

The U.S. solar industry has recently experienced rapid growth in installed capacity, doubling over the last 3.5 years according to the Solar Energy Industries Association and Wood Mackenzie. With costs falling and new technologies like user-friendly apps and solar storage gaining interest from an expanding profile of solar buyers, the industry is at a tipping point to break into new markets and grow at a faster rate. As adoption accelerates, the typical solar owner profile is transforming.

Who comprises the new generation of solar owners? What are their priorities and motivations for embracing renewable energy? What could encourage or prevent more consumers from going solar? The first SunPower Energy Sense Index answers these questions and dives into what's motivating people to take control of their home energy generation.

2021 SunPower Energy Sense Index

Shedding light on the future

The 2021 SunPower Energy Sense Index—which collected a representative sample of U.S. homeowners with solar systems on their homes, those considering solar, and those not considering solar—uncovers the next generation of home solar users. A total of 1,500 respondents completed the survey, which was conducted by Schlesinger Group, an independent research company. Panel respondents were incentivized to participate via the Schlesinger Group's established points program.

Driven by dissatisfaction with their utility providers, high profile grid failures and falling costs of solar, for the first time solar is gaining the broader attention of Midwesterners, baby boomers, and people from across the political and socioeconomic spectrum. Despite this groundbreaking progress, solar is still very much in its infancy, used by less than 3% of households. The data proves there is still much work to be done to reverse misconceptions and educate consumers on the affordability and ease of using solar and storage in their homes. The future of the planet depends on it.

Power outages spur solar and storage adoption

Over the last 12 months, high-profile outages and grid failures inundated American cities. From wildfires in California to the Texas deep freeze, the grid's inability to maintain power through severe weather events is spurring anxiety, seeding doubt among utility-reliant homeowners, and driving adoption of solar and storage.

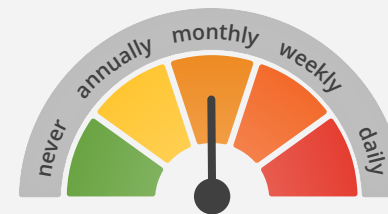
Living in a state of outage anxiety

The threat of power outages adds stress during thunderstorms, extreme temperatures, and day-to-day planning for some Americans. Will the heat remain on during a deep freeze? Will food spoil if the refrigerator is off for an hour or more?

Outages are causing stress between household members. Nearly half (48%) of homeowners that have experienced a power outage in the last year say that the electricity habits of the people they live with cause conflict at least once a month. More than a third (38%) in this group say they stress about their family or housemates' electricity habits every week of the year.

Homeowners are experiencing discord with their electricity providers, too. More than half (52%) of homeowners who experienced a power outage last year say their level of trust in their energy provider has wavered. Even among those who didn't experience an outage, 19% reported less trust in their provider.

How often do homeowners worry about power outages?



2 in 5
homeowners
worry about power outages
every month of the year.



1 in 5
homeowners
worry about power outages
every single week.

Blackouts spur behavior change

Homeowners that have experienced outages in the last year—even as short as an hour—are taking more action than those that didn't experience any outage by a significant margin.

Power loss = preparation

Compared to homeowners that didn't experience an outage, those that did are:



Just as likely to have stocked up on candles



2.5X more likely to have purchased a generator



2.5X more likely to have purchased portable chargers



Nearly 4X more likely to have purchased solar panels



Nearly 4X more likely to have purchased solar storage



Nearly 5X more likely to have changed energy providers

How high-profile outages drive energy action



1/3 of homeowners

considering solar + storage cite outages as a reason.



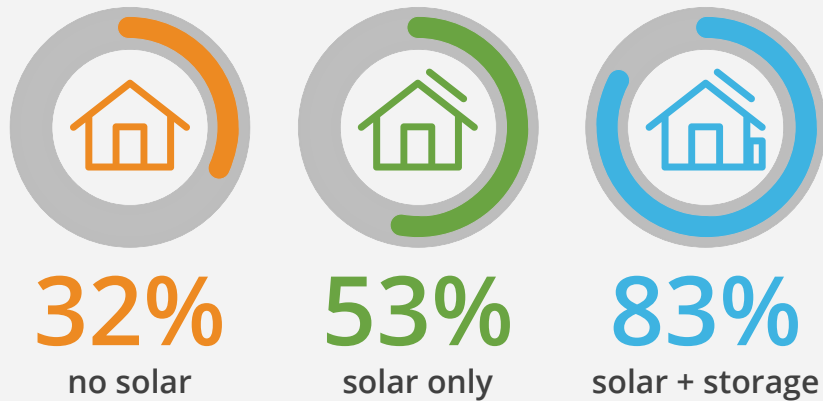
Nearly 2/3 of homeowners

with energy storage cite outages as a reason for their purchase.

Solar and storage bring relief

Against the backdrop of high-profile power outages, the next wave of solar owners view battery storage as a vital component of their solar energy system. Of those considering solar, 70% plan to include a battery in their initial purchase; notably, only 3% aren't planning to include a battery. Of those already with solar, 39% said they installed a battery for energy storage and resiliency during outages.

Homeowners prepared to weather a power outage



When the power does go out, U.S. homeowners are clear in their priorities.

Appliances homeowners say they can't live without during an outage

- 1 Refrigerator 
- 2 Heating + A/C 
- 3 Television 
- 4 Medical Device 
- 5 Oven/Microwave 

The new face of the American solar consumer

Homeowners from Southern California to Northern Maine are motivated to lower their energy costs. Power outages affect Democrats, Republicans and Independents alike. The profile of a U.S. solar owner is changing to reflect the universal need for reliable, affordable electricity: contrary to popular belief, many of those considering solar are older, less wealthy, and more geographically and politically diverse than those who already have solar systems.

74% of current solar users come from Millennial and Gen Z generations and are dominated by those living in the west and south. But this profile is changing fast.

How solar adoption is shifting among demographics



Age

Baby boomers represent the majority (55%) of those newly considering solar compared to 11% that already have solar.



Income

Nearly three-quarters of those considering solar earn \$100,000 or less annually—as compared to 34% of those already with solar in their homes.



Location

Adoption is poised to pick up in America's heartland. While most of those who own or are considering solar live in California or the South, those in the Midwest are the second most likely to be actively considering solar energy for their homes.



Politics

68% of current solar owners identify as Democrats. Well over half of those considering solar are Independents (30%) and Republicans (29%).

Savings fuels interest in solar

Across the board, the top motivating factor for Americans to go solar is to lower their energy costs, followed closely by the desire for resiliency during outages.

Top reasons homeowners go solar

Lower energy cost 92%

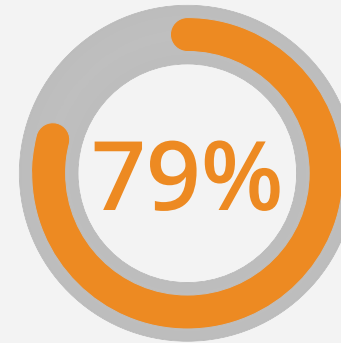
Resiliency during power outages 88%

Reduced carbon footprint 73%

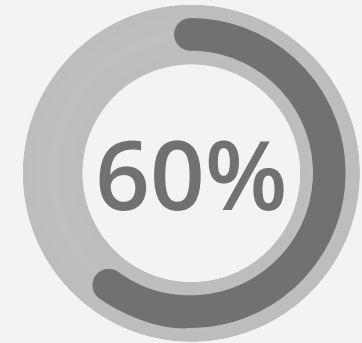
Cost is at the center of every aspect of the solar decision—and could even change minds. Two in three respondents that said they'd never consider solar cite high purchase and installation costs as the main reason. On the other hand, nearly half (46%) state that a significantly lower cost could change their minds.

But while solar customers are focused on dollars and cents, most homeowners don't know how much it actually costs to install a solar system or backup battery. While 79% of those considering solar say the high cost of going solar would be the reason that prevents them from pulling the trigger, 60% of respondents overestimate the average cost of purchasing a solar system (\$20,000 on average for the solar system alone after tax credits according to EnergySage).*

The true cost of going solar?



of homeowners cite
"high cost" as the reason
they haven't gone solar



of homeowners
overestimate the cost
of purchasing solar

*The cost of a solar system will vary depending on system configurations, the quality of the solar system purchased, location and other factors. Not all customers who purchase solar qualify for the federal Investment Tax Credit. Consult your tax advisor regarding the solar tax credit and how it applies to your specific circumstances.