost of long-term homeownership. “We’re now at the point where the hardest part is understanding how all of these technologies work together,” he said.

The Energy pillar includes renewables, grid-scale storage, and efficiency technologies, which balance what’s known as “The Energy Trilemma”: Reliability, in which technologies such as battery storage ensure a steady baseload, providing constant, dispatchable power even in extreme conditions; Resilience, where modern grids utilize smart architectures, advanced encryption, and distributed generation, making the system highly resistant to cyber threats and natural disasters; and Affordability, in which wind, solar, and battery storage are recognized as some of the least-expensive generation resources, lowering overall costs for consumers.

All homes being scored under the Energy pillar include those with advanced energy efficiency upgrades such as HVAC and water heaters, and demand-side energy management systems. These, combined with traditional elements such as building envelope systems, windows, insulation, and cool roofs to enhance efficiency, are definite examples of how to best handle energy within a home, DOE notes.

But there’s an ever bigger picture here, according to Cliff Kitson, a writer for ADW Developments, a construction economics and sustainability consulting firm. The Energy pillar “plays a crucial role in ensuring that construction projects contribute positively to the environment, economy

and society,” he notes.

“The construction industry aims to achieve sustainable development that meets present needs without compromising the ability of future generations to meet their own needs,” Kitson notes.

For more information, download Green Builder Media’s e-book, [The Perfect Envelope](#). **GB**

1. ENERGY (0-200 points)	
1A. Base Energy Score (HERS or Equivalent)	
HERS INDEX	POINTS
≤ 0 (Net Positive)	160
1-10	150
11-20	120
21-30	100
31-40	120
41-50	110
51-60	100
61-70	85
71-80	70
81-90	55
Code Minimum	40

1B. ENERGY SYSTEM ADDERS (MAX +40)	
FEATURE	POINTS
Onsite solar PV	+10
Battery storage	+10
Demand response / grid-interactive ready	+5
All-electric (no fossil combustion)	+10
EV-ready / EVSE installed	+5
Energy Category Cap: 200 points	

Power down. On the VPSF Index, base HERS scores can be supplemented with special extras such as solar energy, battery storage, and electric-driven devices.

THE SEVEN PILLARS

— VALUE PER SQUARE FOOT —



Ready for the worst. Destructive weather—complete with massive floods—has led to construction in the Florida Keys of homes that are effectively on stilts to elevate them from rising water. CREDIT: ISTOCK/KENWEIDMANN

The Federal Emergency Management Agency (FEMA) reports that every \$1 invested in mitigation saves \$6 in future disaster costs, making resilience one of the highest ROI investments in housing.

The VPSF model elevates resilience to equal footing with energy, because **almost every region of the U.S.** is now considered vulnerable to one form or another of natural disaster.

One avoided disaster loss can outweigh decades of energy savings. Yet many resilience features are invisible to buyers—roof fastening patterns, water barriers, ember-resistant vents. This creates a market failure where the highest-value features are often the least understood.

Durability extends the conversation beyond disasters. Materials that resist weathering, moisture, and wear reduce lifecycle costs and eliminate recurring maintenance burdens. In a high-performance home, resilience is not just about surviving extreme events—it's about aging gracefully.

CERTIFIED SUCCESSES

Naturally, builders try to create structures that are meant to last. Some programs give an incentive to do better. For example, the Insurance Institute for Business & Home Safety (IBHS) created “FORTIFIED,” a voluntary construction program designed to help protect homes from severe weather such as high winds, hail, and hurricanes—elements that are becoming increasingly common due to climate change.

There are three classifications of FORTIFIED. It starts with *FORTIFIED*

Roof, which gauges how a home's roof is strengthened by using stronger edges, a sealed roof deck, strong roof vents, impact-resistant shingles, and more.

FORTIFIED Silver moves on to windows, doors, garage doors and chimneys. Focusing on prevention, the classification includes evaluation of usage of products such as strong anchors and additional bracing to reinforce areas such as chimneys, gable ends, and attached structures—all of which are less resistant to severe weather.

FORTIFIED Gold goes even further, requiring engineers to develop and use a continuous load path—a specific plan that specifies how the roof should be fixed to walls, and how the walls should be anchored to the foundation. Creating a singular, solid structure is the key to FORTIFIED's system for maximum protection, IBHS notes.

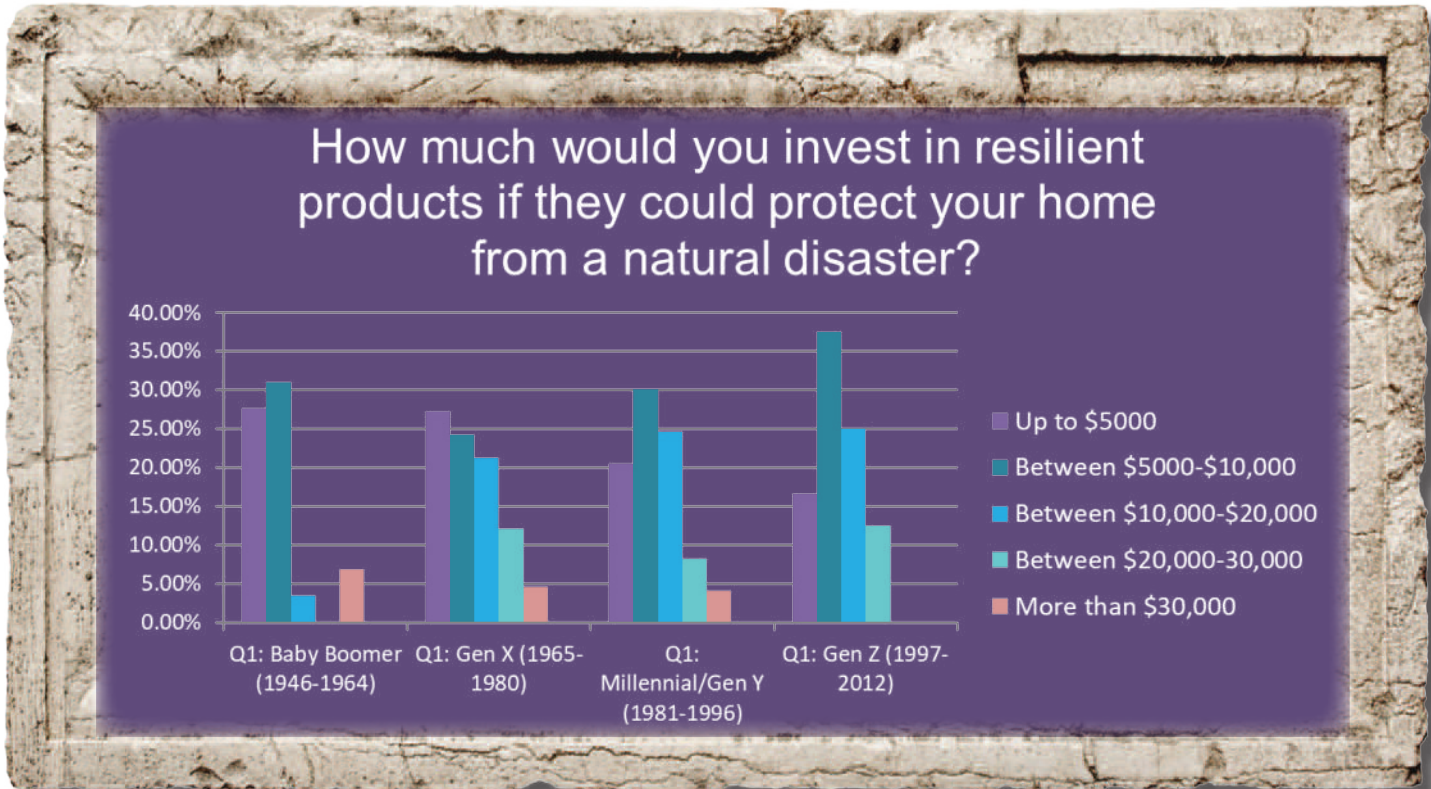
Numerous homeowners agree. FORTIFIED's website is full of testimonials praising the program in the aftermath of Hurricane Sally in 2020: “Our next-door neighbor had shingles all over our yard. We didn't have any damage.” “We actually stayed here [on storm night], and the next couple of weeks. Other people were going through rubble, trying to find keepsakes.” “It's nice to have peace of mind that when we do have high-wind events, your home can withstand the wind.” And so on.

Programs such as FORTIFIED also help home builders and sellers move product. “The fact that you have a home to come back to, and your community will recover quickly, is the biggest selling point,” says Lannie Smith, building official and emergency management coordinator at the City of Orange Beach in Alabama.

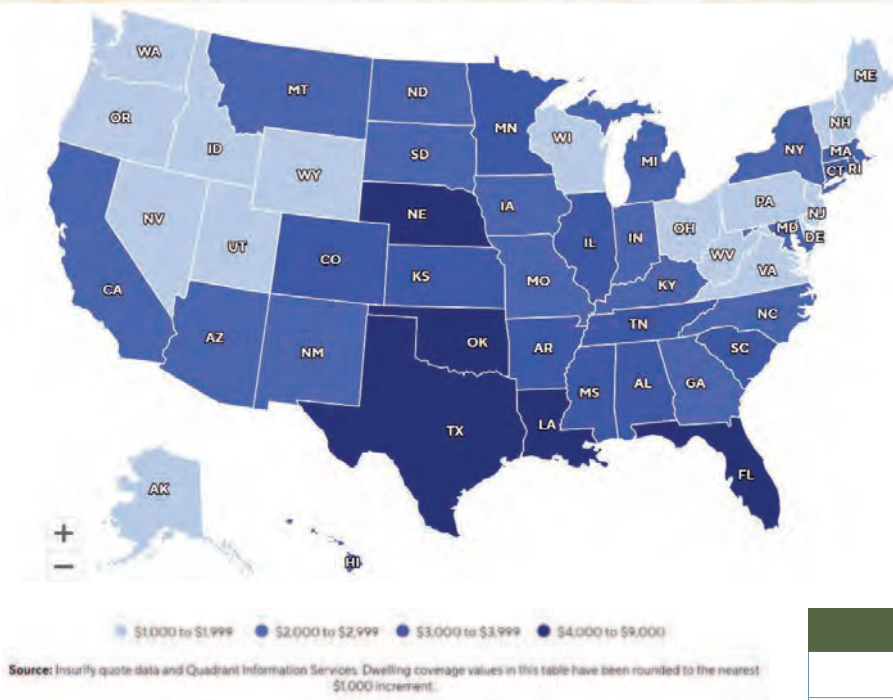


Classy components. A FORTIFIED roof, made with enhanced products such as stronger edges, a sealed roof deck, strong roof vents, and impact-resistant shingles, is designed to withstand hurricane-force weather.

CREDIT: COURTESY OF SOUTHERN HOME IMPROVEMENT CENTER



Valuable thinking. In a case of protecting a long-term investment, the younger the generation, the more money overall that it is willing to spend to protect a home from a natural disaster. SOURCE: COGNITION SMART DATA



AVERAGE ANNUAL HOME INSURANCE COST 2025 - 2026

Disaster dollars. Homeowners' insurance premiums are high, but they are not equally spread: Due to ongoing natural disasters, residents in the Heartland and Southeast pay up to nine times more for coverage, compared to less-impacted Northeast and Northwest states. CREDIT: COURTESY OF SOUTHERN HOME IMPROVEMENT CENTER

Industry experts are also on board. "There are states that get hit hard because they didn't go the strong way. They went, 'just get it built back,'" says Julie Shiyou-Woodard, president and CEO of nonprofit Smart Home America. "That's not being resilient. We see a lot of that, unfortunately."

DOLLARS AND SENSE

There's another good reason to not ignore a home's resilience: It's expensive. According to insurance marketer Insurify, in 2026 homeowners can expect a fifth consecutive year of disaster-induced rising premiums, up about 4 percent nationally from 2025. The story's even less rosy in storm-hammered Midwest and Great Plains states: Minnesota residents can expect a 34 percent increase; Colorado should see about 33 percent; and a handful of other states may endure increases of 20 to 28 percent.

The average annual cost of home insurance rose 12 percent in 2025 to \$2,948; Insurify projects the average will climb to \$3,057 by the end of 2026. Since 2021, the average cost of home insurance has risen 46 percent, about three times as much as inflation (16 percent).

In contrast, homes built to resiliency standards can save the insurance industry billions of dollars annually, and some of those savings can go to homeowners as lower premiums. Claims severity for FORTIFIED-certified homes dropped by as much as 40 percent following Hurricane Sally, and reduced policyholders' deductibles by more than 60 percent, according to a study commissioned by the Alabama Department of Insurance.

"The report clearly demonstrates that homes can be built to survive storms, making them eminently more insurable," says IBHS President and CEO Roy Wright. "This report should be a clarion call to communities across the country, urging them to implement a multipronged approach to promoting disaster mitigation."

For more information, download Green Builder Media's e-book, [Building Resilient Homes for a Turbulent World](#). **GB**

2. RESILIENCY (0–200 points)

2A. Disaster Resistance Certification

STANDARD	POINTS
IBHS FORTIFIED Gold	160
FORTIFIED Silver	140
FORTIFIED Bronze	120
Wildfire Prepared Home (only)	100
No certification	40

2B. RISK MITIGATION ADDERS (MAX +40)

FEATURE	POINTS
Flood-resistant design / elevated	+10
Fire-resistant assemblies	+10
Enhanced moisture management	+10
Secondary power / water resilience	+10

Resilience Category Cap: 200 points

2C. Durability Adders

Infrequent exterior paint
Zero paint required

Risk factors. Elements of resilience and durability in residential dwellings come in many forms—from reinforced design to weather-resistant paint.

CREDIT: COURTESY OF SOUTHERN HOME IMPROVEMENT CENTER

THE SEVEN PILLARS

— VALUE PER SQUARE FOOT —



Bad air daze. As air pollution worsens, it becomes ever-deadlier to people who spend a lot of time outside their homes. But it's not much better indoors, where pollutants can easily build up due to the limited environment size. CREDIT: ISTOCK/BOYLOSO

Indoor air can be 2 to 5 times more polluted than outdoor air, according to the U.S. Environmental Protection Agency (EPA). Yet, good ventilation is often an afterthought, not treated as the value-added asset it should be.

It's not all gear, of course. Buyer behavior has a big effect on whether indoor air quality (IAQ) products—range hoods, vent fans and ERVS—make as big a difference as they should.

High-performance features are not always obvious, but they are noticeable to inhabitants. They include better air quality, ventilation, daylight, temperature stability and sound attenuation. All of these factors contribute to how people feel and function. They shape sleep, cognitive performance and long-term health.

What sets this pillar apart is its dual payoff: better day-to-day living conditions and potential reductions in healthcare costs. The first are somewhat anecdotal, but the latter are bills that every homeowner faces.

CLEAN AIR IS AN ASSET

Overall, air is something that people take for

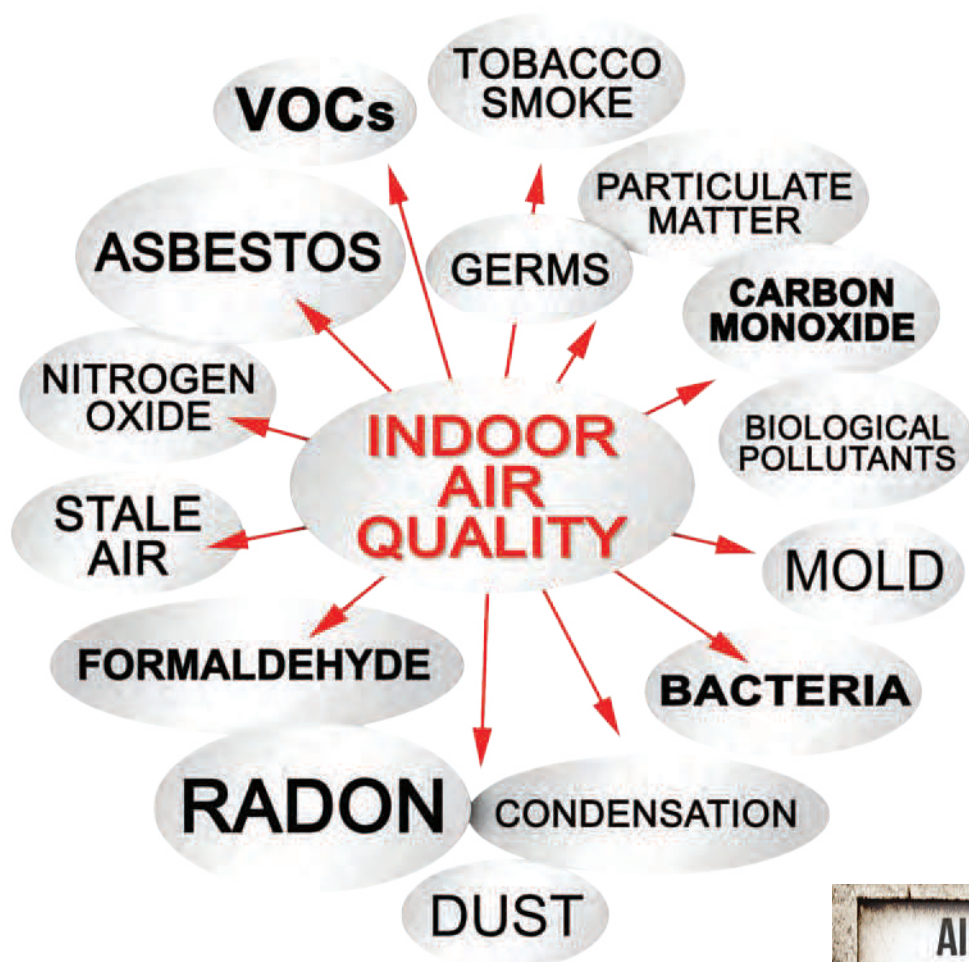
granted. Generally speaking, it's always available, it's constantly recycled, and it's free. But it's also prone to pollutants that cause medical problems ranging from simple allergies to respiratory, cardiovascular or mental illnesses, and these can't be removed at the flip of a switch.

IAQ is another matter. According to the EPA, people spend 90 percent of their time indoors, and the pollution level can be up to 8 times higher than outdoor air due to limited ventilation, volatile organic compounds (VOCs) such as paint, surface coatings, laundry detergents and personal care products, and other health hazards such as dust, mold, cigarette smoke and even furniture. But their impact can be minimized through use of various circulation and filtration systems.

“At this point, the majority of society understands the issue of air pollution and its repercussions not only on the climate but human health as well,” notes Airly, a global environmental technology company with a specific focus on air quality. “But still, not many people seem to realize that indoor air quality is as important.”



Cookery alert. A major source of indoor air pollution comes from an everyday product—the kitchen stove—which can send many toxins airborne. CREDIT: ISTOCK/FOTOGRAFIA INC.



Indoor air war. Health-threatening indoor air pollutants come in various forms, including molds, bacteria, household cleaner fumes, VOCs, pet fur, and more.

CREDIT: ISTOCK/FRANCESCO SCATENA

To help establish—and meet—a growing consumer preference for homes with superior IAQ, the EPA offers Indoor AirPlus (now Indoor AirPlus 2), a voluntary partnership and labeling program that enables new homebuilders to improve IAQ through construction practices and product specifications that minimize exposure to airborne pollutants and contaminants.

Construction specifications include the careful selection and installation of moisture control systems, heating, ventilating and air-conditioning systems, combustion-venting systems, radon-resistant construction, and low-emitting building materials.

There are also “provocative” IAQ efforts such as bio-filtration and living systems, smart air quality monitors, and scent and VOC control units, EPA notes.

A home that emphasizes its ability to maintain clean air would score major points among buyers in terms of indoor health, and their pocketbooks. The Natural Resources Defense Council (NRDC) estimates that each American pays \$2,500 per year for healthcare related to air pollution. Nationally, it’s more than \$820 billion annually. These totals will “worsen each year we fail to curb the pollution,” says Vijay Limaye, director of applied research and initiatives at NRDC’s science office.

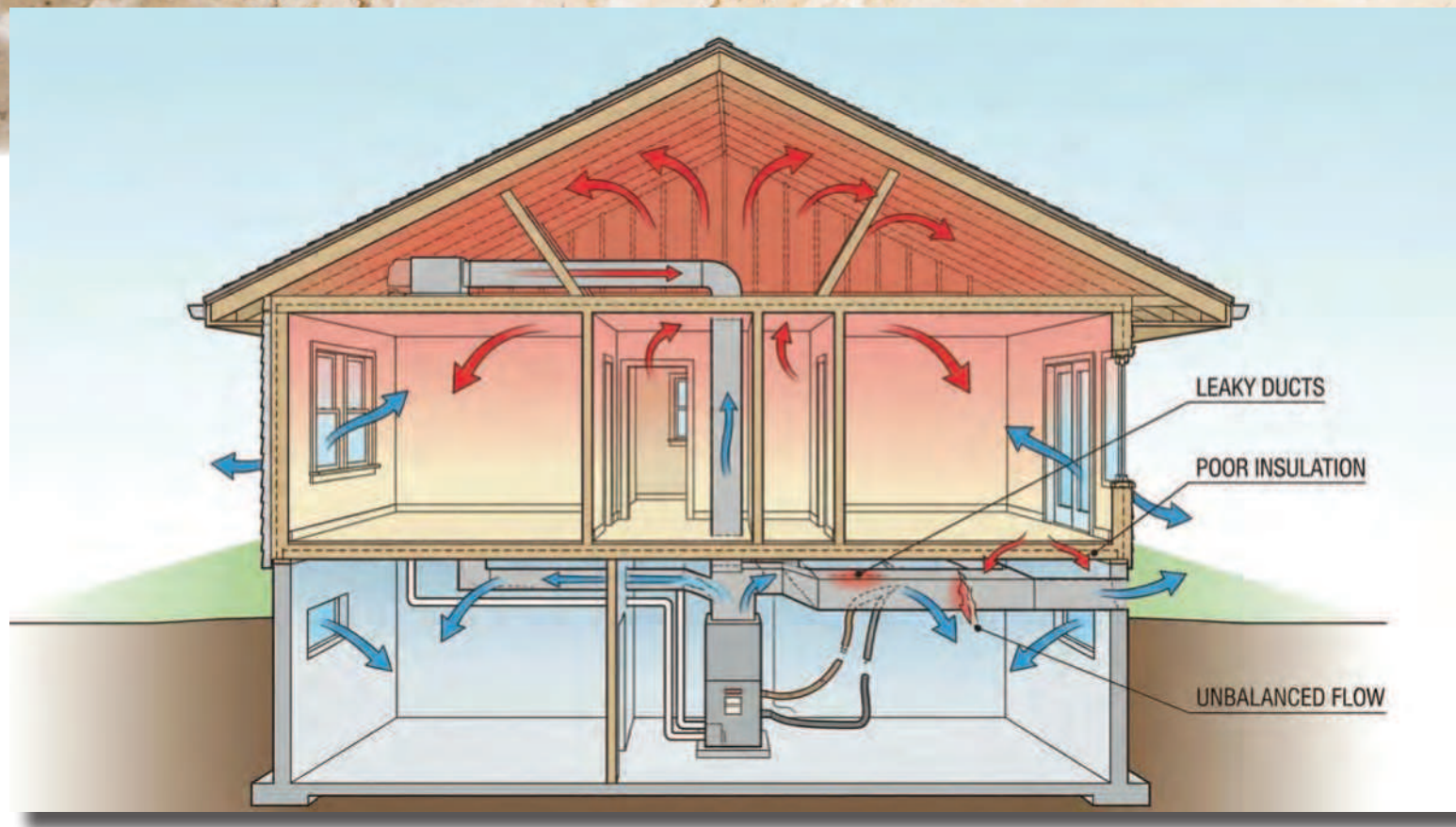
METRIC MATTERS

Research from Harvard’s T.H. Chan School of Public Health shows that employees working in buildings with higher outdoor air ventilation rates

AIR QUALITY HEALTH ADVISORIES		
Air Quality Index	Who Should be Concerned?	What Should I Do?
Good 0-50	No one	It's a great day to be active outside.
Moderate 51-100	Some who may be sensitive to ozone or particle pollution	Unusually sensitive people: Consider reducing prolonged or heavy exertion.
Unhealthy for Sensitive Groups 101-150	People with heart or lung disease, older adults, children, and teens	Sensitive groups: Stay indoors or cut back on strenuous outdoor activities. Have asthma? Follow your asthma action plan. Keep quick relief medicine handy.
Unhealthy 151-200	Everyone	Sensitive groups: Avoid prolonged or heavy exertion. Everyone else: Reduce prolonged or heavy exertion.
Very Unhealthy 201-300	Everyone	Sensitive groups: Avoid all physical activity outdoors. Everyone else: Avoid prolonged or heavy exertion.
Hazardous 301-500	Everyone	Avoid all physical activity outdoors. Sensitive groups: Stay indoors and keep activity levels low.

Hold your breath? The Air Quality Index (AQI), which tracks hazards such as ozone and particle pollutants, informs the public of whether it’s a good day to go outdoors, or if it’s better to stay inside with the windows shut.

SOURCE: WISCONSIN DEPARTMENT OF HEALTH SERVICES



Managed flow. Faulty installation of ducts or lack of air barriers can make air pollution worse indoors. SOURCE: DUCTWORKS

experience dramatic improvements in cognitive function, according to lead researcher Jose Guillermo Cedeño Laurent. When ventilation doubled from standard levels, participants' higher cognitive performance scores increased by up to 70 percent. Such an increase means productivity gains worth about \$6,500 per employee annually. Meanwhile the energy costs of enhanced ventilation were less than \$40 per person annually, Laurent notes.

The findings were expected to some extent—there has been a lot of evidence that air pollution impacts the human brain, Laurent says. But, this study “suggests that poor indoor air quality affects health and productivity significantly more than we previously understood.”

Such findings make indoor air quality monitoring increasingly critical for public health. ANSI/ASHRAE Standards 62.1 and 62.2 are the recognized standards for ventilation system design and acceptable indoor air quality (IAQ); both sets specify minimum ventilation rates and other measures to minimize adverse health effects for occupants.

In addition, ASHRAE's “Indoor Air Quality Guide: Best Practices for Design, Construction and Commissioning” is designed for architects, design engineers, contractors, commissioning agents, and all other professionals concerned with IAQ.

Meanwhile, the International WELL Building Institute (IWBI) promotes healthy indoor environments through its WELL Building Standard (WELL), WELL for residential, WELL Community Standard, iWELL ratings and management of the WELL AP credential.

“Transforming the health and well-being of the places and spaces where we live, work and gather presents an unprecedented opportunity to improve public health—while unlocking incredible economic value for organizations,” says IWBI Executive Chair Rick Fedrizzi. “After all, people are the single largest investment of any organization, accounting for 90 percent of expenses. By linking healthier environments to measurable gains in productivity, satisfaction and retention, the findings enable organizations to move beyond intuition and make data-driven decisions that enhance their human capital strategy.” **GB**

3. HEALTH & WELLNESS (0–200 points)

3A. Core Health Certification

STANDARD	POINTS
WELL or Fitwel Residential	120
EPA Indoor airPLUS	90
RESET Air or equivalent	80
None	40

3B. HEALTH FEATURE ADDERS (MAX +80)

FEATURE	POINTS
Balanced ventilation (ERV/HRV)	+20
Low / no-VOC materials	+20
IAQ monitoring (PM2.5, CO ₂ , VOC)	+20
Daylighting + acoustic comfort design	+20

Health Category Cap: 200 points

Air is in. Homes with indoor air quality (IAQ) certification score well on the VPSF index. Those with extras such as low- or no-VOC materials or IAQ monitoring tools benefit even more.

THE SEVEN PILLARS

— VALUE PER SQUARE FOOT —



WATER



Flow control. Low-flow faucets, fixtures and appliances reduce operational costs over the life of the home.

CREDIT: ISTOCK/AYGUL BULTE

Water use efficiency is built into most building codes. Faucets and fixtures are expected to perform at a gallon per minute rate, flush with a certain amount of wastewater and generally outperform their predecessors. At the same time, water damage from leaks accounts for nearly 1 in 5 insurance claims, making it one of the most common risks in homeownership, according to the Insurance Information Institute.

Water performance sits at the intersection of efficiency and risk. On one side, low-flow fixtures quietly reduce monthly costs. On the other, leak detection systems and smart controls can prevent catastrophic damage—often at a relatively low upfront cost.

As climate variability increases—bringing droughts and extreme rainfall—the ability to manage water intelligently will become a defining feature of high-value homes.

WASTE NOT, HAVE MORE

Excluding air, there's nothing more that people use in

a home than water. According to the Environmental Protection Agency (EPA), a typical U.S. household of four with older fixtures and appliances uses 400 gallons of water per day, and roughly 70 percent of that is used indoors. And nearly 60 percent of that goes somewhere in the bathroom—toilet, sink, and bathtub and/or shower. Update that 15-plus-year-old equipment to EPA WaterSense-labeled products, and water use can drop by about 20 percent, the agency notes.

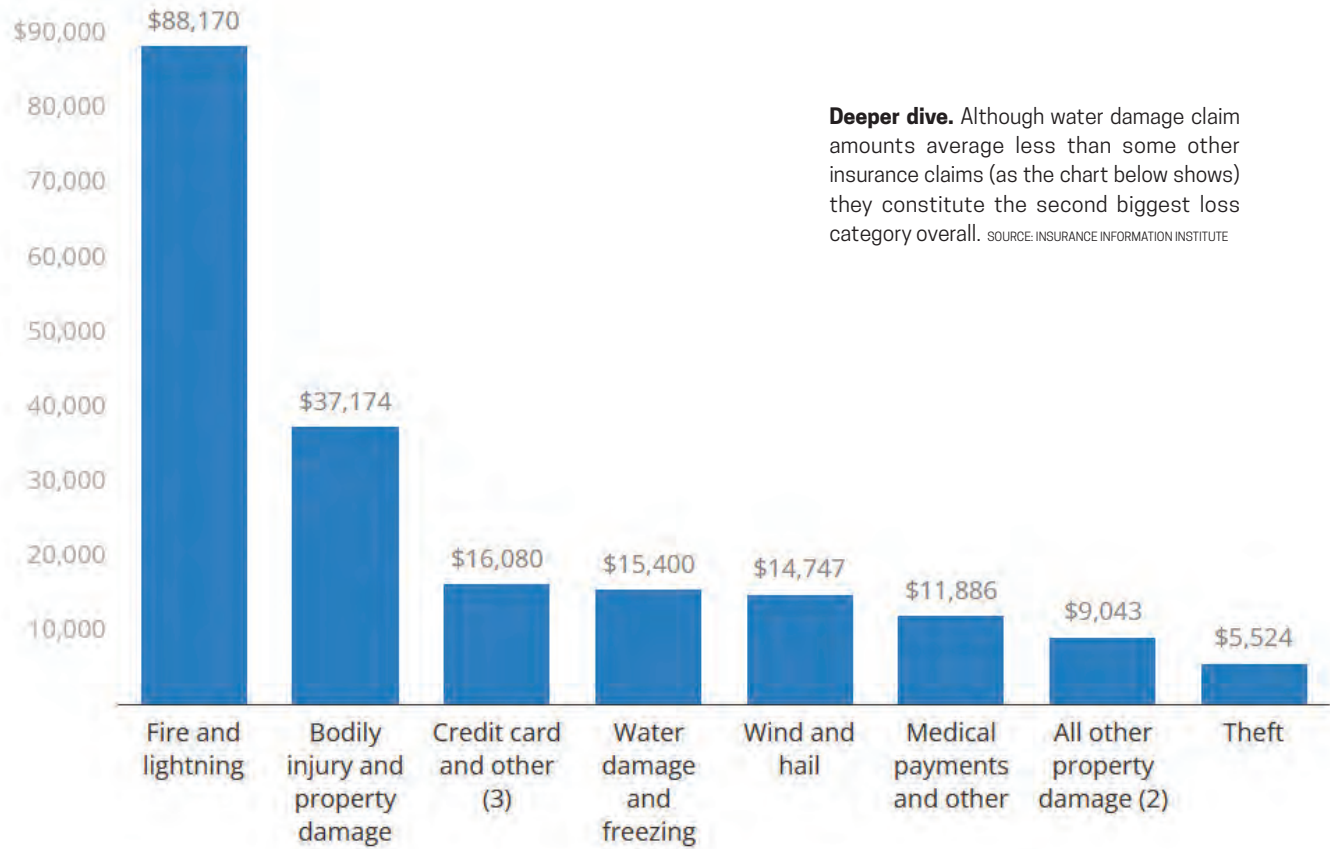
The public doesn't have to be convinced. Availability of WaterSense fixtures in new or used homes was mentioned in real estate listings 290 percent more often in 2024, according to Anthony Smith, senior economist at [Realtor.com](https://www.realtor.com). "The acceleration of efficiency-focused features is striking," he says. "Homes that save water, generate power, or cut other costs are commanding more attention than those that simply look good."

And the adoption of these features isn't just relegated to luxury markets, Smith adds. WaterSense fixtures routinely appear in housing listings with a median list price of \$450,000. "That's significantly closer to the national median list price (\$424,200),"

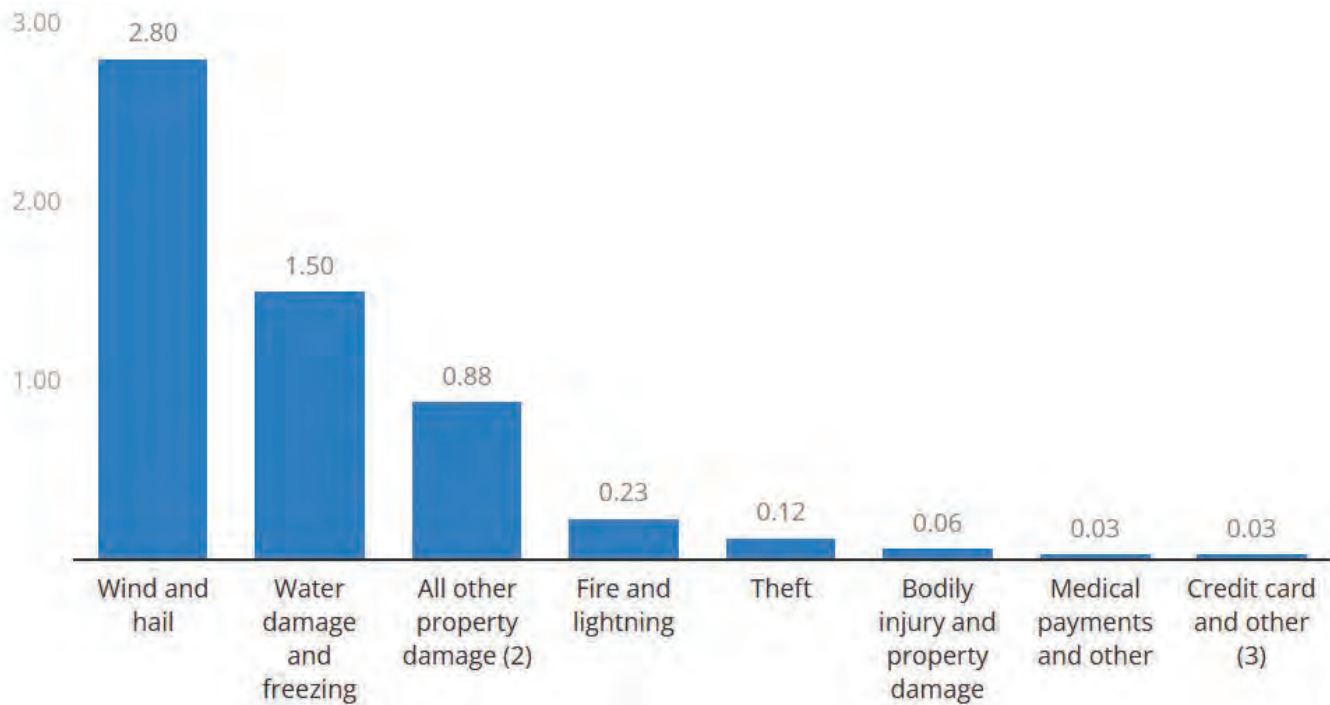


Common mishap. Water damage from leaks accounts for nearly 1 in 5 insurance claims, making it one of the most common risks in homeownership. CREDIT: ISTOCK/PHYNART STUDIO

LOSSES BY CLAIMS SEVERITY



HOMEOWNER LOSSES BY CLAIMS



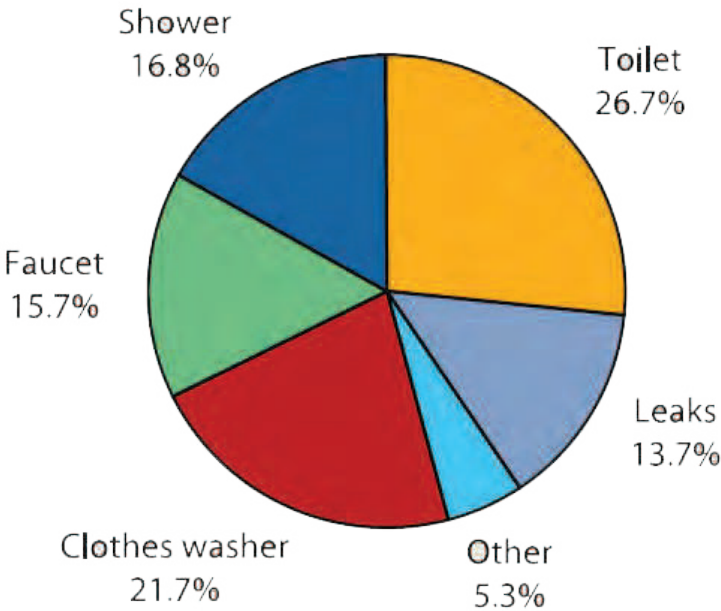
5. WATER (0–100 points)	
5A. Water Efficiency Standard	
LEVEL	POINTS
WaterSense Home v2	60
HERS H ₂ O < regional benchmark	50
WERS rated	40
Code minimum	20

Absolute fluidity. While not as high profile as other VPSF pillars such as energy use and resilience/durability, water use efficiency is a big component of a home’s overall public value. Categorical elements include fixtures (WaterSense), indoor and outdoor water usage (HERS H₂O), and overall property water management (Water Efficiency Rating Score [WERS]).



5B. CARBON REDUCTION ADDERS (MAX +30)	
FEATURE	POINTS
Low-carbon concrete / steel	+15
Biogenic / wood-heavy structure	+15
Adaptive reuse / prefab efficiency	+10
Water Category Cap: 100 points	

HOW MUCH WATER TO USE?



Lower is bigger. Replacing just one showerhead with a low-flow WaterSense-labeled version can save the average family 2,900 gallons of water annually, the amount of electricity needed to power its home for 13 days, and save more than \$70 in utility bills. CREDIT: ISTOCK/GRANDRIVER

Smart choices. The 400-plus gallons of water that a family of four uses each day goes almost entirely to appliances and fixtures. In every case, the amount of water used can be reduced significantly by installation of WaterSense-labeled products. SOURCE: AMERICAN WATER WORKS ASSOCIATION RESEARCH FOUNDATION

Smith says. “That’s an indication that a greener design language is filtering into the everyday home.”

SAVING ON SAVINGS

If all fixtures are replaced with WaterSense-labeled and ENERGY STAR-certified fixtures and appliances, a family of four can save about 13,000 gallons of water annually, according to EPA. But much of those savings—about 9,400 gallons—are canceled out if there are household leaks. Most of these come from running toilets, worn-pit flappers, and dripping faucets or showerheads. But an unseen leak, such as from a cracked underground pipe, can completely offset the WaterSense upgrades. “You can easily waste more than 13,000 gallons in a year,” the agency notes. “That’s the equivalent to washing at least 300 loads of laundry.”

A homeowner may not consider a small leak to be a high priority—only 1 in 6 see non-weather-related water damage as a serious concern, according to The Hanover and Harris Poll. However, the longer someone waits to take action, the more expensive it can be to fix.

Research from the Insurance Information Institute notes that a \$500 repair to a damaged water line might top \$1,500 if delayed by two years. That’s not counting adjustment for inflation. Among insurers, water leaks fall into the “Water Damage and Freezing Category,” which has the second-highest number of claims annually—about 1.5 per 100 homes (“Wind and Hail” is No. 1, at 2.8). The average claims severity is \$15,400 per home, which places it fourth-highest overall (way behind the \$88,170 total for fire and lightning claims).

“The good news is that it is easier and more affordable than ever for insureds to access tools to mitigate the risk of water damage in their home,” notes Kris Zebratski, an advisor with Amwins, a wholesale distributor of specialty insurance products. “Water pressure regulators, pressure reducing valves and leak detection systems are among the best devices to detect and prevent pipe breaks and leaks. Typically, a homeowner can have all three tools in their home for \$1,500 or less. These devices can prevent tens or even hundreds of thousands of dollars in damage.”

For more information, download Green Builder Media’s ebook [Size Plumbing Smarter](#). GB

THE SEVEN PILLARS

— VALUE PER SQUARE FOOT —



5

DECARBONIZATION



Equal footing. Recycled or “green” cement—such as Terra CO2 Technologies’ waste granite-developed *OPUS SCM* at a project in Sugarland, Texas—provides a surface that is environmentally friendlier but just as durable. CREDIT: TERRA CO2 TECHNOLOGIES

Embodied carbon can account for up to 50 percent of a building’s total emissions over its lifecycle, according to the Carbon Leadership Forum—making material choices a critical, forward-looking value factor.

Material selection is quickly becoming a strategic decision, not just a design one. Builders who prioritize low-carbon products and document their choices are positioning themselves ahead of tightening regulations and shifting market expectations.

Knowing a product’s carbon footprint is key. For example, some materials, such as acrylic paint, have a much higher footprint than most homeowners realize. A house with siding that requires fewer repaintings produces less pollution over time. Cement made without high heat has a much lighter carbon impact.

A ZERO CARBON QUESTION

According to the World Green Building Council, structures are currently responsible for 39 percent of global energy-related carbon emissions: 28 percent from operational emissions due to the energy needed to heat, cool and power them; and the remaining

11 percent from materials and construction.

A home that ends in the upper echelon of the Decarbonization pillar does the opposite: it’s closer to being zero carbon-emitting. Enter the International Living Future Institute (Living Future), which in 2018 developed Zero Carbon Certification. It’s the only standard to measure actual decarbonization, not just reward carbon calculations or modest reductions, according to Living Future CEO Lindsay Baker.

There are three general requirements: authenticity, resiliency and value. Achieving these targets demonstrates a home’s “credible and comprehensive approach to carbon neutrality to enhance the resilience and asset value of a built project,” the institute notes.

There are two forms of carbon reductions. Under embodied carbon, new building and building renovation-categorized projects must demonstrate a 20 percent reduction in the embodied carbon emissions of primary materials and exterior materials. With operational carbon, all projects must achieve an energy efficiency target over a 12-month period. In both cases, the results are compared to those of a typical existing building with comparable climate, size, use, and occupancy.

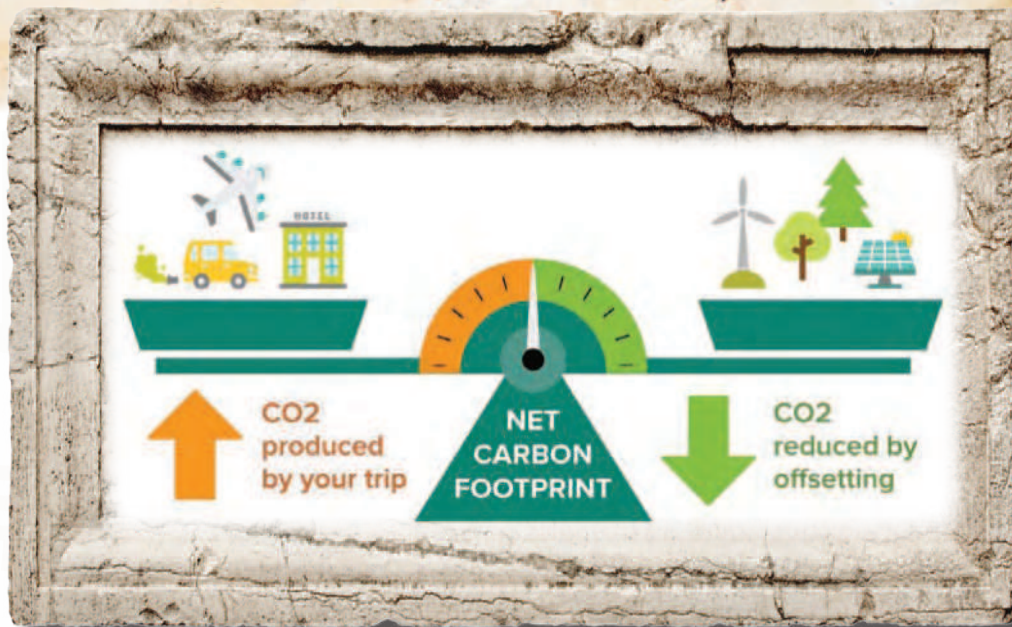
“Embodied carbon has emerged as an urgent industry and policy priority for building sector decarbonization,” notes Brad Benke, manager of low carbon buildings at the Carbon Leadership Forum. “Building practitioners are working to measure and reduce embodied carbon on their projects and engage building owners to commit to reducing the embodied carbon of their portfolios.”

DECARBONIZATION ESSENTIALS

There are three key tenets that will facilitate the ongoing decarbonization of the built environment.

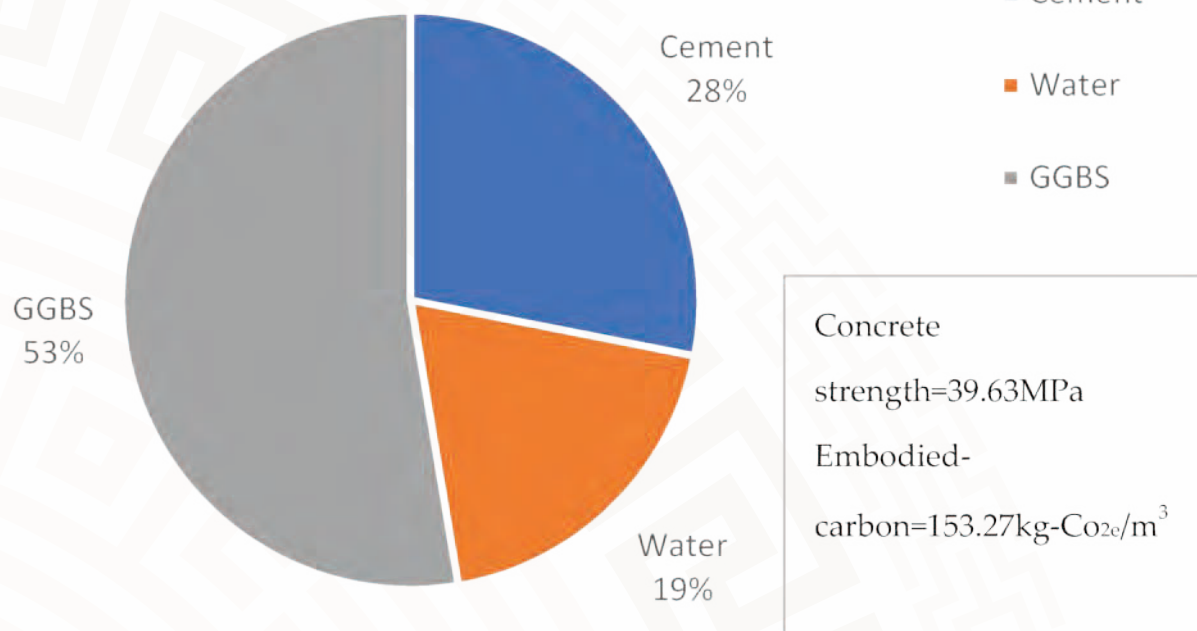
The first tenet addresses performance through climate responsive design, building science, and green construction, following best practices such as:

- Implementing passive heating, cooling, and ventilation strategies
- Enhancing energy efficiency and thermal comfort
- Converting to all-electric
- Designing for health and wellness
- Adopting renewable energy
- Installing advanced technologies for control optimization



Balancing act. A carbon offset is a transaction that removes greenhouse gases from the atmosphere to compensate for emissions made elsewhere. They are a commodity because there aren't enough low-carbon products, construction and waste management practices, or transportation and packaging solutions to build net zero homes.

CREDIT: SUSTAINABLE TRAVEL INTERNATIONAL



Carbon composite. There are various blends, but the typical low-carbon, emission-absorbing concrete is primarily recycled content. In this case, most of the product is Ground Granulated Blast-furnace Slag (GGBS), a sustainable supplementary cementitious material made from recycled iron production by-products.

SOURCE: SCHOOL OF ENGINEERING, COLLEGE OF ARTS, TECHNOLOGY AND ENVIRONMENT, UNIVERSITY OF THE WEST OF ENGLAND, BRISTOL

- Inspecting, testing, and measuring performance throughout the build and ongoing operations

The second tenet involves the meticulous specification of low-carbon products (for example, those with Environmental Product Declarations [EPDs]) from low-carbon companies. In a very short timeframe, EPDs have transformed from obscure to vital. According to a recent COGNITION Smart Data survey:

- Approximately 85 percent of builders currently specify products with EPDs. Of those builders who are not, 50 percent say that they'll start doing so within a year, and 45 percent say they'll start doing so in the next few years. Less than 5 percent say that they won't specify products with EPDs.
- When asked why they specify products with EPDs, the top three responses were understanding product roadmaps, regulatory requirements, and

4. DECARBONIZATION (0–150 points)	
4A. Embodied + Operational Carbon Strategy	
LEVEL	POINTS
Zero Carbon Certified (Living Future)	120
Documented EPDs + CLF Benchmark	90
Partial material disclosure	60
No accounting	30

4B. CARBON REDUCTION ADDERS (MAX +30)	
FEATURE	POINTS
Low-carbon concrete / steel	+10
Biogenic / wood-heavy structure	+10
Adaptive reuse / prefab efficiency	+10
Carbon Category Cap: 150 points	

Future living. Homes that are zero carbon certified are far more likely to have a strategy for handling the different types of carbonized products on the market.

- consumer demand.
- More than 60 percent of builders assert that they’re seeing an increased demand for products with EPDs by consumers. Another 20 percent respond that while consumers might not be asking specifically for EPDs, they’re looking for product certifications and information to verify sustainability attributes.

Two examples of low-carbon successes are concrete and steel. Both are essential for modern construction but account for roughly 15 percent of global CO₂ emissions, according to sustainability media firm The Trellis Group. Low-carbon alternatives reduce this footprint by using supplementary cementitious materials (SCMs) or recycled scrap steel, achieving comparable performance.

Low-carbon concrete replaces highly carbon-intensive cement with industrial byproducts such as fly ash, slag, or recycled waste products. It often reaches compression strengths that rival or exceed conventional concrete. But they can take longer to cure than traditional cement, making them less ideal for projects requiring rapid early strength.

Meanwhile, conventional steel relies on iron ore and coal. Low-carbon alternatives (a.k.a. “green” steel) are made by melting recycled scrap steel in electric arc furnaces (EAFs) instead of using traditional blast furnaces. Using scrap steel can reduce the thermal energy required by up to 75 percent. But

CNUGHT ‘LOGS’ THE FUTURE

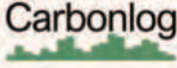
It may seem too soon to worry about AI’s impact on homes and construction companies, but San Francisco-based CNaught has taken a step toward showing people what’s to come. The carbon credit manager has unveiled *Carbonlog*, the first plugin, independent academic research-driven tool that tracks the carbon footprint of any AI-assisted coding.

It’s a down-the-line effort: *Carbonlog* follows the amount of carbon emissions generated and energy consumed with every ChatGPT response, AI-generated image, every “let me search that for you.” According to CNaught, the price is steep: A single AI query can use 10 times as much electricity than a standard online search.

Meanwhile, as AI usage increases, the need for controversial, power-hungry data centers goes up with it. By the end of this decade, U.S. data centers are expected to consume more electricity than all energy-intensive manufacturing combined, including aluminum, steel, and cement production. The amount of carbon emissions will also skyrocket, according to Goldman Sachs Research.

But up to this point, there hasn’t been a bonified way to track the emissions. And that’s how we got here, according to CNaught co-founder and CEO Mark Chen. “We built *Carbonlog* because measurement has to come before management,” he says. “Right now, almost nobody is measuring.”

The developer plugin is available for free at [CNaught’s Claude Code plugin marketplace](#).

the availability of high-quality scrap is limited compared to global demand.

DECARBONIZATION KNOW-HOW

The third tenet, a carbon offset, is a transaction that removes CO₂ or other greenhouse gases from the atmosphere to compensate for emissions made elsewhere. One carbon offset is equivalent to taking 1 metric ton of carbon out of the air. The most common carbon offset projects today focus on emissions reductions, forest management and conservation, biodiversity protection, renewable energy, biochar, and direct air capture.

Customers are often purchasing carbon offsets to reach the “last mile” of eliminating carbon emissions, since there simply aren’t enough low carbon products, construction and waste management practices, or transportation and packaging solutions to build net zero carbon homes or structures today, according to carbon credit platform CNaught.

The company specializes in helping people choose the portfolio that will benefit them—and the environment—the most. “We need more people to put more money into reducing the amount of carbon in the atmosphere through purchasing voluntary carbon credits,” the company notes. “Today, too many potential buyers don’t know how or what to buy...the market is opaque, confusing, and hard to navigate for even experienced buyers, and organizations need a substantially easier solution.” **GB**

THE SEVEN PILLARS

— VALUE PER SQUARE FOOT —



Happy times. Homes that do well within a Community pillar reflect occupants' lifestyle and social value in terms of access to green space, shared amenities and active transportation. CREDIT: ISTOCK/ANCHIV

Transportation is the second-largest household expense after housing, according to the U.S. Bureau of Labor Statistics. This makes location a major driver of total cost of living.

Homes in walkable, transit-accessible communities can significantly reduce or even eliminate the need for multiple vehicles. This creates a powerful but often overlooked financial benefit.

This category also reflects broader lifestyle and social value in the form of access to green space, shared amenities and active transportation "modes." A superior community offers walking paths, bike lanes and transit proximity. But it also takes pains to slow traffic and make life less noisy and safer for multi-generational families.

WALKING OR WHEELS?

Using a car to get from place to place is as natural as taking a neighborhood walk—people don't think about it much. But there is a large difference between driving and walking when it comes to managing a household. According to the U.S. Bureau of Labor Statistics, 17 percent of all expenditures are from

transportation. That's about \$1,100 per month in an average household, or \$13,300 annually.

By comparison, walking costs absolutely nothing in terms of fuel, parking and vehicle maintenance, according to the Policy Analysis for California Education (PACE). "The primary cost of walking is time," the report notes. "A 15-minute walk takes away time that could be used for studying, sleeping, or other activities."

Walkability is good for house values. Homes within walking distance of schools, shopping, parks and other urban amenities sell for an average of \$80,000 more than comparable properties that are car dependent, according to a report by real estate broker Redfin.

In addition, nearly one-quarter of Redfin's active listings are considered walkable, based on ratings from the firm's subsidiary, Walk Score. The company's scoring tool ranks homes based on its distance to various amenities. Scores of 50-100 place homes in categories ranging from "somewhat walkable" to "walker's paradise." There are also scales for a Transit Score, which measures access to public transit, and a Bike Score, which measures whether a location is good for biking.



EV mitigation? Growing use of EVs and renewables can sometimes take the edge off commuting.

CREDIT: UNAIHUIZIPHOTOGRAPHY



Hot dogs. The healthy minded Community pillar includes amenities such as dog parks, and bike trails, both of which can save money on gym memberships or traveling to outdoor areas. CREDIT: GREEN BUILDER MEDIA

Walk Score®	Description
90-100	Walker's Paradise Daily errands do not require a car.
70-89	Very Walkable Most errands can be accomplished on foot.
50-69	Somewhat Walkable Some errands can be accomplished on foot.
25-49	Car Dependent Most errands require a car.
0-24	Car Dependent Almost all errands require a car.

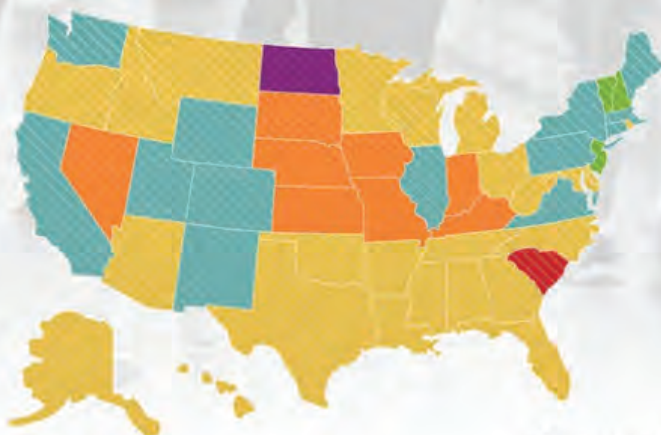
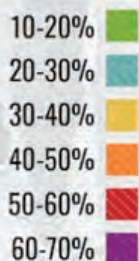
Transit Score®	Description
90-100	Rider's Paradise World-class public transportation.
70-89	Excellent Transit Transit is convenient for both trips.
50-69	Good Transit Many nearby public transportation options.
25-49	Some Transit A few nearby public transportation options.
0-24	Minimal Transit It is possible to get on a bus.



Bike Score®	Description
90-100	Biker's Paradise Daily errands can be accomplished on a bike.
70-89	Very Walkable Biking is convenient for most trips.
50-69	Somewhat Walkable Some bike infrastructure.
0-49	Car Dependent Minimal bike infrastructure.

The “get around” gang. Redfin’s three neighborhood transportation evaluation tools—Walk Score, Transit Score, and Bike Score—gauge how well-placed a home is in terms of access to walking routes, public transportation, and biking infrastructure. SOURCE: REDFIN/WALK SCORE

% of Americans who would drive to a destination that is just 5 mins away



BarBend

State	Percentage	State	Percentage	State	Percentage	State	Percentage	State	Percentage
Alabama	35%	Hawaii	33%	Massachusetts	25%	New Mexico	29%	South Dakota	43%
Alaska	31%	Idaho	33%	Michigan	34%	New York	22%	Tennessee	37%
Arizona	30%	Illinois	27%	Minnesota	33%	North Carolina	33%	Texas	35%
Arkansas	36%	Indiana	40%	Mississippi	33%	North Dakota	63%	Utah	29%
California	26%	Iowa	44%	Missouri	46%	Ohio	37%	Vermont	13%
Colorado	28%	Kansas	45%	Montana	33%	Oklahoma	38%	Virginia	29%
Connecticut	26%	Kentucky	47%	Nebraska	45%	Oregon	30%	Washington	21%
Delaware	36%	Louisiana	38%	Nevada	42%	Pennsylvania	29%	West Virginia	31%
Florida	33%	Maine	28%	New Hampshire	18%	Rhode Island	35%	Wisconsin	33%
Georgia	36%	Maryland	30%	New Jersey	17%	South Carolina	52%	Wyoming	22%

Behind the wheel. Regardless of location and environmental issues, time is a top factor when people choose to drive a very short distance instead of walk.

SOURCE: BARBEND

6. COMMUNITY (0-50 POINTS)

FEATURE	POINTS
WalkScore > 70 or equivalent	+15
Access to transit / services	+10
Community green space	+10
Shared amenities / low-car design	+10
Bike infrastructure	+5
Community Category Cap: 50 points	

A loaded location. Community features and transportation services play key roles in how attractive a home is to a potential buyer. They also serve as markers for what kind of house may be built in a specific area.

A CLEANER LIFE

According to a report by Kora, a sustainability app maker that focuses on carbon offset programs, people who prefer walking to nearby destinations cite the environmental consequences of driving a few miles away: air pollution, noise pollution and traffic congestion. A gasoline-powered car also generates the most pollution during its first five minutes of operation, meaning the short jaunts to the store are doing more environmental damage than a driver may realize.

There are also the general health implications. People who drive are not getting any physical exercise, and they are actually exposed to more pollution in their cars than if they were walking in open air.

“By choosing to walk instead of drive, we’re taking a significant step towards reducing our carbon footprint,” the report notes. “If we swap just five [1.25-mile] car trips per week for walking, we could cut our annual emissions by 86 kilograms. It’s a simple change that adds up to make a big difference over time.”

But not everyone is as concerned. A 2024 report by body health news site BarBend shows that one-third of 3,400 respondents would rather drive than walk for 5 minutes. Some of them cited weather, temperature, timesaving, and the need to transport goods as reasons for getting behind the wheel. But ease of movement is also top choice indoors: 31 percent of respondents said they prefer taking an escalator as opposed to climbing a short flight of stairs.

“Of course, there can often be factors outside your control when attempting to get your steps in each day,” notes report author Phil Blechman. “But when

walking or driving to a destination is feasible, maybe you should opt for your walking shoes rather than your car keys. Those steps add up to a healthier lifestyle long term.”

FRINGE BENEFITS

Although walking, biking and public transportation are far less expensive than driving, it’s not a perfect financial fix. Residents spend roughly 28 percent less on transportation but pay a premium—about 20 percent more—for housing in a dense, amenity-rich area. Meanwhile, in car-dependent areas, homes may be less expensive. But that benefit is offset by a \$12,000 average annual cost of vehicle ownership, according to a report by [Realtor.com](#).

The Community pillar goes beyond mobility and transportation. Other location-based amenities include items such as gardens, walking trails, greenspaces, dog parks, and co-working spaces, all of which enhance the sense of community and add value. A cohesive community also leads to a person’s better physical and emotional health, which can mean reduced risk of anxiety or depression, and a greater sense of purpose, according to Parks & People, a promoter of green space activities in Baltimore.

Ultimately, it comes down to what a homeowner wants, according to Arjit Ray, a real estate researcher at the University of Florida’s Warrington College of Business. “Many consumers prize living in areas within a close walk of everyday amenities because of the added convenience, quality of life or other reasons,” he says. “But what about the bottom line? Can you put a price on walkability and, if so, how much is it worth?” **GB**

THE SEVEN PILLARS

— VALUE PER SQUARE FOOT —



7

EQUITY &
INVESTMENT



Burden of proof. Prospective buyers have many things to consider when planning to buy a home—the biggest being whether they can afford it, and what they must do to make it that way. CREDIT: ISTOCK/SANDWISH

Traditional affordability metrics ignore major cost drivers. The U.S. Department of Housing and Urban Development defines cost burden at 30 percent of income—but this excludes energy, maintenance and insurance volatility.

A clearer picture of affordability emerges when those hidden costs are brought into the equation. By expanding the metric to include total ownership burden—principal, interest, energy, taxes, insurance, and maintenance (PIETIM)—the gap between “cheap” and “sustainable” housing becomes more apparent.

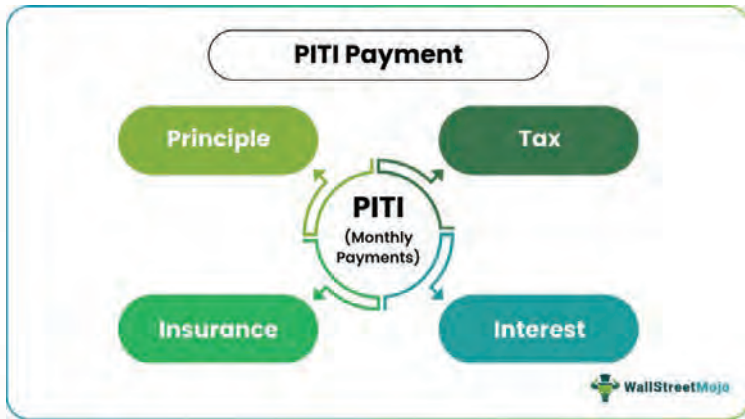
This pillar also highlights the value of predictability. Homes that minimize surprise costs through better construction, documentation and insurance rebates have a competitive edge. For example, a house with leak detection, hurricane tiedowns or “third nail” detailing may cost hundreds less to insure than a home without.

WHAT'S THE COST?

When one talks about the “homeownership burden,” there’s a direct tie-in to Value Per Square Foot



More mortgage available? By expanding a principal, interest, taxes, and insurance (PITI) buying metric to include total ownership burden—principal, interest, energy, taxes, insurance, and maintenance (PIETIM)—the amount of home deemed affordable may drastically change. CREDIT: ISTOCK/2WINDSPA



What a PITI. Principal, interest, taxes, and insurance (PITI) are components of a home buyer’s monthly expenses as an operating budget is determined. It’s the No. 1 tool lenders use to evaluate loan eligibility and home affordability.

SOURCE: WALLSTREETMOJO.COM

(VPSF). This emerging course of action offers a clearer picture as to what “affordability” really means.

“Historically, homes have been viewed through the lens of price per square foot, but that only considers the upfront cost. With rising costs for power, utilities, and insurance, these often-overlooked expenses are eating up housing budgets for families,” says Don Worthington, branch manager of Primary Residential Mortgage Inc., in Layton, Utah. “When homebuyers compare properties on sales price plus operating expenses—PITI (principal, interest, taxes and insurance) plus utilities—VPSF becomes a more accurate, holistic measure. It accounts for both the sales price and the ongoing cost to operate a home.”

And yes, there are a lot of costs. Venturing into long-term ownership cost modeling (a.k.a. total ownership cost or TOC), first-time homeowners would be starry eyed at the prospect of no longer renting. And they might be aware of some initial expenses—such as closing costs, property tax, and homeowners’ insurance—others might be easily missed in the legal or logic-minded fine print: mortgage insurance, a homeowner’s association fee, outside maintenance (What if the driveway or swimming pool needs maintenance? How will you take care of the lawn and trees on the property? What will it cost for weekly trash removal service? How long before the house must be repaired and/or repainted? What about pest control?), and indoors (Higher utility costs? A security system? New furniture? Energy-saving lights and utilities throughout the house?). There are even wildcards: How much will it cost for tools for everyday projects? What about emergency repairs?

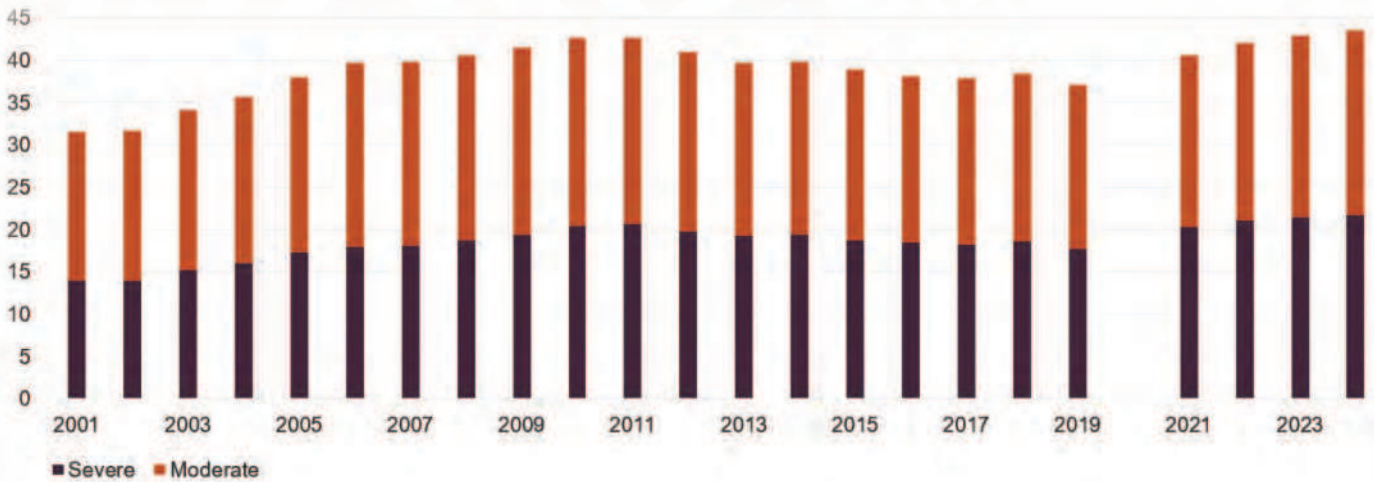
“It’s good to overview the things that first-time homeowners aren’t always thinking of but can be a drain on their finances,” notes a report on the Citizens Bank website. “It’s better to know what could be coming at you and to be prepared for it than be surprised.”

THE BURDEN OF COST BURDENS

Purchasing a home also means determining PIETEM, or the operating cost burden—how much of a buyer’s income needs to be spent on housing costs. Harvard University’s Joint Center for Housing Studies (HJCHS) considers 30 percent to be the maximum monthly income expenditure before it becomes a burden on the household. The number of households exceeding that percentage has grown steadily in recent years, reaching a record 43.5 million in 2024—up from 42.9 million in 2023. The percentage was at a 19-year-low of 37.1 percent in 2019.

As of 2024, the most recent data available, 33 percent of all U.S. households

COST-BURDENED U.S. HOUSEHOLDS (ALL), 2024



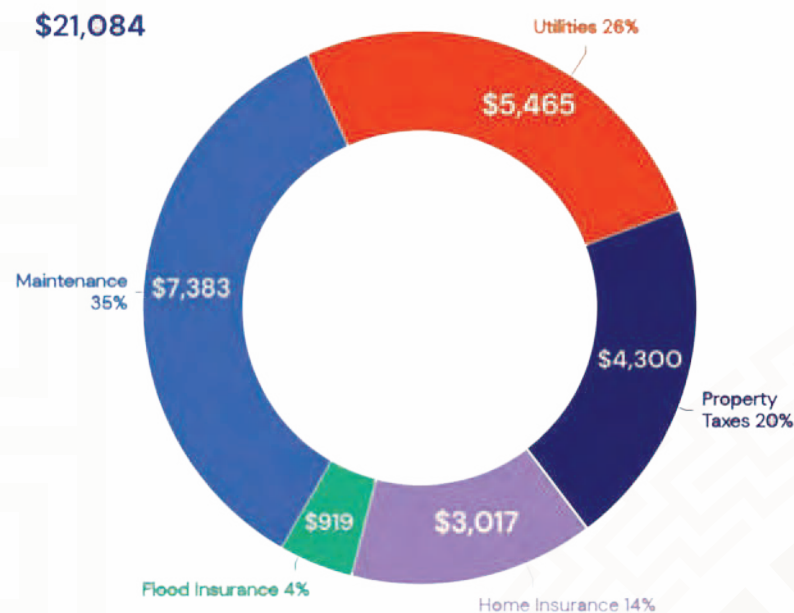
Notes: Cost-burdened (severely cost-burdened) households spend more than 30% (more than 50%) of their income on housing. Data from 2020 are omitted due to data collection issues experienced during the Covid-19 pandemic.

Quite a burden. In 2024, households defined as “cost burdened”—requiring more than 30 percent of overall income to operate the home—increased for a fifth straight year (excluding the COVID-impacted 2020) due to rising inflation, lower incomes and higher maintenance costs.

SOURCE: JOINT CENTER FOR HOUSING STUDIES OF HARVARD UNIVERSITY

HIDDEN COSTS OF HOME OWNERSHIP, 2025

Total Annual Cost, National Average



Wallet thinners. For potential first-time homebuyers, numerous less-than-obvious costs could make it tougher to make that landmark purchase. SOURCE: INSURIFY

are cost burdened. The total was 24 percent in 2023, according to HJCHS. Part of the huge increase can be attributed to an aging population that is seeing overall income decrease. Another factor is an increase in the cost of living. A third is destruction from climate-related disasters, which has driven up insurance costs.

“As housing costs have grown, many households have less money available to cover other necessities,” notes HJCHS Director Chris Herbert. “Many are forced to make difficult spending tradeoffs between crucial needs, including healthcare, food and retirement savings.”

Which brings the value of VPSF back into play. “An underwriter’s job is to assess a homeowner’s ability to repay a loan based on available data,” Worthington says. “With a (VPSF) approach, data should show that operating costs are lower, which increases the likelihood of a homeowner successfully making payments now and in the future.”

LONG-TERM LIVELIHOOD

When people do buy their home, there’s another piece of good news: According to [Realtor.com](#), it can be a successful long-term investment and a source of generational wealth. Assuming the home’s value stays flat, an owner makes money with every monthly payment. Even with interest rates close to 7 percent, equity still works. This equity can come in handy if needed for emergencies, fund new ventures, or buy another house.

If the property’s value increases, the owner makes even more money. The same benefits apply as with the static-valued home, but to a greater degree. [Even with market fluctuations](#), homes typically gain 2-3 percent in value annually. Strategic choices in location and maintenance can further boost the home’s appreciation.

Eventually, the home can be passed on to relatives, transferring the benefits to the next generation. **GB**

7. EQUITY INVESTMENT (0–100 points)

7A. Operating Cost Burden (PIETIM)

PIETIM AS % OF INCOME	POINTS
< 25%	60
25–30%	50
30–35%	40
35–40%	25
> 40%	10

7B. RISK REDUCTION EVIDENCE (MAX +40)

FEATURE	POINTS
Verified insurance discount	+15
Long-term warranties (envelope, roof, systems)	+15
Maintenance cost model provided	+10
Leak detection	+10
Third nail migration	+15
Financial Category Cap: 100 points	

Act of approval. For the Equity Investment pillar, the lower the operating cost burden or PIETIM is, the safer lenders feel about working with the buyer. A few add-ons, such as warranties and leak detection, can make a house even more enticing to both parties.

Living With the Elements



The greenest homes follow a sustainability path adorned with **air-**, **earth-**, **fire-** and **water-based** features.

BY ALAN NADITZ

THE ANCIENT GREEKS BELIEVED that everything was made of four elements: air, earth, fire and water. Builders follow that same philosophy, although they may not be totally aware of it. HVAC units and filtration systems cleanse the air. Sustainably crafted landscaping takes on a Mother Earth friendly tone. Fire resistance and water conservation are now huge topics, thanks to record heatwaves and worsening drought conditions.

Four builders sent *Green Builder Magazine* examples of their element-emphasizing projects. Here's a look at what they're doing, how they've done it, and what it can mean for the future of the construction industry.

AIR

Carbon aware. This Erin Glen Community home was designed with ultra-low air leakage, high-performance triple-pane windows, and optimized insulation levels to minimize heating and cooling demand, and reduce operational carbon.

CREDIT: COURTESY OF LAKEVIEW HOMES



Carbon Conscious

Although it appears conventional, this home treads far more lightly than comparable projects.

It looks like an ordinary new house in a quiet Canadian subdivision. Yet this North York, Ontario home is quietly rewriting the future of residential construction. Over its lifetime, it is projected to reduce its total carbon footprint by 65 percent compared to a code-built home, including an 87 percent annual reduction in operational carbon and a 15 percent cut in embodied carbon during construction.

The home's developers note that this was not a showcase build; it's "a proof of concept to demonstrate that meaningful carbon reduction can be achieved within standard budgets, timelines, and trades." Led by **ENERQUALITY**, in partnership with **Lakeview Homes**, an energy advisor, and 11 other manufacturers, the project—part of the Erin Glen community—began with a simple challenge: Can a standard home be built dramatically more sustainable using only market-available materials?

Three conditions guided every decision: Upgrades had to be feasible today, offer measurable benefits beyond energy savings, and be easily replicable by other builders. The project strategy focused on direct carbon reduction through energy modeling, airtight construction, and low-carbon materials rather than purchasing offsets.

A key component is lower-carbon concrete, which when paired with a holistic approach to envelope, mechanicals, and materials, offered a practical, scalable blueprint for sustainable construction. Other sustainable and low-carbon materials were prioritized, including Owens Corning XPS insulation, Cham Clad recycled siding for exterior cladding, Truss design for solar integration, and other products with verified Environmental Product Declarations (EPDs).

The home was designed with ultra-low air leakage (0.4 ACH using AeroBarrier sealing), high-performance triple-pane windows, and optimized insulation levels (R-22 to R-31 in walls, R-60 to R-31 in attic, R-20 in basement walls). Continuous insulation and reduced



From outside to inside. Lakeview Homes' Erin Glen Community houses were built solar-ready. A conduit and truss design means panels can be added later without major retrofits. Solar roof vents are also installed to enhance attic air circulation and temperature control, while a radon venting system provides improved indoor air quality. CREDIT: COURTESY OF LAKEVIEW HOMES

thermal bridging minimize heating and cooling demand, reducing operational carbon.

Additional sustainable strategies include: PowerPipe drain-water heat recovery system connected to the domestic hot water tank. Combo electric heat pump hot water system providing space and water heating. Truss system engineered to support future solar panel installations. Pre-wiring for motorized window shades to manage solar gain and shading. Solar roof vents installed to enhance attic air circulation and temperature control. Radon venting system for improved indoor air quality. Indirect cove LED lighting for reduced energy use. Exterior Cham Clad siding, made from recycled plastic extrusion offcuts.

Air tightness was improved from 3.0 ACH to 0.4 ACH through precision sealing and envelope optimization. Spray polyurethane foam and XPS continuous insulation enhance thermal performance. Triple-pane coated and tempered glass windows (U as low as 0.25) significantly

reduce heat loss. Additional building science elements include: 2-inch XPS insulation under the basement slab, minimizing thermal bridging at slab-to-wall transitions. Solar-oriented window placement and app-controlled shading design to regulate seasonal heat gain. Roof-mounted solar vents to balance roof air circulation and extend building durability.

A comparable code-built home would generate roughly 133 tons of CO₂e over 30 years. This home is projected at 46.1 tons CO₂e — a remarkable 65 percent total reduction. Its airtightness of 0.4 ACH (versus 3.0 ACH typical) and optimized envelope with triple-pane windows and exterior insulation reduced energy use by half.

For the homeowners, the benefits of these activities were immediate: lower bills, quieter interiors, cleaner air, and resilient comfort during outages or heat waves. For builders, it proved high performance can be mainstream, achievable with coordination, not reinvention. **GB**



EARTH

At one with nature. This custom home has a net energy positive footprint. Sectional relationship of spaces within the house respond to the topography, waterfront views and solar orientation.

CREDIT: MICHAEL BIONDO PHOTOGRAPHY



On Solid Ground

This Earth (and earth)-friendly home puts the ‘green’ in Greenwich.

A couple who spent their careers in healthcare wanted a home where they could age in place and that reflected their values: the importance of wellness, connections to nature, and a minimized carbon footprint. They got their wish with the 5,700-square-foot single-family home in Greenwich, Connecticut that they completed in 2025.

There’s a real connection to earth and Mother Nature with the home. The house, built by Stamford, Conn.-based [Prutting+Co.](#), is positioned on a sloping half-acre lot that overlooks the harbor and the Long Island Sound beyond. The footprint and sectional relationship of spaces within the house respond to the topography, waterfront views and solar orientation.

The actively used outdoor living spaces, located along the south side yard, include a pergola, deck and raised garden beds. Also, given views of the harbor from above, primary spaces are located on the upper floor accessed by elevator and central stair that ascends along the atrium.

The dimensions of the atrium space spill out into the landscape—designed by local architectural firm [James Doyle Design Associates \(JDDA\)](#)—with an outdoor pergola and forecourt animated with organic and curvilinear shapes of a Zen-garden, including raked shells, a topiary tree and rock formations. No-mow grass and native plantings reduce water consumption and decrease maintenance requirements from gas-powered equipment. A covered entry walkway is lined with vine-growing louvers continuing the integration of plant material throughout and around the house.

Reducing energy consumption is central to this home’s sustainability objectives and the owners’ world view. The project is net positive with a certified HERS index score of minus 18. The home, designed by [Amanda Martocchio Architecture](#), requires minimal ongoing maintenance given the application of durable, weather-resistant materials that are panelized with open joints and meticulously weave around the exterior of the house.

In the atrium, an operable four-foot-by-four-foot skylight allows excess heat to escape, while supporting



Green goodness. An outdoor pergola and forecourt with organic and curvilinear shapes of a Zen-garden, including rock formations and a topiary tree, provide eye-pleasing natural beauty. CREDIT: MICHAEL BIONDO PHOTOGRAPHY

the daylight requirements for a growing tree. In the living room, the net zero fireplace’s flame is produced by combusting bioethanol vapor, offering the flame of a traditional fire without the carbon footprint.

Deep southern roof overhangs and balconies provide summer shading and allow for desirable winter warming. Additionally, large windows are covered with aluminum louvers that diffuse direct sunlight and provide textural interest on the outside and inside. An array of rooftop photovoltaics combined with heat pumps contribute to zero-carbon emissions.

Managing abundant daylight is accomplished with deep overhangs, window louvers and recessed motorized shades, while artificial lighting is introduced through dimmable LED recessed lighting on a programmable Lutron system. Occupancy sensors also help to reduce lighting demand in closets and low occupancy rooms.

A tight thermal envelope is achieved with a rigorously detailed rainscreen wall assembly with four

inches of continuous rigid insulation (two staggered layers with joints taped), tenacious air-sealing, and triple-glazed windows and doors.

During construction, an emphasis was placed on air-sealing techniques, leading to a 1.15 ACH50 blower door test. Any supplemental heating and cooling, rarely required, is produced by the 19-kilowatt rooftop photovoltaics combined with heat pumps. Fresh air is renewed throughout the home with operable windows and an energy recovery ventilator (ERV) system.

Materials selected for this home were based on product durability, recycled content and environmentally focused production. On the exterior, materials with environmental product declarations (EPDs) include FSC-certified Parklex Prodema laminated wood panels, and Cembrit and Equitone cement fiber board, manufactured from recycled content containing cellulose fibers, sand and cement. Kebony FSC-certified thermally modified wood decking, which resists rot, decay and warping is used for the atrium flooring and exterior decking. **GB**



FIRE



Second stage. A turn-of-the-20th century Victorian style home destroyed by fire in 2020 has been rebuilt with its historic look intact. But the inner workings of the new version are far more sustainable, featuring everything from solar panels to modern HVAC.

CREDIT: UNIK CREATIVE STUDIO



Royal Rebirth

An historic home destroyed by fire comes back better than ever.

They call it the “Queen of Zero.” Completed in November 2024, this Hyattsville, Maryland home represents a story rebirth: a Phoenix of a house rising from the ashes to become a one-of-a-kind Queen Anne Victorian aligned with the U.S. Department of Energy’s Zero Energy Ready Home (ZERH) standard.

A tragic fire in 2020 damaged the 1901 home beyond repair. The owner, a local musician and longtime Maryland resident with a deep appreciation for historic preservation, explained that “it was never a question of whether we would rebuild” the original home instead of opting for a more-contemporary one. The goal was to replicate the original in appearance, keeping it in form with others in the historic Washington, D.C. suburb.

Yet, recognizing the demands of a changing climate and rising utility costs, the owner also wanted to modernize the functional aspects of his new home with advancements in energy efficiency, resiliency and comfort, according to **DAKS Builders**, the project’s builder.

Such an effort was actually quite appropriate. Victorian homes incorporated what were then cutting-edge techniques, such as taller double-hung windows to maximize interior air flow, and wide porches to reduce heat from direct sun, according to Hyattsville architect Michael Romero of **Romero Architects**.

To achieve net-zero performance, the new structure incorporated a host of innovative products and materials, such as Tesla solar shingles and Powerwall backup batteries, a SPAN smart electric panel, high-efficiency heat pump HVAC and water heating, extensive foundation waterproofing, advanced air sealing and beyond-code insulation. The exterior shell was made of structural insulated panels (SIPs), which provided superior air sealing and insulation properties.

According to Nicole Tysvaer, CEO of **Symbi Homes** and director of sustainability on the project, the home was completed in about



Make mine modern. The interior of the Queen of Zero home is up to date, with features such as energy-efficient lights and appliances, and low- and no-VOC paints. CREDIT: UNIK CREATIVE STUDIO

13 months and achieved everything the team set out to do (and then some). It demonstrated that high-performance homes need not come in square boxes. The house achieved a blower door of 1.6 ACH50 air filtration with a HERS score of 15. “It was quite a feat for a design with seven different roof pitches, multiple bay windows, dormers and a turret,” Tysvaer notes.

There has been some controversy, however. Although “Queen of Zero” met Symbi Homes’ net zero performance criteria, some housing experts argued that a project this size and complex—4,600 square feet, three-stories, with six bedrooms and five bathrooms—make it too large to be considered an example of a green home. Such a massive structure requires more resources to build and generates more greenhouse gas emissions than a typical 2,000-square-foot model, making it more environmentally inefficient.

“Yet, the pathway to decarbonization is not a single road, but rather requires the convergence



Touch of glass. The home’s dual pane windows outperform those of its century-old predecessor, but the design and appearance remain the same. CREDIT: UNIK CREATIVE STUDIO

of many routes,” Tysvaer notes. “This would create a world in which sustainability becomes common vernacular across the construction industry—whether building a luxury mansion or a group of affordable townhomes.” **GB**



WATER

Aqua enthusiasts. The main home and its guest house on the Texas Hill Country Haven site rely on a 30,000-gallon rainwater harvesting system for irrigation, potable use, and gardens.

CREDIT: TIKICAM PRODUCTIONS.



Bring on the Rain

For these two homes in Texas, sustainability starts with everyday H₂O.

This dual dwelling in the Texas Hill Country Haven project in Austin, Texas embodies sustainable luxury through its two connected residences: a main home with a HERS of 56 and a guest home with a HERS of 54, both of which are EPA Indoor airPLUS certified. Thoughtfully designed, these residences merge elegance with energy efficiency, showcasing how sustainability enhances, not limits aesthetics.

At the core of this [Younger Homes](#) property is a beautifully designed 30,000-gallon rainwater harvesting system, capable of capturing up to 6,000 gallons per inch of rainfall from the main residence, supporting irrigation, potable use, and gardens on the 11-acre property.

There's also a well for fresh water, as well as an option to use city water. And there's a mudroom, which supports the owner family's eco-conscious lifestyle and includes a built-in water bottle filter that uses rainwater collected on the property.

Natural water resources extend to secondary locations. An expansive outdoor space maintains focus on beauty and sustainability, with native gardens that support local biodiversity. A thoughtfully designed pool cabana draws the family to nature by incorporating a full kitchen and pizza oven, pool area, and yoga deck.

Younger Homes and architectural firm [Danze & Davis Architects](#) had even more fun incorporating sustainable design within the home.

Solar energy is generated by discreetly positioned ground-mounted photovoltaic (PV) panels, designed to meet the homes' energy demands while minimizing their carbon footprint. For energy independence and resilience, the home utilizes a Generac generator to provide backup power during emergencies.

Stepping through oversized metal and glass doors in the 10,000-plus-square-foot main home, visitors are greeted by natural light and panoramic views of the Texas Hill Country demonstrating that energy-efficient windows



and sliders can amplify the architectural beauty while maintaining efficiency.

The living room showcases expert craftsmanship, with its 25-foot ceilings, exposed dark-stained beams, a meticulously crafted raked plaster fireplace, and custom cabinetry that highlights the dedication to quality.

The kitchen demonstrates attention to detail, featuring a sculpted plaster hood, flush-mounted outlets seamlessly integrated into the stone backsplash, and a thoughtfully curated blend of white oak and walnut cabinetry.

Additionally, a fully furnished garage apartment was built above the garage, making efficient use of available space while providing a private, comfortable retreat for guests.

Eye-popping entrance. Oversized metal and glass doors provide natural light and demonstrate that energy-efficient windows and sliders can amplify architectural beauty. CREDIT: CATE BLACK PHOTOGRAPHY

The previously mentioned cabana optimizes natural ventilation and shade to reduce cooling needs, supporting homeowners' overall health and well-being through green space exposure.

Meanwhile, the 3,800-square-foot guest home is thoughtfully designed for generational living, incorporating features that make efficient use of resources. The home benefits go beyond sustainability; sharing property for generational living fosters close family connections, reduces overall land use, and maximizes shared utilities. **GB**

Coming soon. The VISION House SHAWOOD project—similar to Sekisui House's Magnolia Ranch—will introduce three communities that showcase a new valuation metric for housing, Value Per Square Foot.

CREDIT: COURTESY OF SEKISUI HOUSE



A New VISION With Value

Our latest demonstration project, VISION House SHAWOOD, turns the old 'price per square foot' metric upside down.

BY SARA GUTTERMAN

I'm excited to announce the VISION House SHAWOOD, a multi-faceted demonstration project that changes the conversation for homebuilders and buyers. The VISION House SHAWOOD marks our first collaboration with Sekisui House, one of the world's most respected and forward-thinking homebuilders.

The project will introduce three SHAWOOD communities with diverse product designs and aimed at different demographic groups. Our driving purpose will be to showcase a new valuation metric for housing, Value Per Square Foot (VPSF). We'll break down this concept into its pillars of meaning, and show how builders and homeowners can use this metric to plan and purchase homes that are designed with operational costs in mind, not just upfront costs.

VALUE PER SQUARE FOOT

The current housing valuation metric, Price Per Square Foot, only represents how big a house is and how much it costs. In contrast, VPSF incorporates sustainability, performance, resiliency and independence, offering a more-accurate measurement of a home's worth. This reflects modern performance standards as well as

expectations of today's homeowners.

Through the VISION House project, we'll analyze Sekisui's SHAWOOD communities in Las Vegas, Los Angeles and the Bay Area, applying the seven pillars of the VPSF metric:

- **Energy:** performance and renewables
- **Resiliency:** climate-responsive design, durable materials, and energy independence
- **Health and wellness:** indoor air quality, non-toxic materials, acoustics, daylighting, biophilic design, mental health, comfort and productivity
- **Water:** quality, conservation and efficiency
- **Decarbonization:** embodied and operational carbon, lifecycle impact and environmental stewardship
- **Equity and investment:** long-term affordability, wealth-building, avoided risk costs and enhanced resale value
- **Community:** social cohesion, access to nature, mobility, walkability, car-free design, and shared amenities

Through this process, we plan to showcase how homes built with the VPSF approach enable homeowners to lower operating costs, utility bills and insurance premiums, enhance efficiency, wellness, resilience, safety and independence—and reduce their carbon footprint.

DESIGNED FOR REAL LIVES

Sekisui has intentionally shaped its SHAWOOD brand around lifestyle archetypes reflecting the realities, rhythms, and aspirations of today's homeowners. Deep research into occupant behavior, family dynamics, and emotional needs inform design aspects like spatial flow, daylighting, privacy gradation, air movement, flexibility, storage, and the choreography of daily life.

SHAWOOD plans are optimized for how people truly live in their homes. Design examples include:

- **Serene sanctuary:** Peaceful, refined living for two. A single-story sanctuary emphasizing ease, natural light, and restorative outdoor connection, ideal for those seeking beauty, tranquility and simplicity.
- **Nurture dwelling:** Spaces that support healthy growth. Double-height volumes, clean sightlines, and interconnected spaces allow children to flourish while maintaining the intimacy of family life.

- **Vitality retreat:** Active, “second-life” sanctuary. A home that supports purpose-driven living, wellness, and reinvention, designed for those embracing a new chapter with energy and intention.
- **Atelier haven:** Indoor-outdoor creativity. Vaulted ceilings, exposed architectural structure, and adaptable rooms inspire at-home creators, artistic expression, remote work, and evolving modern lifestyles.
- **Nature refuge:** Private, nature-immersed oasis. Serene nooks, atriums, nature-framed views, and integration with the surrounding environment support introspective retreat in a world that rarely slows down.

THE ART OF PRECISION, THE SCIENCE OF STRENGTH

SHAWOOD demonstrates an integrated approach to high-performance building and climate-ready engineering.

From ember-resistant building assemblies to moisture-managed construction systems and passive thermal strategies capable of maintaining comfort during power outages, every material and design decision in SHAWOOD homes is informed by climate realities.

High-performance windows and doors stabilize comfort amid temperature swings, while advanced electrified systems, balanced ventilation, and heat pump

Natural thinking. Design elements of a new SHAWOOD community include environmentally friendly interior and exterior tiles, porcelain slabs, quartz countertops, and sustainably manufactured flooring.

CREDIT: COURTESY OF SEKISUI HOUSE



Health and wellness. Homes built within the Seven Pillars of Value Per Square Foot principle meet attributes such as indoor air quality, non-toxic materials, acoustics, daylighting, biophilic design, mental health, comfort and productivity. CREDIT: COURTESY OF SEKISUI HOUSE



All-in-one value. VISION House SHAWOOD is a combination of high performance and renewables, climate-responsive design, durable materials, and energy independence. CREDIT: COURTESY OF SEKISUI HOUSE



A Sekisui storyteller. Throughout 2026 and into 2027, Green Builder Media will document the evolution of this project through extensive editorial coverage, video storytelling, research, and onsite exploration. CREDIT: COURTESY OF SEKISUI HOUSE

technology for HVAC, water heating, clothes drying, and induction cooking reduce operational emissions and increase resilience.

Fresh, filtered air circulates quietly and continuously to support respiratory health, and non-toxic materials and biophilic finishes reduce chemical exposure and enhance natural connection. Meanwhile, drought-tolerant landscaping minimizes irrigation and adds resilience by reinforcing defensible space.

Solar + storage systems allow homes to intelligently harvest, store, and share energy to enhance grid stability while lowering costs and remain powered when grids go down.

FOLLOW ALONG

The VISION House SHAWOOD project is more than a demonstration project. It is a template for what housing must become in a world defined by climate volatility, economic pressure, and an urgent need for safer, healthier spaces.

Throughout 2026 and into 2027, Green Builder Media will document the

evolution of this project through extensive editorial coverage, video storytelling, research, and onsite exploration.

We'll track the VPSF analysis, as well as the design and construction of a new SHAWOOD community, which will proudly boast products such as:

- DalTile interior and exterior tile, porcelain slabs, and quartz countertops
- Carrier high-performance heat pump HVAC systems
- Mohawk sustainably manufactured flooring solutions
- Rheem efficient heat pump water heaters
- Sunrun solar, storage, smart panel, and EV charging solutions
- Westlake Roofing resilient concrete tile

We invite you to walk this journey with us as the VISION House SHAWOOD spotlights the transformation of the U.S. housing market and the emergence of VPSF.

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

THANKS TO OUR GENEROUS SPONSORS
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TODAY'S HOMEOWNER



VALUE VS. VALUES

The decision to buy a home is more than just a matter of money.

BY SARA GUTTERMAN AND VICTORIA MUHARSKY

A wide range of factors influence homebuyers' decisions. From location and budget to home type and neighborhood, buyers must navigate a complex set of considerations. Purchasing a home is not simply an economic transaction—it is an emotional decision, as buyers are choosing where they will live, grow and connect within a community for years to come.

Homebuyers make decisions through a blend of rational analysis and emotional judgment. Green Builder Media's COGNITION Smart Data industry research shows that these drivers fall into two distinct but equally important categories: "Value" and "Values."

Values reflect the emotional and lifestyle motivations that shape how people want to live. These include comfort and daily livability, peace of mind and safety, health and indoor air quality, environmental stewardship and carbon reduction, and a growing desire for independence through renewable energy systems.

Value, by contrast, captures the financial dimension of the decision: initial cost and total cost of ownership, resale potential, payback periods on energy and efficiency investments, and overall return on investment.

COGNITION Smart Data provides clear insight into how these forces interact throughout the homebuying and remodeling process. While financial realities establish boundaries, it is often values—emotional

priorities and lifestyle aspirations—that ultimately guide decisions about specific homes, products, features and benefits.

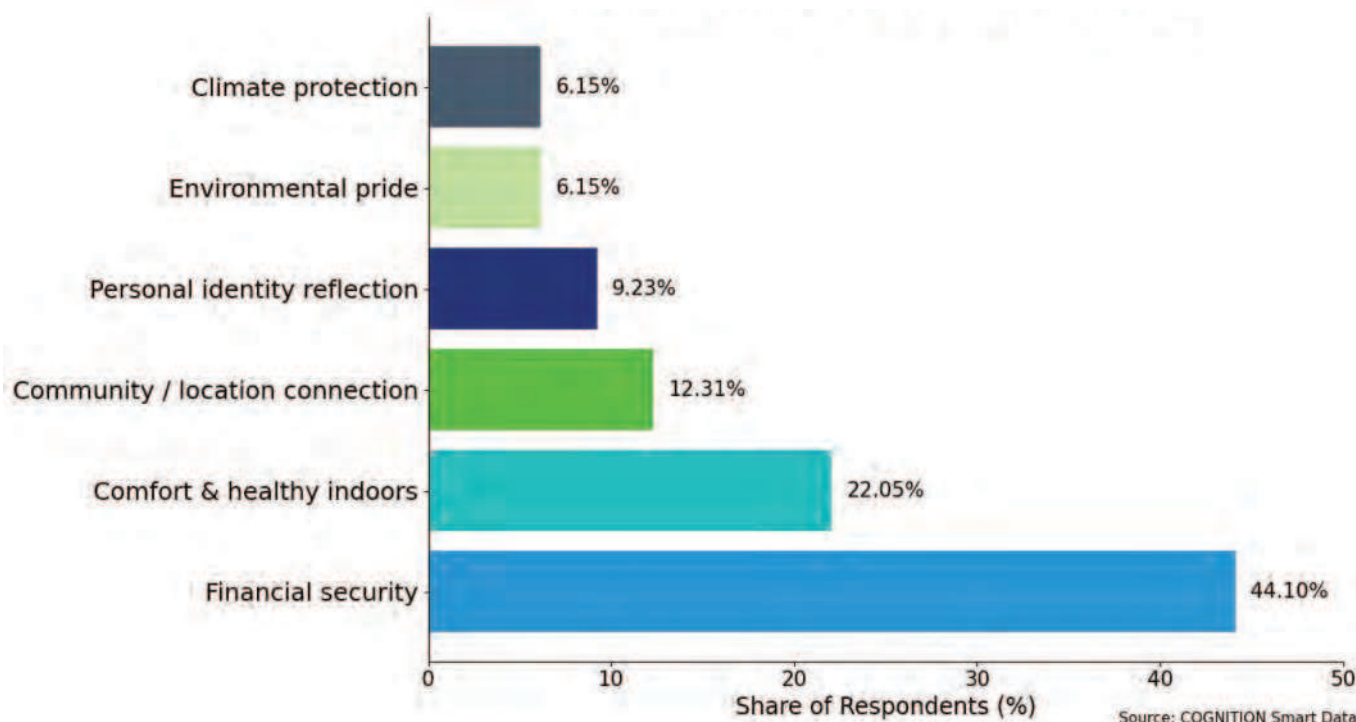
And yet, many builders continue to anchor their messaging in financial rationale alone, overlooking the value-driven motivations that more powerfully influence buyer choice, and ultimately determine what sells.

FINANCES AND EMOTIONS DRIVE HOMEBUYING DECISIONS

Financial priorities in homebuying are often rooted in deeper emotional needs—most notably, the desire for security and confidence in one of life's most significant decisions.

COGNITION Smart Data reinforces this connection: financial security ranks as the most important factor—44 percent in defining the ideal home—followed by comfort (22 percent) and location (12 percent). Notably, financial security holds the top position across every generation.

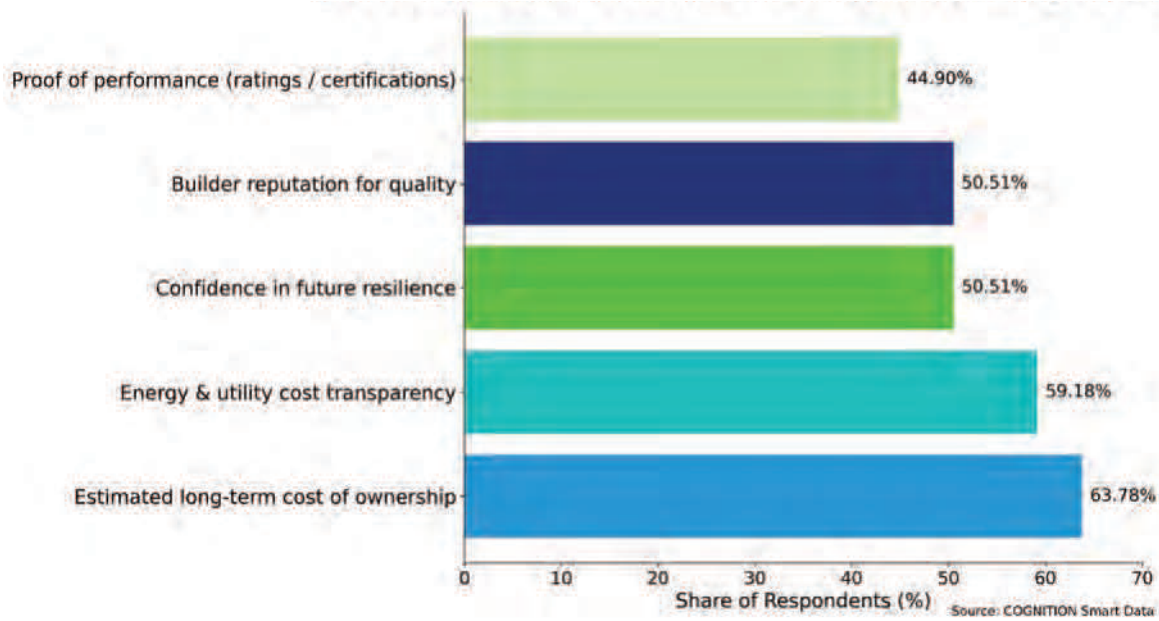
What matters most in an ideal home?



But financial security is not just about affordability—it's also about certainty. In an environment where consumer trust remains historically low, confidence is built through transparency. Buyers feel most assured when they clearly understand the full, long-term cost of homeownership.

This is where value and values converge. The top drivers of buyer confidence are inherently value-based—clarity around total cost of ownership and transparency in monthly utility and energy expenses—yet they ultimately serve an emotional outcome: helping buyers feel confident they've made the right choice.

What Helps Buyers Feel Confident They're Choosing the Right Home?

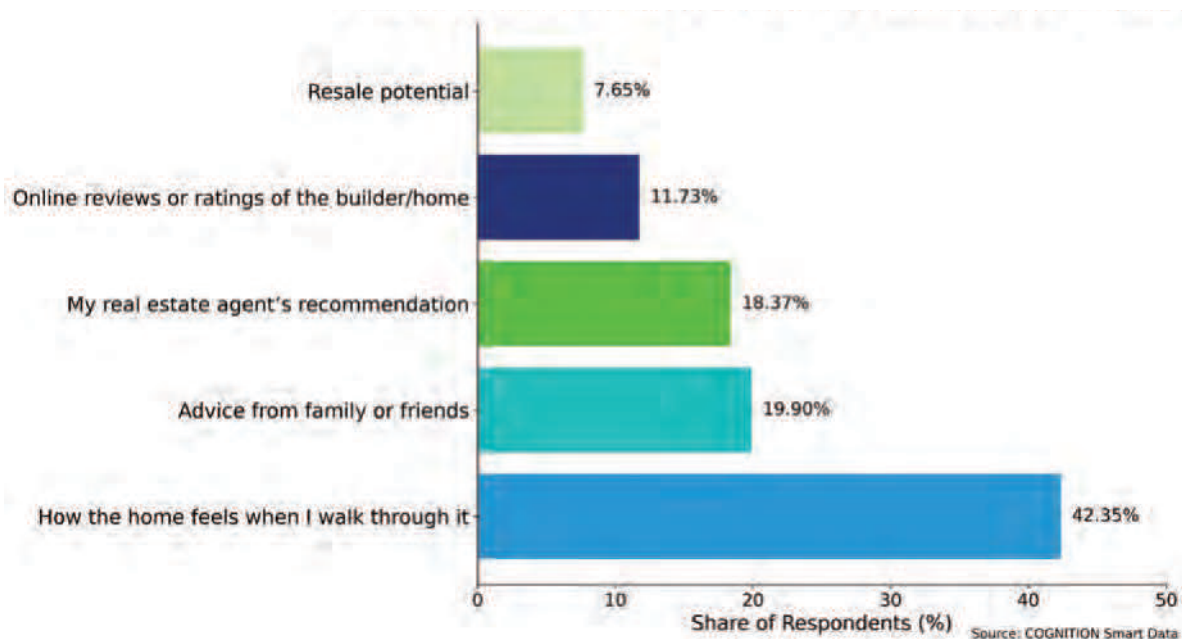


For builders, the implication is clear. Communicating long-term costs with clarity and simplicity can significantly strengthen buyer confidence. Messaging such as “know what to expect every month” or “designed to minimize surprise expenses” reinforces a sense of control, predictability and trust.

Once financial parameters are established and buyers feel confident in their options, the decision-making lens shifts. When comparing similar homes, values take the lead. Forty-two percent of buyers are primarily influenced by the emotional response during a home tour, making “how the home feels when I walk through it” the most decisive purchase driver across all generations.

In the end, buyers may justify their decisions with numbers, but they make them with both confidence and conviction.

What Most Influences the Final Decision Between Similar Homes?



“Buyers are not just choosing homes—they’re choosing how they want to live.”

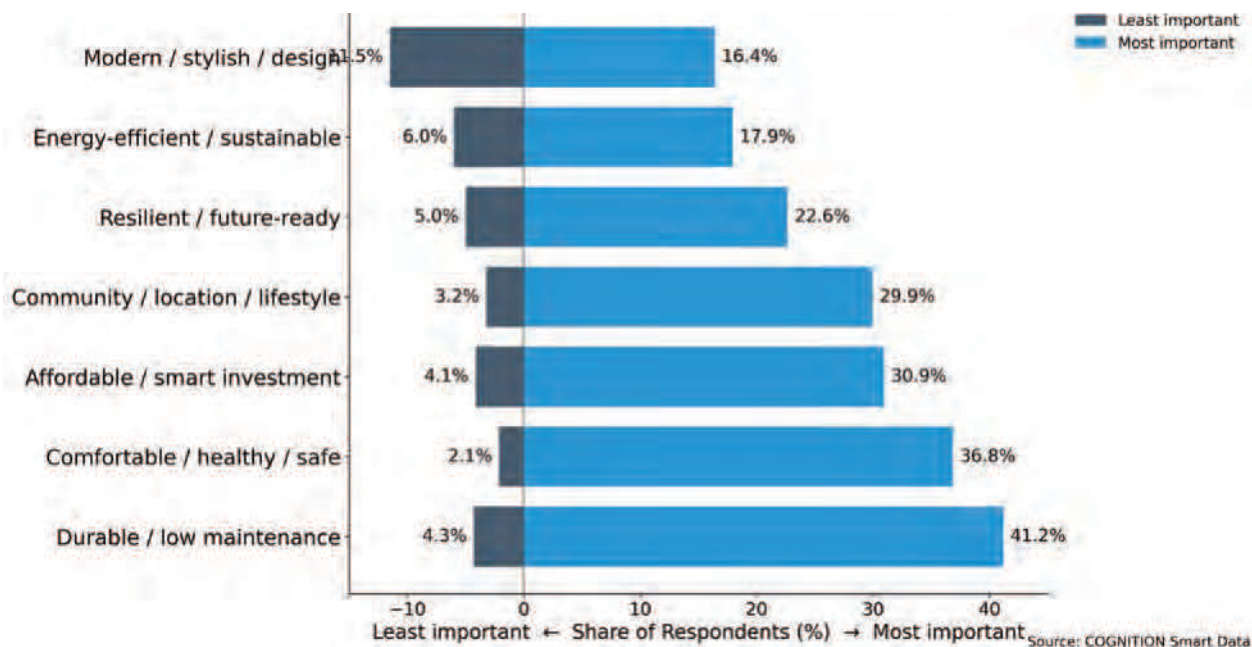
Social influence is the second most important purchase driver, with 2 percent of buyers citing the opinions of family and friends as a key factor in their decision-making. By contrast, traditional financial metrics—such as resale potential—rank among the least influential.

These findings reveal an important shift: Once affordability thresholds are met, homebuyers prioritize lived experience over long-term investment framing. The idea of a home as a sanctuary—one that supports daily well-being, personal growth and meaningful connection—outweighs purely financial considerations when comparing otherwise similar options.

For builders, this represents a clear opportunity. Highlighting features that enhance day-to-day living can be far more persuasive than emphasizing abstract financial benefits. COGNITION Smart Data shows that the words and phrases that resonate most strongly with homebuyers are “durable or low maintenance,” “comfort, health or safety” and “affordable or smart investment.”

The takeaway is clear: Buyers are not just choosing homes—they’re choosing how they want to live.

Which Phrases Polarize Interest Most Strongly?

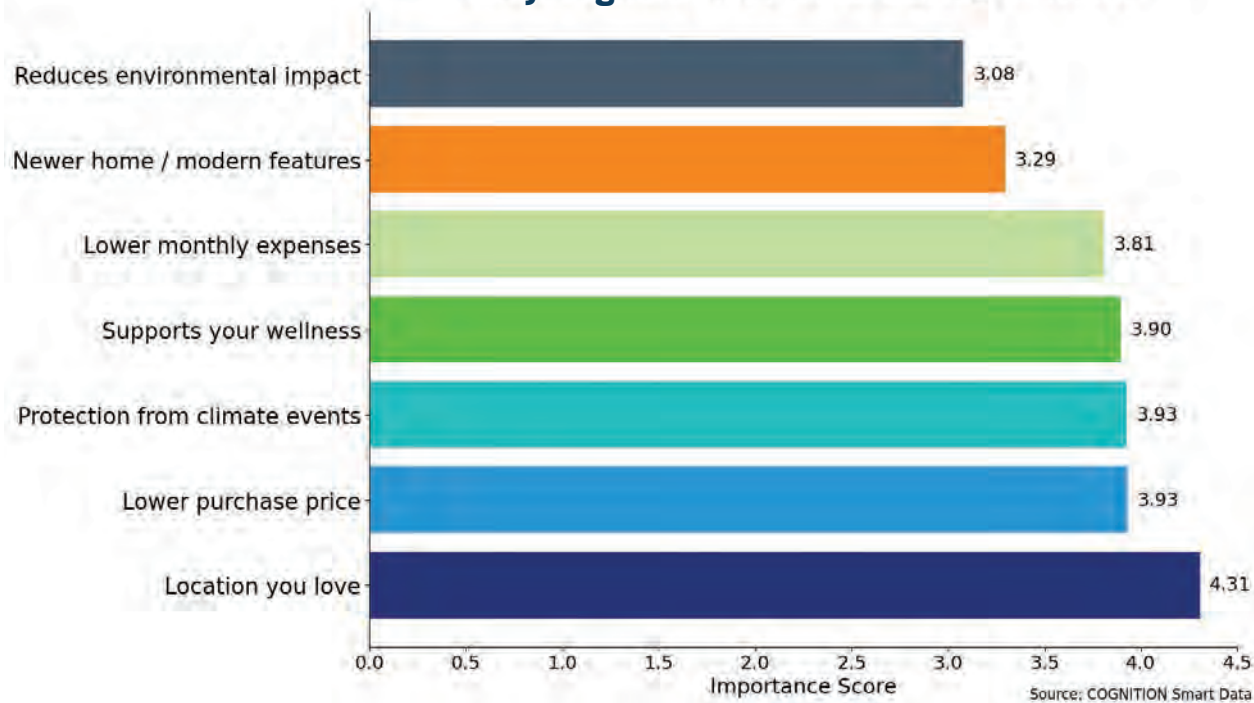


Marketing that highlights these qualities enables buyers to envision the life a home can support. Such messaging resonates because it speaks directly to the outcomes that buyers value most. When done effectively, this type of storytelling transforms features into lived experiences, helping buyers see not just what a home is, but what it makes possible.

LOCATION, LOCATION, LOCATION

Location remains one of the most important factors in homebuying. In fact, according to COGNITION Smart Data, “Location you love” ranks highest among factors that matter most to buyers.

What Matters Most When Buysing a Home?

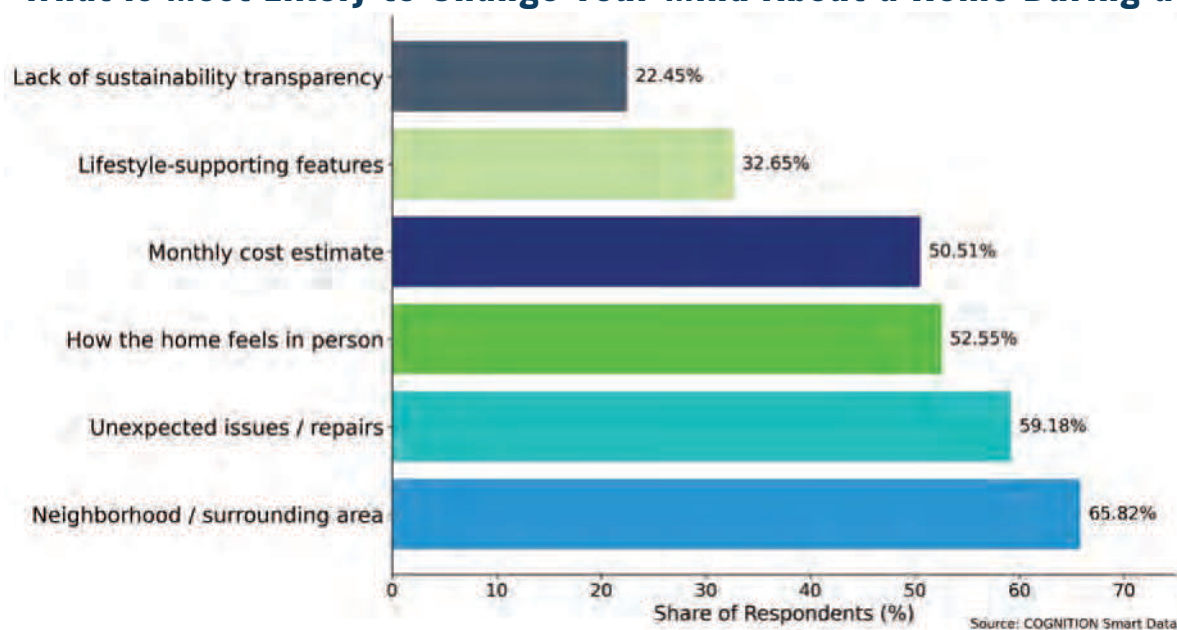


Location seamlessly integrates both value and values. It shapes daily life—proximity to work, family, and social networks—while also influencing financial outcomes such as property values, school district quality, utility costs, and overall cost of living.

From a value perspective, location affects tangible considerations like property taxes, employment opportunities, and energy expenses, often driven by regional climate and infrastructure. From a values perspective, it reflects deeply personal priorities: staying connected to community, maintaining relationships, and accessing the places and experiences that define quality of life.

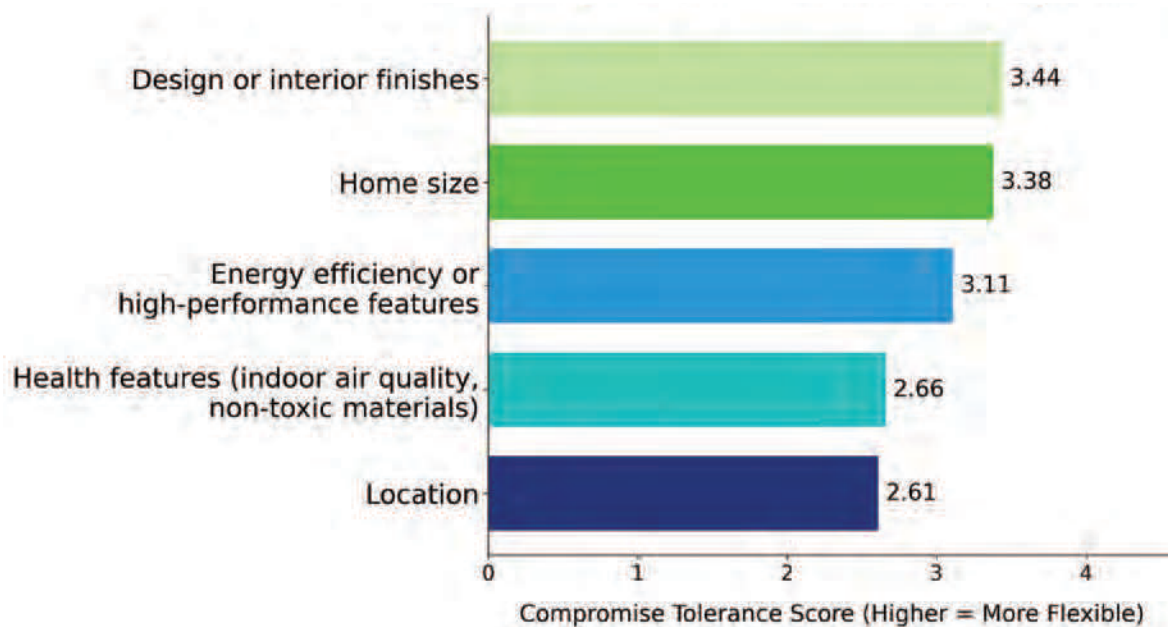
Location also plays a decisive role in real-time buyer perception. Almost 66 percent of buyers identify the neighborhood and surrounding area as the most influential factor during a home tour, reinforcing that where a home is situated can be just as important as the home itself.

What is Most Likely to Change Your Mind About a Home During a Tour?



“Even subtle differences in location—neighborhood appeal, proximity to work or family, or access to amenities—can quickly shift a buyer’s perception and desirability of a home.”

What Buyers Will Protect vs Compromise On?



Source: COGNITION Smart Data

A home’s location shapes emotional and practical considerations, influencing not just the property itself, but the lifestyle, community and sense of place it offers. Even subtle differences—neighborhood appeal, proximity to work or family, or access to amenities—can quickly shift a buyer’s perception and desirability of a home.

In many cases, location becomes the deciding factor, often outweighing financial considerations or even in-home features during a tour. It defines how a home feels to live in and how it functions day to day.

Given its far-reaching impact, it’s no surprise that location is the attribute buyers are least willing to compromise on, followed by health features and overall comfort. By contrast, buyers are far more willing to trade off elements such as home size and design to secure their ideal location.

Builders can use these tradeoffs as a strategic framework for decision making. By prioritizing highly desirable locations and integrating key attributes such as healthy home features and energy efficiency, they can align their offerings with what buyers value most. At the same time, making thoughtful compromises on elements such as size or design allows builders to deliver greater overall value, meeting the practical and emotional expectations of today’s homebuyers. **GB**

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OFF-GRID IN THE ARCTIC



A successful solar EV charging pilot in the far North could power the territory's electric future—and more.

A place with more than eight months of limited daylight has become a prime example of how to move car owners away from fossil fuels, regardless of climate conditions.

Easee, a Norwegian pioneer in smart electric vehicle (EV) charging technology, has successfully completed a pilot program with Subaru in Canada's Northwest Territories (NWT), in which an EV was charged in the remote sub-Arctic using power generated solely from portable solar panels. The effort counters a belief that solar energy is only fully functional in hotter, sun-intensive locales.

The trial, carried out in collaboration with technicians from the NWT and

observed by members of the local Inuit community, resulted in an electric Subaru Solterra being successfully charged using a test rig comprising of four latest-generation solar panels connected to an [EcoFlow Delta Pro 3](#) battery and inverter system.

Despite the challenging February light conditions—overall, NWT at that time averages a mere 2.5 hours of unobstructed sunlight per day, according to [WorldData.Info](#)—the vehicle charged reliably at approximately 25 percent of the speed of a conventional 7 kilowatt (kW) home or public charger, according to Easee CEO Anthony Fernandez. Use of 8-10 more solar panels would match the conventional speed rate.



Luddite lodgings. Researchers used some of the oldest housing technology as base camp, while testing extreme temperature effects on solar charging. The ability to power electric vehicles (EV) with solar panels and EV chargers could reduce dependency on expensive and hard-to-transport fossil fuels in the Arctic. CREDIT: COURTESY OF EASEE

“Together with Subaru, we’ve demonstrated that smart EV charging can operate beyond traditional grid infrastructure,” Fernandez says. “Using portable solar power in sub-Arctic conditions, we’ve shown that electrification is viable even in remote environments.”

Such a finding means that solar energy can be used virtually anywhere in the world, according to Madison Marple, public relations specialist with Subaru Canada. “This project was a natural fit for the Subaru Solterra,” he says. “It’s important to continue to demonstrate the durability and viability of EVs in more-extreme climates. We are grateful for the help of Easee and our other project partners to bring this demonstration to life.”

SUPPORTING RESILIENCE

Climate change is impacting Canada’s Arctic and sub-Arctic regions at a rate three times faster than temperate and tropical zones. In recent years, forest fires have forced evacuations from local communities, while drought conditions have affected water supplies. At the same time, the cost of living has surged as communities remain heavily reliant on fossil fuel flown or transported over vast distances.

With unpolluted skies and intense sunlight, solar power adoption is accelerating across the NWT. More remote communities are now exploring how renewables, combined with electrification, can reduce fuel dependency



Sun screens. Four sets of solar panels are doing what people said wasn't realistic in the Arctic: Making photovoltaic a suitable form of energy for cars, homes and businesses in the far North. CREDIT: COURTESY OF EASEE

and improve long-term resilience.

The pilot between Easee and Subaru demonstrates how smart EV charging infrastructure can operate far beyond traditional grid-connected settings—opening new possibilities for transport, energy independence and lower-emission living in the North, the companies note.

The test also sparked enthusiasm within the indigenous Inuit community, who see portable renewable energy as key to maintaining their traditional, nomadic way of life.

Flexible, roll-up solar panels and portable wind turbines could in future be used to charge electric snowmobiles, enabling travel across traditional lands without carrying fuel.

During the demonstration, one local resident—born in an igloo—described green technology as critical to maintaining relevance for future generations. Electricians even connected the electric vehicle to power a light inside an igloo, illustrating the versatility of EV batteries as mobile energy sources.

The successful charging of a Subaru vehicle using solar energy alone reinforces the potential for electric transport solutions in regions where logistics, fuel costs and environmental pressures are increasingly challenging.

A REMOTE ELECTRIFICATION BLUEPRINT

As the Arctic grows in strategic and environmental importance, scalable, smart charging solutions will play a crucial role in enabling sustainable mobility. The Northwest Territories pilot provides a blueprint for how renewable generation, battery storage and intelligent EV charging can work together—even in extreme climates.

Easee's smart charging technology is designed to integrate seamlessly with renewable energy systems, optimizing charging performance while supporting grid stability where grid infrastructure exists. In off-grid scenarios such as this pilot, the technology demonstrates its flexibility and robustness in harnessing distributed clean energy sources.

"Our purpose is to make electrification effortless for everyone," Fernandez

says. "That includes communities that depend on transported fuel and face increasing climate pressure. With renewable generation, storage and intelligent charging working together, clean mobility can strengthen energy resilience and reduce reliance on imported fuels." **GB**



A positive impression. Due to environmental conditions, charging a Subaru Solterra in the sub-Arctic isn't as fast as doing so in a warmer climate, but it's more efficient than the perception that it can't be done at all.

CREDIT: COURTESY OF EASEE

About Easee

Founded in Norway in 2018, Easee, with 1 million chargers across Europe, has rapidly become a leader in smart EV charging technology, delivering scalable, intuitive, and future-proof charging solutions for homes and businesses.

About Subaru Canada, Inc.

Subaru Canada, Inc. is a wholly-owned subsidiary of Subaru Corporation of Japan. Headquartered in Mississauga, Ontario, the company markets and distributes Subaru vehicles, parts and accessories through a network of 96 authorized dealers across Canada.

Course of inaction. Homes in areas prone to natural disasters such as wildfires, floods and tornadoes are slipping into “uninsurability,” where an owner can’t find a property insurer or has to pay huge premiums. CREDIT: ISTOCK/FOOSION

Insuring the Future

Architecture has a crucial role to play in a growing climate of rising risk.

BY DR. DOUG MILBURN

As the prevalence of extreme weather accelerates, global insurance markets are being stretched to the breaking point. Insurers are pulling out of wildfire-prone California, flood-prone Florida, and storm-battered coastal regions around the world. Premiums are skyrocketing, entire neighborhoods are slipping into “uninsurability,” and millions of property owners are being left behind. The implications are staggering: If a building can’t withstand the realities of climate extremes, it

may become increasingly difficult to protect, insure, finance, or even occupy.

This crisis poses a central question: If insurability is tied directly to a building’s resilience, how must architecture evolve?

THE SYSTEMIC RISK OF CLIMATE EXTREMES

The logic of the insurance market is straightforward: As payouts rise from increasingly frequent and severe disasters, insurers retreat from risk zones or price coverage out of reach. But the ripple effects go far beyond financial ledgers. Uninsurability

reshapes communities, leaving homeowners stranded, property values eroded, and recovery from disasters deeply unequal. For example, in Australia, 1 in 25 homes could be uninsurable by 2030 due to flooding threats. In the U.S., major insurers have already halted new coverage in high-risk states. This risk is immediate and already unfolding.

ARCHITECTURE AS ACTIVE DEFENSE

The changes we are facing demand a new, more-resilient architecture. Our buildings must be designed to face more-frequent



How strong? Some storms are so powerful that they can't be "tamed" by simply building to code. CREDIT: ISTOCK/INHAUSCREATIVE

exposure to flooding, fire, tornado winds, hurricanes, and other weather-related disasters.

Design must also anticipate the breakdown of energy systems. By employing passive thermal and daylighting strategies through carefully designed glazing, shading, insulation, and natural ventilation, buildings can remain habitable when grids fail. In areas vulnerable to flooding or fire, architects must harden structures with elevated foundations and ember-proof materials, and they must also incorporate sacrificial zones, accepting that some components will be lost so the rest of the building may endure.

At the same time, resilience increasingly requires independence. Buildings equipped with rooftop solar, integrated battery storage, and microgrid capabilities can shelter occupants and maintain critical functions even during extended blackouts. Because climate risk is not static, materials must also be engineered for disassembly and retrofit so



Ready for this? Super-insulated housing envelopes offer a hedge against extended power outages in extreme conditions. CREDIT: ISTOCK/CHRIS GORDON



Future shock? Without climate-adaptive design, vast portions of the built environment could become uninsured, uninhabitable and unlivable.

CREDIT: ISTOCK/EEI_TONY

they can be upgraded or swapped out as new threats and technologies emerge.

REGIONALIZED RESILIENCE

Resilience also has to be specific to place. In California, wildfire-resistant façades and ember-proof glazing combined with defensible landscaping can mean the difference between a home surviving or burning. In Florida and other coastal regions, storm-rated glass, watertight envelopes, and elevated foundations are becoming baseline requirements for habitable structures. In the Northeast, super-insulated envelopes and diffused daylighting can reduce winter heating loads while ensuring buildings remain functional during deep freezes or prolonged energy shortages. In desert cities, solar-responsive façades, shading strategies, and glare-controlled glazing can turn dangerous heat into manageable living conditions.

INSURABILITY AS THE NEW DESIGN STANDARD

The convergence of insurance and architecture is now unavoidable. Insurers, regulators, and architects must work together to establish frameworks for evaluating resilience. A building that is not climate-adaptive will struggle to be insured, financed, or sold. Resilient design is a professional responsibility and a financial necessity.

By mid-century, resilient architecture will define our built environment. Just as modernism and sustainability shaped the last century of design, resilience will shape the next. The buildings of 2050 that endure, physically and financially, will be those designed for extremes: multi-layered, adaptive, and protective.

A CALL TO ACTION

The stakes could not be higher. Without climate-adaptive design, vast portions of our built

environment risk becoming stranded assets: uninsured, uninhabitable, and ultimately unlivable. With foresight, innovation, and collaboration, buildings can be designed to stand the test of time while safeguarding the financial systems that underpin our communities.

In the end, resilience has become fundamental to architecture. The ability of buildings and the societies they support to endure will depend on how effectively resilience is integrated today. The buildings that stand in 2050 will be the ones designed with insurance, adaptability, and climate extremes in mind. **GB**

Dr. Doug Milburn, chairman of [Advanced Glazings Ltd.](#), is a long-time serial entrepreneur and innovator who has brought his vision and passion to manufacturing, engineering, software development, and process engineering for more than 35 years. Advanced Glazings invented Solera and Aerogel window products for minimizing sunlight glare in an energy-efficient way.

Eyes on the room. With so much marketing data and “noise” in the public’s ear, it’s more important than ever that a company release proper messaging to its definite and desired customers.

CREDIT: ISTOCK/SAIFULASMEE CHEDE

Cutting Through the Green Noise

Here’s a smarter approach to sustainability communications.

BY SUSAN FERNANDEZ

Raise your hand if you’ve ever rolled your eyes at the following words: “sustainable,” “eco-friendly” and “resilient.” Overused and undefined, the words have become meaningless to the market. Today’s design industry is congested with too much data, making it harder to evaluate impact. Factor in greenwashing and false claims that have eroded consumer trust, and the challenge facing design professionals is clear: How do you meaningfully communicate a brand’s sustainability values in a crowded, unregulated market?

To help tackle these questions, we spoke with industry experts working at the forefront of material transparency, product certification, and whole-life carbon tracking. Proving your mettle to designers, architects, contractors, and homeowners is about transparency, accountability, and translating complex data into clear, credible stories that they can trust.

LAYING THE GROUNDWORK: SHAPING DATA INTO A SHARED LANGUAGE

When specifying products, architects and builders want to know how a product is made, who makes it, and what happens at the end of its lifecycle. When building a new home, consumers want to know how their investment will protect their health, optimize their energy bills,

and stand up in the face of a shifting climate.

The problem? With so much data available to us, it can be hard to identify what decisions really make an impact. Ren DeCherney, director of built environment at Oakland, California-based [Cradle to Cradle Products Innovation Institute](#), likens it to scrolling through *Netflix* for something to watch. “The options are overwhelming,” she notes. “You could spend hours sifting through lists of binge-worthy dramas.”

Anthony Guerrero, executive director at sustainability nonprofit [mindful MATERIALS](#) in Spring City, Pennsylvania, agrees with the analogy—but emphasizes the importance of having a “North Star” when it comes to sustainability goals. “Sure, Netflix might be overwhelming,” Guerrero notes. “But if you already know that you’re looking for *Stranger Things*, you’ll get to your goal in seconds.”

DeCherney and Guerrero are representatives of two forward-thinking organizations that help the industry make sense of today’s data overload. [mindful MATERIALS](#) created a shared language—the [Common Materials Framework](#)—to help people across the industry clearly evaluate and compare the impacts of building material selections.

Cradle to Cradle Certified offers a product certification aligned with this framework, signaling to specifiers that a product meets

rigorous, third-party-verified standards for circularity and material health. Meanwhile, [C.Scale](#)—a San Francisco-headquartered team of architects, data scientists and software engineers—provides a whole-life carbon tracking platform, equipping design and construction teams with tools to understand the full lifecycle impact of their specification decisions.

By adopting a shared language, product manufacturers can make their differentiators clear to specifiers, and builders can communicate their targets to consumers in an approachable way. For everyone involved, this means the ability to meaningfully track the progress being made by their project teams—and find their Stranger Things that much quicker.

GET SPECIFIC: RISE ABOVE THE GREEN NOISE

Standing out requires precision and authenticity to communicate your story meaningfully. Consumers and journalists are skeptical of vague claims, and it's more important than ever to define what your sustainability message truly means. How? Get specific. Focus your messaging around clear, verifiable differentiators, rather than making sweeping, unsubstantiated claims.

Replace general insights with details that move the needle: How your product helps humans breathe easier by optimizing air quality, or how your construction practices increase resilience in the face of inclement weather. This serves not only to build greater credibility but also to provide more compelling hooks for media amplification.

DeCherney also spoke to us about how the best brands are adapting to these messaging challenges: “What people are doing in response is making sure they’re not just saying the word sustainability and leaving it out there,” she says. “They’re defining what they mean by sustainability on a project and backing it up with not just data, but contextualized information that helps tell the story in a way that a normal person can understand.”

SOLVE A REAL, HUMAN PROBLEM: MOVING BEYOND THE CHECKLIST

Frameworks and certifications are vital markers for performance. Achieving a LEED certification, for example, signifies a verified third-party review of your sustainability claims, grounding them in real action.

The key is understanding your audience and not leaving the entirety of your message up to a checklist. Homeowners, communities and journalists want to understand the human piece of the puzzle. Instead of simply closing with, “this project achieved LEED Platinum certification,” illustrate a narrative about how your team transformed a flood-prone lot into a resilient, naturally ventilated home, ultimately cutting annual energy usage in half.

“There is so much power in language and how we speak to these things,” notes Flavia Grey, principal at Portland, Oregon-based [ZGF Architects](#). “It’s all about values, what problems your client is facing, and how you can help solve them.”

When you focus on how your design, specification, or building choices will affect what your clients truly care about—whether that’s long-term building performance, storm resilience, or healthy living—you might not even have to use the “S” word, Grey adds.

Brice Aarestad, director of design at window manufacturer [H Window](#) in Ashland, Wisconsin, expressed a similar sentiment. “Having a product story that communicates the problems it’s solving



Common cause. When specifying products, architects and builders want to know how a product is made, who makes it, and what happens at the end of its lifecycle.

CREDIT: ISTOCK/FILIPPO BACCI

will yield better adoption of that product,” he says. “Humanizing your results creates a more compelling narrative overall, connecting technical performance with pathos, providing emotional backing that tells a story about how people live and work.”

SUSTAINABILITY AND BRAND STRATEGY

Sustainability shouldn’t be a standalone message; it should work to reinforce your identity as a brand. When communications teams treat sustainability considerations as an add-on rather than an integrated part of a firm’s identity, the result comes across as inauthentic.

As DeCherney notes—citing a concept from John Doerr’s *Measure What Matters*—sustainability has to be something you “bump into every day.” When sustainability is embedded into decision-making, workflows, and culture, it becomes visible not just in outcomes, but in how a firm shows up consistently over time.

Our final takeaway: The companies that lead the conversation are moving past buzzwords and focusing instead on transparency and authenticity, proving impact through measurable, verifiable action. **GB**

Susan Fernandez is senior vice president of marketing for [UpSpring](#), where she specializes in helping clients differentiate themselves in the competitive building and architectural product industry. UpSpring partners with architecture firms, interior design studios, real estate developers, and building product manufacturers to build awareness, establish authority, and drive measurable impact.

COGNITION Smart Data

This is not your average building market intelligence.

[Greenbuildermedia.com/cognition-smart-data](https://greenbuildermedia.com/cognition-smart-data)

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A multifamily, prefab, net zero workforce housing project.

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**COMING NEXT ISSUE****2026 Eco-Leaders**

This year's annual special edition features companies that are using a Value Per Square Foot (VPSF) metric. Here's a look at real world case studies from real builders.

VISION HOUSE HICKORY GROVE

Green Builder Media's latest VISION House project is a 16-unit multifamily, prefab, net zero workforce housing project.



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Follow the VISION House Hickory Grove's progress at:

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WHY NAHB WANTS TO KILL THE 2021 ENERGY CODE



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After several years of urging by numerous trade contractors who worked on my building projects, and product suppliers who I did business with, I joined the local home builders association in 1989.

At the time, I was not clear on the structure of the organization but I soon learned that it is a federation made up of hundreds of local and state-level associations throughout the country, all coming under the umbrella of the National Association of Home Builders (NAHB), which is headquartered in Washington, D.C.

I remained a member from 1989 through 2019. I served in many elected and appointed positions at all three levels of the organization, and often in all three simultaneously.

As soon as I became a member, I quickly learned that the organization hated mandates of any kind and pursued an ideological crusade against regulations, codes, and, frankly, being told what to do. It was unquestionably clear that the greatest fear harbored by the organization and its core constituency of builders was the possibility that the federal government would enact a nationwide energy code that had to be complied with.

To exert maximum influence in code development, adoption and enforcement process, the National Association of Home Builders (NAHB), the American Gas Association (AGA) and the American Chemistry Council (ACC), along with other stakeholders such as the American Institute of Architects (AIA), the Building Owners and Managers Association International (BOMA), and the National Multifamily Housing Council (NMHC), joined forces to support the consolidation of the country's building codes.

The result was the creation of the International Code Council in 1994, by combining the three legacy code bodies in America, the Building Officials and Code Administrators International (BOCA), International Conference of Building Officials (ICBO), and Southern Building Code Congress International (SBCCI).

This provided the key stakeholders with greater opportunities to advocate for their special interests. NAHB called for consistent, cost-effective standards to reduce regional variations and maximize the profits of members through improved construction efficiency. The AGA promotes codes encouraging energy efficiency while supporting natural gas infrastructure and attempting to make certain electric-ready provisions appear in non-mandatory appendices to protect industry interests. ACC endeavors to streamline standards for building materials and safety. Each organization has vested interests in how codes advance and they often

help one another when they benefit from aligned advocacy.

With the possible exception of a code that mandates the inclusion of fire sprinkler systems in residential structures, there is no greater concern to the home builders than the energy code. Required standards of energy efficiency add to overall building costs and threaten profits, even though in the long run the homeowner realizes considerable operational savings that far exceed the additional upfront costs.

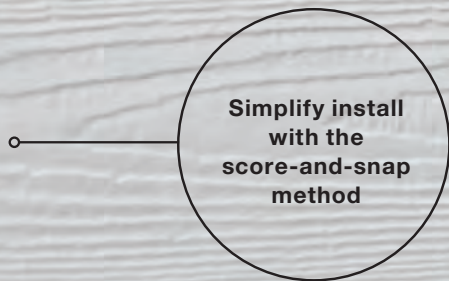
For this reason, NAHB has been determined to resist increased energy efficiency requirements at every opportunity. ICC has essentially ceded control of the energy code development process and caved to NAHB demands after the 2021 code cycle. Now, the energy code development is completely in the hands of the special interests.

The 2021 edition of the residential energy code is a particularly despised version of energy regulations for two reasons. The 2021 code called for far greater efficiency measures in the building envelope than previous editions and eliminated many tradeoffs that allowed mechanical systems to replace superior envelope strategies. But perhaps even more upsetting to the builders was the fact that they were outmaneuvered in the code development process by the energy conservation and efficiency community, whose surprise strategy recruited hundreds of eligible municipal officials to participate in the voting process.

The interests of towns, cities and counties regarding improved energy efficiency were very much aligned with the energy advocates. As a result, the 2021 edition of the IECC made greater advances in performance than any previous cycle. Embarrassed and furious, the homebuilders bullied the ICC and took the IECC out of the existing development process and into one that they have total control over. In the 2024 edition they rolled back many of the requirements of the 2021 and have battled to prevent jurisdictions at all levels and in all parts of the country from requiring adoption and enforcement of the 2021.

On April 28, 2026, NAHB posted a statement applauding the actions of the Department of Housing and Urban Development (HUD) and the Department of Agriculture (USDA) for rescinding the rule that would "impose the 2021 International Energy Efficiency Code (IECC) and ASHRAE 90.1-2019 as the minimum energy-efficiency standards for certain single-family and multifamily housing programs."

Ironically, on the same day, the Home Innovation and Research Labs, which is a wholly owned, for-profit subsidiary of NAHB, celebrated the ANSI approval for the 2025 version of the National Green Building Standard, which sets the baseline for performance in energy efficiency and ventilation as the 2021 IECC. **GB**



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