

## Off-the-Grid Homes

The freak winter storm in Texas earlier this year created an uptick in those considering homes off the grid as millions went without power and water for days at a time as the Arctic temperatures plunged.

Living off the grid is a recent phenomenon, considering it wasn't all that long ago society had no choice but to live off the grid. However, there are some and many more thinking about reverting to that past to save money and limit their carbon footprint, as well living in harmony with nature and her wonders.

### THE INCREASE IN DEMAND

Off-the-grid homes are trending primarily because of one factor: climate change.

The increase of severe storms each year will further "indicate the needs for resilient development," Ben Keys, associate professor of real estate at the University of Pennsylvania's Wharton School, told CNBC.

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### REAL ESTATE 101

#### Investing in Solar Panels

Homeowners who install photovoltaic power systems receive numerous benefits: lower electric bills, lower carbon footprints and potentially higher home values. But these benefits typically come with significant installation and maintenance costs, and the magnitude of the gains can vary widely from one house to another. To learn more about solar-powered homes, visit [bit.ly/2Son40c](https://bit.ly/2Son40c).

out" events in the U.S. that impacts 50,000 or more people, jumped by more than 60% since 2015, according to CNBC.

"These houses can be built in much more efficient ways, so not just solar, but they can have their own water filters, other sources of electricity generation and a number of other efficient ways to man-

age their utilities," said Keys.

Enter builders such as California-based Dvele.

Dvele homes have solar, battery and other construction and insulation elements, as well as smart technology, that allow them to use far less energy and operate longer off the grid. The home monitors its own energy input and output all the time, then tweaks the

systems to save more. If the local power goes out, the home should see no difference.

"Today, most of us have traded our independence to pay someone else to keep our homes warm, keep our lights, on and keep our stomachs full. I think this is becoming an increasingly unstable proposition," said Cam Mather, author of "Thriving

During Challenging Times: The Energy, Food and Financial Independence Handbook."

Most of Dvele's projects are on the West Coast, but they are forecasting expansion of individual homes and whole new communities in other states.

### COST AND SAVINGS

Perhaps the biggest, not to mention counterintuitive, deterrent for living off the grid? Cost.

Dvele homes, which are built in a factory, are sheeny, modern designs with high-end furnishings. The average size is about 2,600 square feet and run about \$1.2 million. That's cost prohibitive for many.

"I think the funding is a big challenge because the payoffs to many of these investments don't pay off right away," said Keys, the Wharton professor.

In an off-the-grid home in Texas specially built for the homeowners, composting toilets plumbed from a rainwater catchment and graywater tank cost \$1,700.

Yet, that same house, without air-conditioning, kept Texas temperatures inside the house at no higher than 82 degrees. That was generally attributed to design that used concrete walls and floors.

The investment is up front. The savings are found down the line.





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HOMEWISE GLOSSARY

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**Balloon:** A mortgage where there are payments over a period of time, but the final payment is a lump sum which is quite large compared to the previous payments. SOURCE: MLS.com

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