

## MANSSION GLOBAL

# Taking High-End Green Living to a New Level

Experts advise homeowners to have proper insulation and install solar panels and a good heating/cooling system

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**Y**ou switched to LEDs, covered the walls with low-VOC paint and invested in natural fiber furnishings. But for your home to be truly eco-friendly, there's so much more to consider—especially as residential and commercial buildings now account for 32% of greenhouse gas emissions when measuring electricity end-use, according to the U.S. Environmental Protection Agency.

With Earth Day upon us, sustainability-minded homeowners in the luxury market should approach their next purchase or major renovation with three main priorities in mind, said Asa Foss, director of Residential Technical Solutions at the nonprofit U.S. Green Building Council in Washington, D.C.

First, Mr. Foss recommends insulating or sealing the attic or roofline—a relatively easy change to make on an existing home. Second, seriously consider adding solar panels; costs have dropped significantly in recent years, he said. And a federal tax credit allows homeowners to deduct 30% of the cost of installation of solar panels, provided that they buy rather than lease the system. Finally, install a variable-speed heating, ventilation and air conditioning system. A system with more than just one or two motor speeds makes for a quieter and more temperate home and also increases energy efficiency.

“Especially when we’re talking luxury, what people tend to care about more is comfort, and they care more about their own health,” Mr. Foss said. “Things that improve the efficiency of the home are also the same things that improve the comfort and the indoor air quality, so it’s kind of a perfect trifecta.”

Progressive developers say they also favor heat-recovery systems that bring filtered fresh air into the living space but simultaneously prevent much of the heat from escaping, resulting in energy cost savings.

Michael Namer, CEO of Alfa Development in New York City, said he started using the variable-speed Daikin HVAC system, from Japan, in his luxury condo buildings about eight years ago. When he saw his energy costs drop by half that first year, he never looked back.

The latest among his targeted LEED-Gold certification projects, 200 East 21st St., is located in Manhattan’s upscale Gramercy neighborhood. The building superintendent will be able to manage the HVAC system for each of the 67 units via an iPad, Mr. Namer said.



A bedroom at 200 East 21st Street. The building has a variable-speed HVAC system that the superintendent can control with an iPad.

Rendering courtesy of Alfa Development

## Health and Wellness

As LEED-certified housing is poised to soon become as ubiquitous as reusable shopping bags, the concept of a green home and an eco-friendly lifestyle is evolving to include health and wellness, experts said.

"You might spend a lot of time seeking out things like organic food or natural fiber clothing or non-toxic toys, but you don't think about the fact that your kids might be crawling around on floors or eating off countertops that contain formaldehyde," said John Oppermann, a licensed real estate broker, lawyer, and executive director of Earth Day Initiative, a New York-based nonprofit that promotes environmental awareness through partnerships with schools, businesses, community organizations and governments.

Having this knowledge on hand when making decisions about modifying or choosing a home can be powerful, especially as stricter green-building certifications slowly make their way to the U.S. from around the globe, Mr. Oppermann said.

## Global Trends

The Passive House certification, which sets stringent standards for energy-efficient construction, originated in Germany and is gaining steam in the U.S., Mr. Oppermann said. And China has popularized the WELL building standard, which incorporates not just energy efficiency but how the residence impacts the health and wellness of its occupants.

“That country has developed so rapidly that now there’s a fear that that development is really hurting the environment and the health and wellness of the Chinese people,” he said. “There’s a demand there and you see that through the uptick in WELL projects that are being developed.”

Mexico is also making strides in the green-certified home industry as experts combine best practices of the U.S. and Europe. Gustavo de las Heras Izquierdo, an architect and LEED consultant who rates buildings as LEED certified, said the company he works for, Revitaliza Consultores, just certified its first high-end green home in the city of Monterrey. The six-bedroom concrete structure—with a gym, Jacuzzi, swimming pool, and private garden—is nestled into a mountainside with city views. Solar panels cover 50% of the roof, he said, and the home is well-insulated to keep air conditioning in, both a rarity in Mexico.

Concrete homes are more common in Latin America and Europe, Mr. de las Heras Izquierdo said, and they offer better noise insulation and fewer air leaks than wood construction, making them more eco-friendly by nature.

Since LEED certification guidelines are typically geared toward wood construction, it can be difficult to obtain certification in Mexico, Mr. de las Heras Izquierdo said. These types of differences are the “main handicap” when certifying LEED homes outside the U.S, he said.

As such, he and a group of other LEED green raters in Mexico and Europe are working on alternatives to LEED compliance that would account for such idiosyncrasies, he said.

## Build Versus Renovate

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Experts agreed that creating an energy-efficient home—be it a single-family estate or a condominium—is easier to do from the ground up. For existing homes, a gut renovation is usually required to meet high energy-efficiency standards.

“It’s much easier to build right the first time than it is to renovate,” Mr. Foss said, because many fundamentals of high-performance construction—like a state-of-the-art HVAC system—are hidden behind the walls and would be hard to access in a simple renovation project.

San Francisco development firm Troon Pacific specializes in transforming single-family homes, some built as early as 1906, into paragons of modern, sustainable living while preserving their historic facades.

Six recent renovation projects are Platinum LEED-certified, said Troon Pacific CEO Greg Malin. Some feature rainwater harvesting systems that can collect upward of 15,000 gallons of water per year and redistribute it to irrigate yards and flush toilets. A current project on Union Street features a greywater filtration system to redistribute shower and sink runoff for irrigation.



This San Francisco home renovation includes a greywater filtration system that redistributes shower and sink runoff for yard irrigation.

Image courtesy of Troon Pacific



While these features will produce huge cost-savings over time, this sort of purchase could result in a significant investment. For instance, a Vallejo Street home that Troon Pacific renovated sold five years ago for \$20 million. While it's hard to pinpoint how much a home like this would sell for without the green amenities, Mr. Malin estimated it would be worth about 20% less.

Buyers are "attracted to the sustainability and wellness features and consider them an investment in their health and happiness," he said. "We've certainly never lost a buyer because of the added features."

Karim Masri, a Miami-based entrepreneur who develops restaurants, hotels and nightclubs in South Beach, opted to build his sustainable dream house from scratch. His waterfront property in Miami Beach has a 2,500-square-foot roof, two-thirds of which is dedicated to solar panels that are powerful enough to take it completely off-grid in the event of an emergency. After two years of meticulous planning and construction, he said he expects to move in this spring.

Mr. Masri declined to state his budget for the project, but said it's become an inspiration for another project that he is in the early stages of working on with David Martin, a Miami developer.

"I decided to make a business of it and therefore to use my home as an example, a showroom," Mr. Masri said, of how solar power can be optimized in sunny Florida.

As for the other project, Mr. Martin is building 125 homes in South Florida that are between 4,000 and 6,000 square feet, and priced around \$2 million, and Mr. Masri will develop an optional solar package that would add up to \$275,000 to the cost of the home.

## A Greener Future

Currently, only about 5% to 10% of single-family homes in the U.S. are Energy Star-certified, meeting the basic standard for energy-efficiency set by the EPA. Roughly 25% of multi-family homes are LEED-certified nationally (LEED evaluates a wider range of features than Energy Star), mostly in large cities like Los Angeles, New York, the District

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of Columbia and San Francisco, according to Mr. Foss, of the U.S. Green Building Council.

He expects those numbers will increase gradually in the coming years. A more immediate way to green the real estate industry, he said, is if lenders considered the energy-efficiency standards of new properties when approving home loans.

If that becomes part of their standard underwriting process, Mr. Foss said, "it's going to very quickly trickle down to the big banks and then the appraisal industry, such that properties that have lower (energy) bills will be appraised higher and/or you can afford more, which will have a huge impact on the industry."

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