

RESIDENTIAL SOLAR INSIGHTS:

Raleigh + Charlotte Metro Area



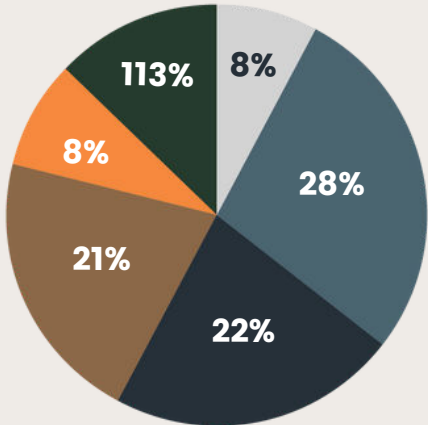
METHODOLOGY

Freedom Solar Power wanted to understand homeowner sentiment in the Raleigh and Charlotte metro areas on attitudes, benefits, and barriers to wider adoption of residential solar energy. The company partnered with Survey Monkey to gather objective and statistically relevant viewpoints of those who are considering or have solar energy.

The following insights account for 617 total respondents, including 320 Charlotte and Raleigh homeowners.

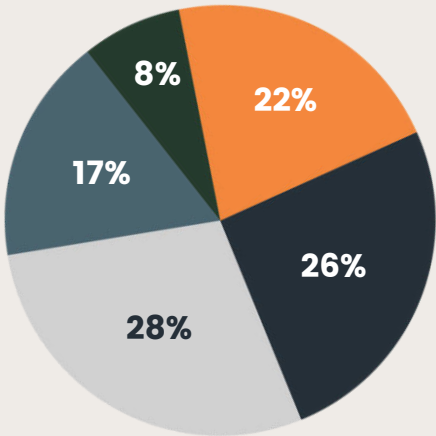
Data was fielded in November 2022.

INCOME RANGES



- \$25,000 - \$49,999
- \$50,000 - \$74,999
- \$75,000 - \$99,999
- \$100,000 - \$124,999
- \$125,000 - \$149,999
- \$150,000+

AGE RANGE



- 25-34
- 35-44
- 45-54
- 55-64
- 65+

INSIGHT 1

Not surprisingly, financial savings are an important consideration when investing in solar, but costs are hindering adoption.

Upfront homeowner expense is the primary reason Americans do not purchase solar panels, but energy cost savings is the primary reason why they want solar panels.

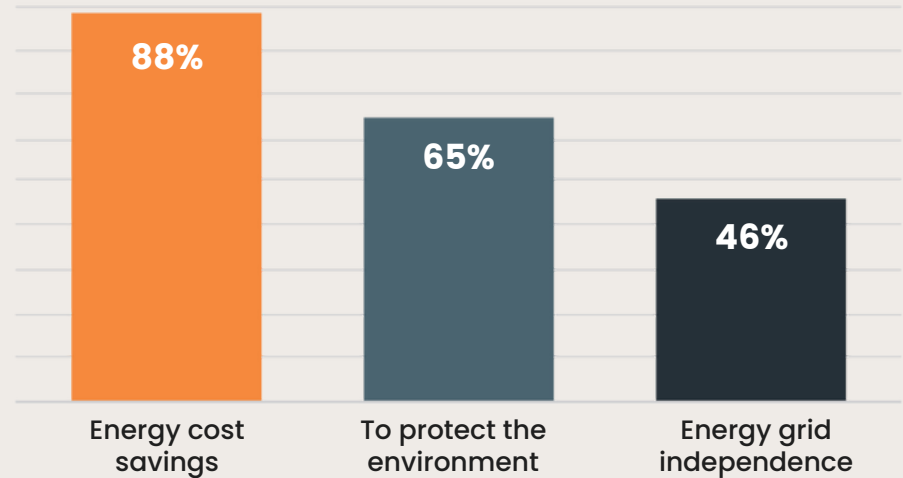
- 73% of U.S. homeowners said expensive upfront cost was “important” in limiting their decision to go solar.*
- **Cost concerns did not change with income level;** it was the primary concern for those surveyed across all income levels, from \$25,000 to \$200,000.

Solar Reviews found that disaster resilience or independence from the grid was the second most important factor in going solar, followed by environmental protection. These ranked differently in importance among those surveyed in NC: Environmental protection ranked higher than energy grid independence.

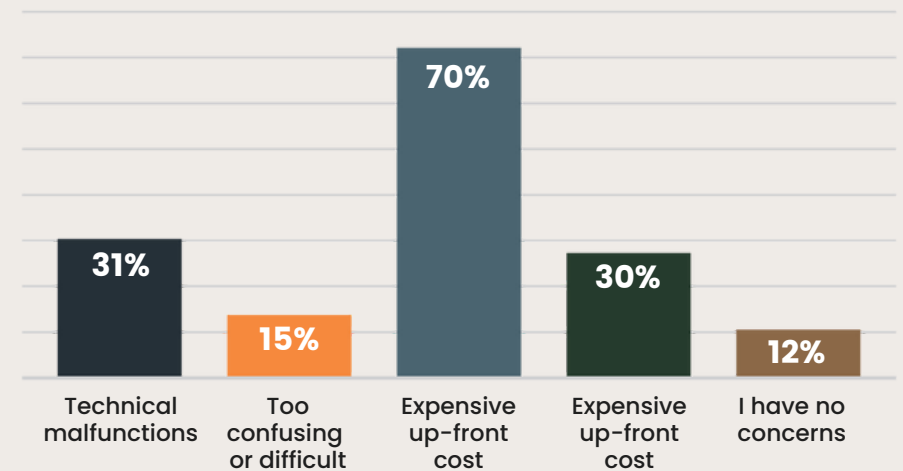
- Environmental reasoning resonates most among millennials, polling 20 points higher compared to Gen X and young Baby Boomers

*Source:

SELECT ALL THE REASONS YOU CONSIDERED PURCHASING/HAVE PURCHASED SOLAR PANELS



WHAT IS YOUR BIGGEST CONCERN ABOUT SOLAR PANELS?



INSIGHT 2

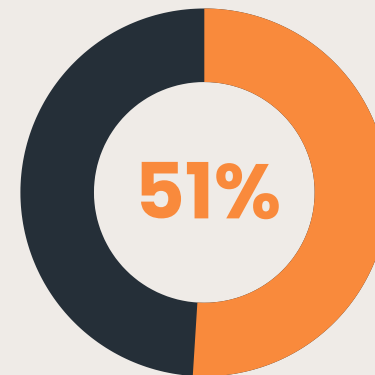
Although tax incentives could offset some concerns about upfront Solar costs, homeowners only have moderate awareness of federal and state tax incentives for solar/renewable energy.

Subgroups more aware of legislation or incentives supporting solar include:

- **Current/prospective EV owners**
- **Current solar panel users**
- **Millennials (ages 25-44)**
- **Those with a household income of \$100,000+**

For those who were not aware and interested in solar, 65% of respondents said they would need \$9,999 or less in incentives to consider solar or renewable energy solutions.

The federal refund for an average solar panel installation falls within the range for a tax credit respondents needed to purchase solar panels, before even accounting for state incentives. The formula to the right outlines the federal tax investment credit (ITC) based on the recently passed Inflation Reduction Act for an average installation in the U.S.



51% of respondents were not aware of “current or future tax credits derived from North Carolina legislation or the recently passed federal Inflation Reduction Act.”

$$\begin{array}{ccccc} \$20,000 & \times & 30\% & = & \$6,000 \\ \text{Average cost} & & \text{Current} & & \text{Current} \\ \text{of residential} & & \text{Federal ITC} & & \text{Federal ITC} \\ \text{solar panels} & & \text{Rate} & & \text{Refund} \end{array}$$

INSIGHT 3

For Raleigh + Charlotte homeowners, concerns over maintenance, reliability, and technical malfunctions were high.

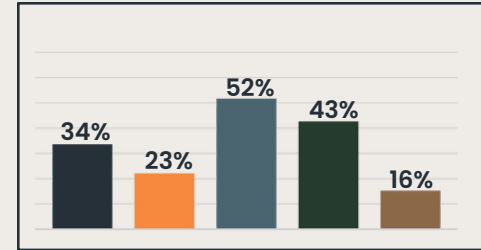
A high percentage (31%) were concerned about technical malfunctions or reliability.

- In a similar poll from *Forbes*, 7-8% of Americans worry about maintenance and reliability issues.

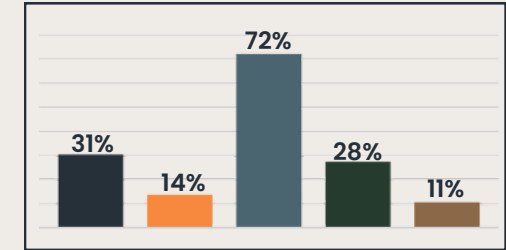
Warranty and customer service were significantly more important than brand and appearance. Only three respondents believed it was not important for their solar panels to be sold, installed, warranted, and maintained by one company, rather than multiple vendors and contractors.

WHAT IS YOUR BIGGEST CONCERN ABOUT SOLAR PANELS FOR YOUR HOME?

Respondents with solar panels:



Respondents considering solar panels:

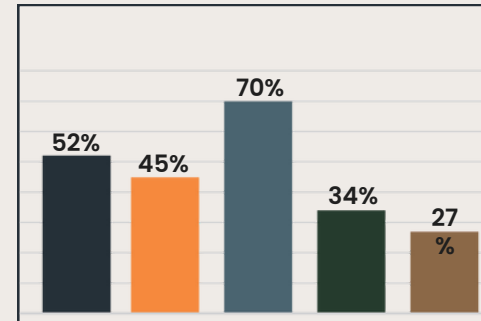


- Technical malfunctions
- Too confusing or difficult
- Expensive up-front cost
- Inability to achieve a timely ROI
- I have no concerns

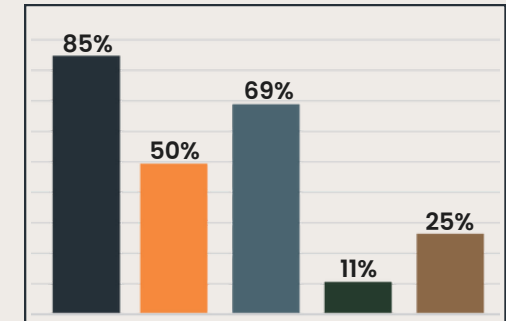
Current solar panel owners place an emphasis on warranty, over cost and continue to place a strong emphasis on customer service.

WHAT IS THE MOST IMPORTANT FACTOR IN CHOOSING A SOLAR COMPANY?

Respondents with solar panels:



Respondents considering solar panels:



- Cost
- Customer service
- Warranty
- Brand
- Appearance