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The 2025 Solar Industry Survey

Released February 2025

Executive summary

The 2025 Solar Industry Survey was conducted in December of 2024 against a backdrop of shifting political realities and closures of several prominent companies, two years after the solar industry celebrated the passage of the landmark Inflation Reduction Act.

The data paints a picture of an industry that is still recovering from pandemic-related effects, with persistent concerns about inflation, rising interest rates, and tariffs promised by the new Presidential administration. Struggles with permitting, interconnection rules, and customer acquisition continue.

Despite uncertainties around tariffs, incentives, and politics, the survey results show an industry that remains optimistic. Over one-third of companies expect to do better in 2025 than they did in 2024, and an additional third have a neutral outlook. Time will tell whether these predictions will come true.

Important note: All percentages are rounded to the nearest whole number except when necessary to highlight important differences, such as ranking items in order. Any discrepancy in addition, such as a sum of greater or less than 100% in the charts, is due to rounding.

Key findings

- The solar industry is worried about the future, with **56% of companies reporting concerns** about the potential for **new tariffs** and 50% listing changes to solar incentives as a major worry. Additionally, **46% of companies** said **legislative and political uncertainty** is one of their biggest fears.
- When planning for 2025, **34% of respondents** said their **business outlook became more negative** due to the outcome of the U.S. elections, while 48% reported no change, and 18% reported a more positive outlook.
- Despite those worries, **only 7% of respondents** said they were **concerned about their company's ability to stay in business** in the next six months. On the flip side, 38% said they expected their business to grow in 2025.
- On a happy note, **supply chain issues appear to have improved** greatly over the past 2 years, as 43% of businesses say the supply chain was better in 2024 compared to 2023 after 69% of businesses responded that way the year before. Only 11% of respondents said supply chain issues were worse this year than last.
- On the residential installation side of the industry, installers are continuing to expand service offerings, with **92% now reporting that they do energy storage installation** and 86% reporting that they do EV charger installation. These numbers are up from 74% and 64%, respectively, in the previous year.
- Respondents reported **Qcells**, **REC**, and **Silfab** as their **most used solar modules**, and **Enphase**, **Tesla**, and **SolarEdge** as **most used for energy storage**.
- Solar company closures were all too common in 2024, with **81% of installers reporting the closure of at least one large competitor in their service territory**. When asked about the effects of those closures, more than **57% of respondents** said the closures resulted in negative outcomes and increased service calls from customers of the former competitors.

Please direct all questions to **press@solarreviews.com**

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Methodology and respondent overview

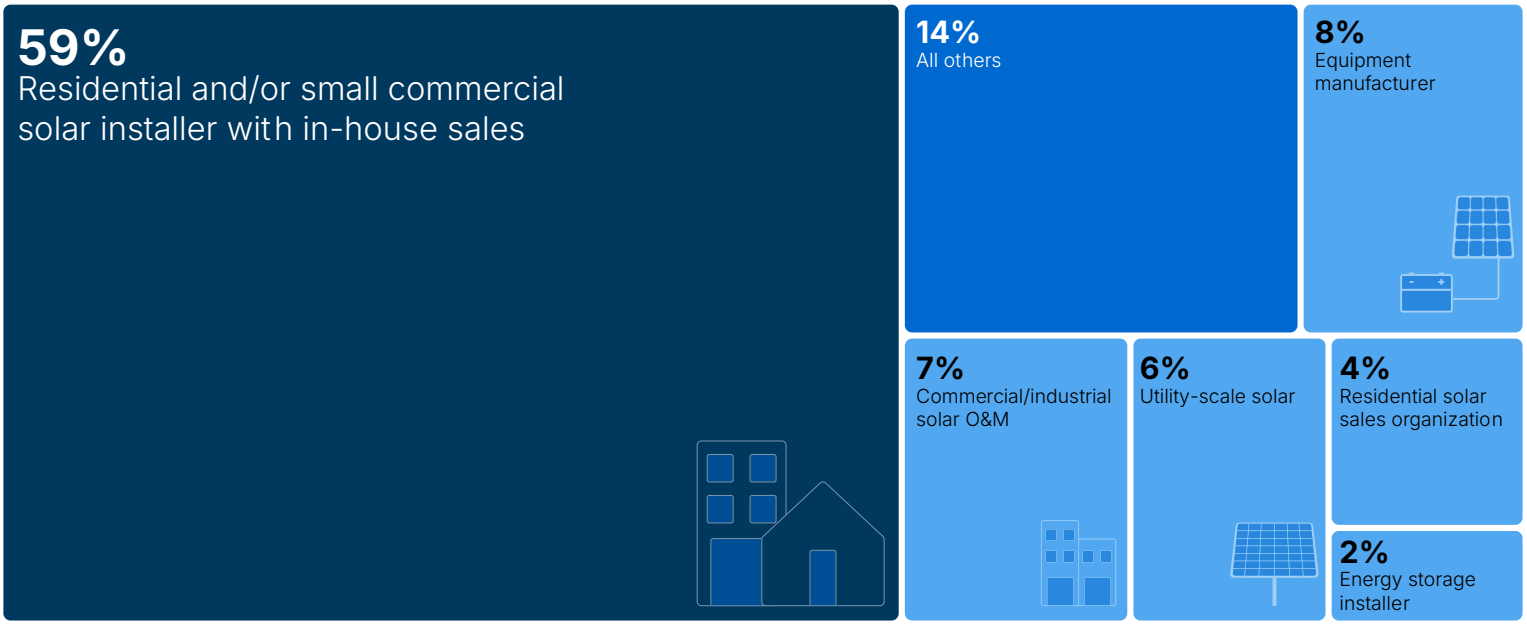
The Survey was conducted through SurveyMonkey from December 2nd, 2024, to January 3rd, 2025. Respondents were invited to participate via email and public social media posts from SolarReviews and industry partners, including Solar Power World, COSSA, MSSIA, MnSEIA, and Solar Insure.

The Survey used branching logic to ensure respondents were presented with questions relevant to them, with specific branches for residential/small commercial solar and energy storage installers. Installers were asked to report their total kilowatts (kW) of installed capacity in 2024.

That data was normalized to remove outliers and then used to weight responses to other questions related to proportions, such as the percentage of various payment methods, customer demographics, and installation types. For some questions, respondents could select multiple answers, causing some answer totals to add to over 100%.

Respondent breakdown

Responses were received from a diverse range of participants across the industry, categorized as follows by primary business activities:



While 59% of respondents said they focus mainly on residential and small commercial installations, 72% said they do at least some small-scale work. Respondents were mostly associated with smaller solar companies, meaning the results amplify an essential but often overlooked voice within the solar industry.

Responses came from companies nationwide, with the majority of respondents doing most of their business in just five states: California, Colorado, New York, Texas, and Florida. At least one respondent reported operations in each of the 50 U.S. states, Washington D.C., and Puerto Rico.

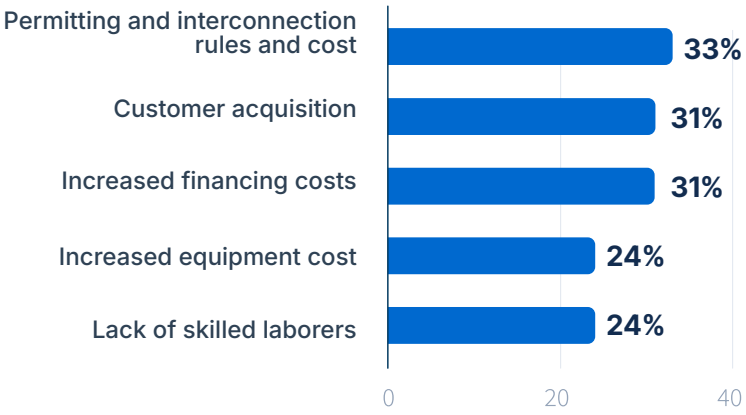
Industry-wide takeaways

The solar industry as a whole has faced several challenges since the start of the COVID-19 pandemic. Some of these challenges have improved dramatically, while others are ongoing. Supply chain problems brought on by the pandemic have largely cleared up, while the effects of inflation and increased interest rates still plague the industry.

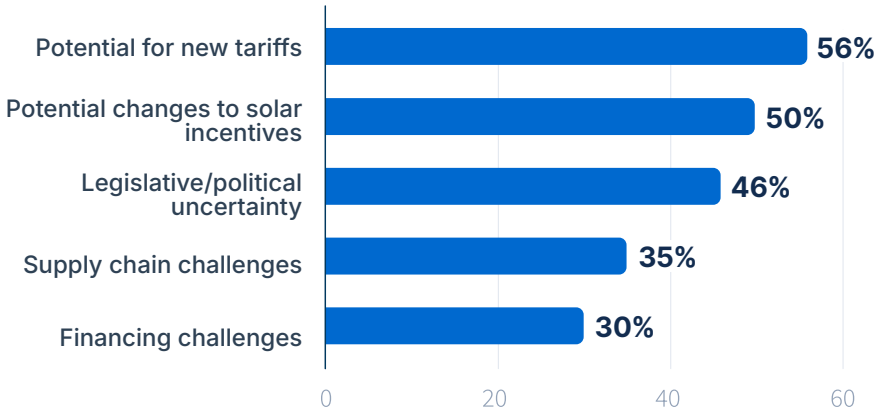
The Inflation Reduction Act of 2022 greatly improved the outlook for domestic solar manufacturing, but its effects have largely plateaued. Now, a new presidential administration promises to enact steep tariffs on foreign goods that could mean good things for stateside manufacturing, but developers and installers who count on a steady supply of low-cost products are worried about changes to tariffs and incentives caused by political uncertainty.

Business challenges and barriers to success

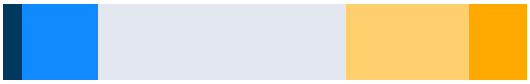
What are your company's primary barriers to success?



When you think of 2025, what are you most afraid of?



How has your business outlook changed (if at all) because of the 2024 U.S. elections?



Significantly more positive	3.6%
Slightly more positive	14.5%
Neutral/no change	47.3%
Slightly more negative	23.6%
Significantly more negative	10.9%

How concerned are you about your ability to stay in business in the next six months?

We expect to grow	38%
No concerns / Neutral outlook	35%
It will be difficult but we will stay in business	18%
Somewhat concerned	4%
Very concerned	4%
Unsure / Don't know	2%

Despite political uncertainties, companies in the industry remain optimistic, with **90% of respondents** expressing confidence in their ability to **stay in business** in the next 6 months.

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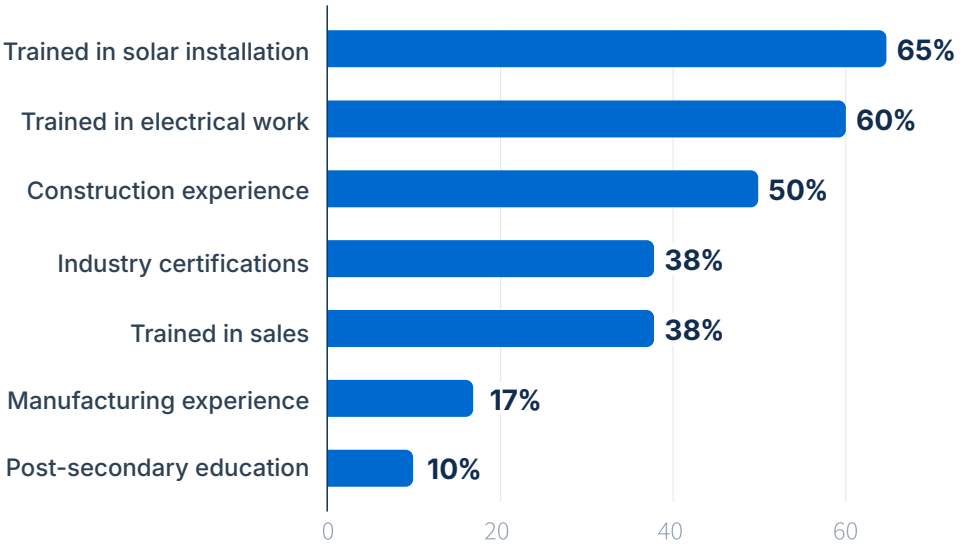
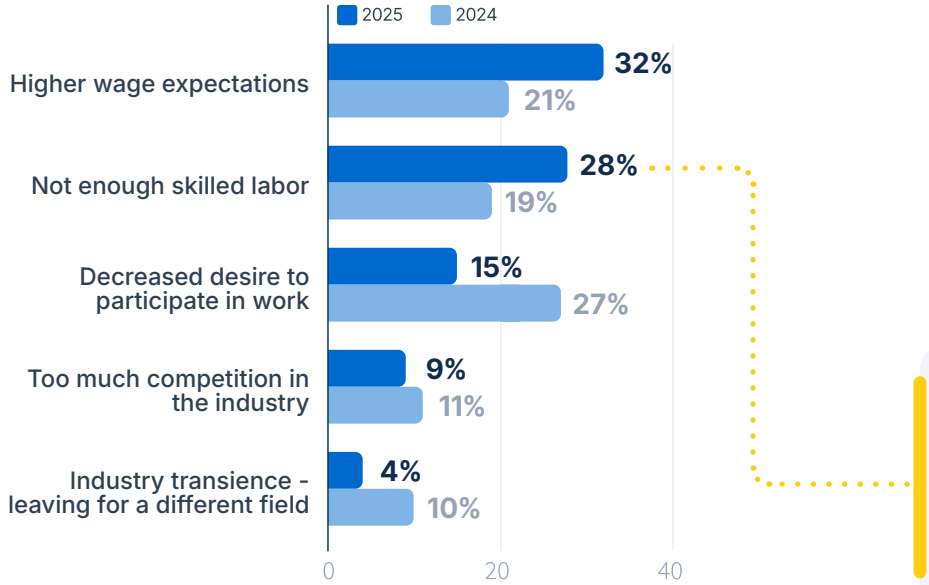
Solar workforce development and training

What are the most important skills for workers in your industry?



Challenges aside, companies in the solar industry are always hungry for new workers. According to respondents, the most valuable skills are previous solar installation and electrical work training, followed by construction experience. These exactly echo the results from last year's survey.

What is the most prominent weakness you see in the workforce today?



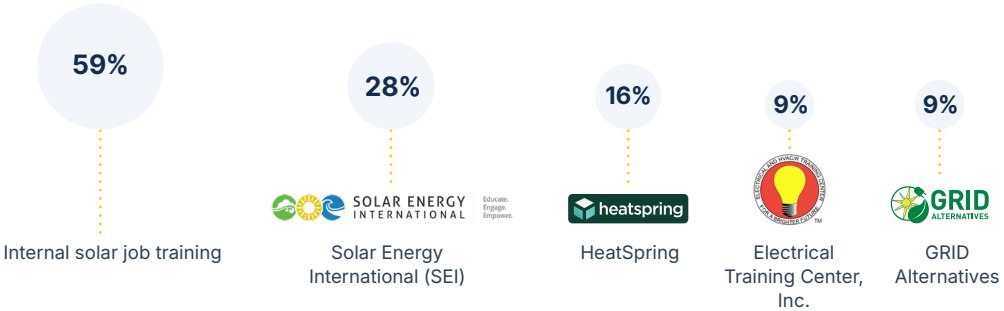
A large number of respondents pointed to higher wage expectations and a lack of skilled labor as key challenges in finding good workers. These challenges go hand-in-hand, as workers with the necessary skills can demand higher wages when there is less competition for jobs.

What skills are missing?

33% of these respondents said more electrical training is necessary

17% said workers need more hands on experience

Top 5 providers of solar job training in 2024:



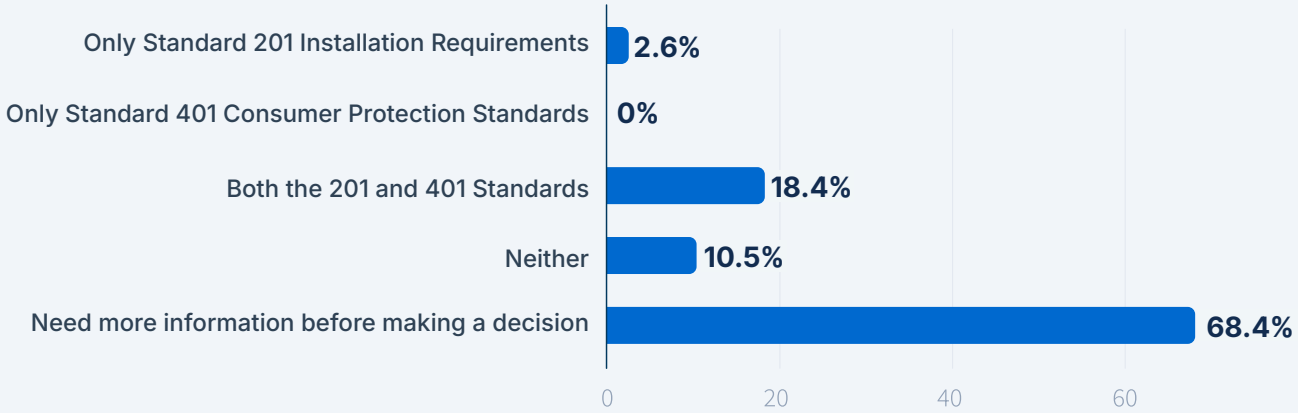
Most companies in the industry conduct their own training, but well-respected training organizations like SEI and HeatSpring still have an important place in teaching the skills necessary for working in the industry.

Spotlight on SEIA Standards

In July of 2024, SEIA introduced two new draft ANSI standards: 201 and 401. Standard 201, the Solar and Energy Storage Installation Requirements Standard, creates a baseline for how systems are installed. Standard 401, the Solar and Energy Storage Consumer Protection Standard, outlines training requirements for solar salespeople and allows for third-party certification of solar businesses that meet the requirements of the Standard.

When asked whether they planned to adopt these standards, the vast majority of respondents said they needed more information to make a decision, suggesting that SEIA has some work to do to prove the importance of the Standards.

Does your company plan to adopt the SEIA Standard 201 Installation Requirements and/or Standard 401 Consumer Protection Standards when they are finalized?



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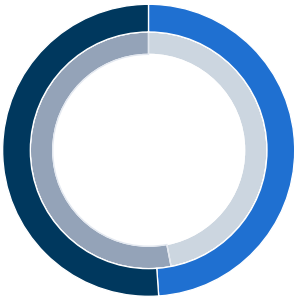
The Inflation Reduction Act

Now over two years old, the Inflation Reduction Act of 2022 (IRA) has had time to take full effect. The law has been partially responsible for a significant increase in domestically produced solar equipment, but outcomes in other parts of the industry have been relatively muted.

Respondents indicate that much of the promise of the IRA has been realized, with barely any movement in the responses to our questions about the law. One change is that the majority of respondents now indicate that they think the IRA didn't go far enough to help solar installation companies.

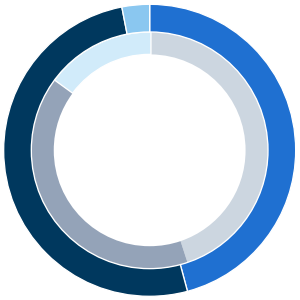
Has your business expanded due to the IRA?

		2023
Yes	**49%**	47%
No	**51%**	53%



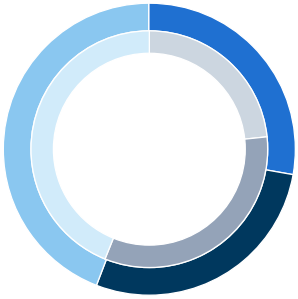
Do you feel the Inflation Reduction Act did enough to help solar installation companies?

		2023
Yes	**46%**	45%
No	**51%**	40%
Don't know	**3%**	15%



Has your business expanded into low-income areas because of Inflation Reduction Act tax credit adders?

		2023
Yes	**28%**	21%
No, but we plan to in 2025	**28%**	29%
No, and we don't plan to	**44%**	39%



Solar policy

State-level solar incentives have taken a backseat in the post-COVID era, with property and sales tax exemptions left as the most widespread form of incentive program. Rebates have mostly disappeared, and only six states currently offer some form of residential solar tax credit.

However, **with political uncertainty around federal solar incentives in 2025, states may have to reclaim a vital role in promoting solar**. When asked about how helpful different incentive programs would be for their business, respondents provided this ranking:

State-level policies ranked by how helpful they are or would be for solar business

1st	Statewide tax credit for solar customers
2nd	Energy storage rebate program
3rd	Solar rebate program
4th	State-backed green bank offering low-interest loans to individual consumers
5th	SRECs
6th	Demand response battery program
7th	Community solar gardens

Net metering

Residential installers who responded to the survey reported **30% of their 2024 solar installations took place in areas without net metering**, up from 27% in 2023. That number will undoubtedly increase in 2025. States have continued to strip away net metering for distributed solar, with Illinois becoming the latest state to move away from the program on January 1st, 2025.

What percentage of your 2024 installations occurred in areas not covered by net metering rules?

Permitting and interconnection

Respondents say **permitting and interconnection rules and costs are the #1 barrier to success**, with 33% of companies reporting it as a major impediment.

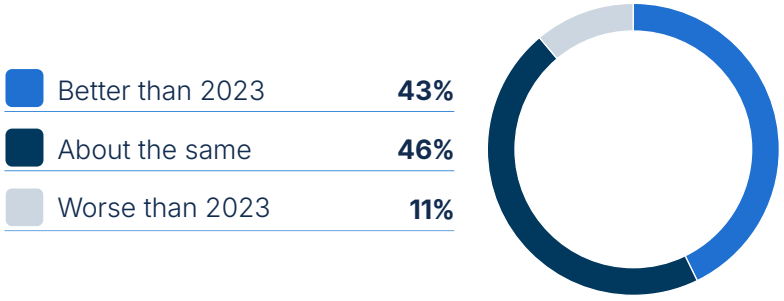
Current attempts to fix residential permitting do not go far enough, with **46% of respondents who work with the streamlined SolarAPP+ permitting tool reporting that it does not make the permitting process significantly easier.**

Anecdotal evidence from responses to our open-ended survey questions suggests there are still problems with inconsistent requirements across jurisdictions and communication with utilities, especially when energy storage systems are involved.

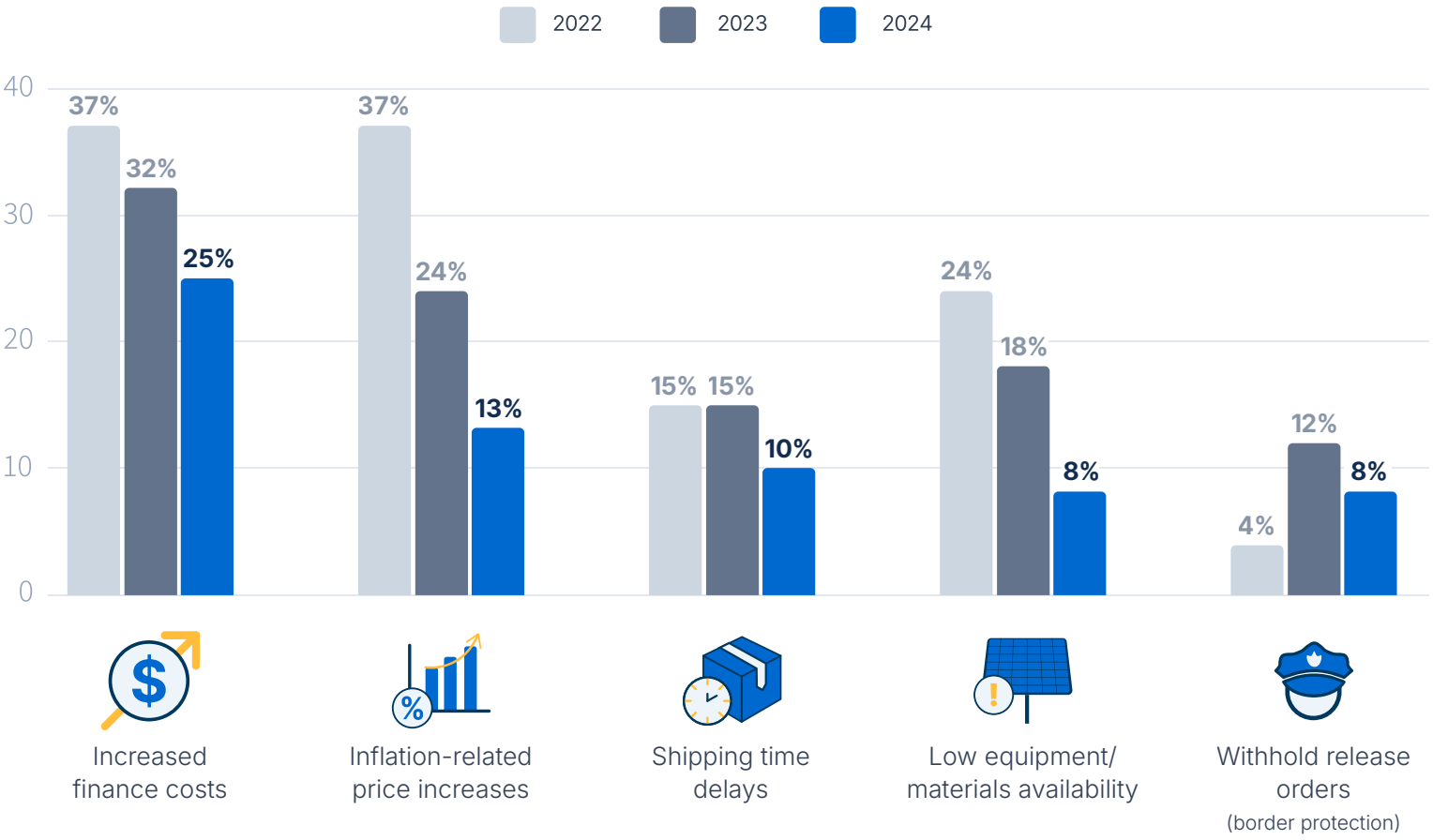
Supply chain

In 2024, respondents' experiences with the supply chain continued to improve. This is on top of big gains the year before, suggesting that many COVID-era supply chain challenges are no longer of concern.

How would you characterize the severity of supply chain issues in 2024?



Supply chain issues (and % of respondents reporting the issue as having "major significance")



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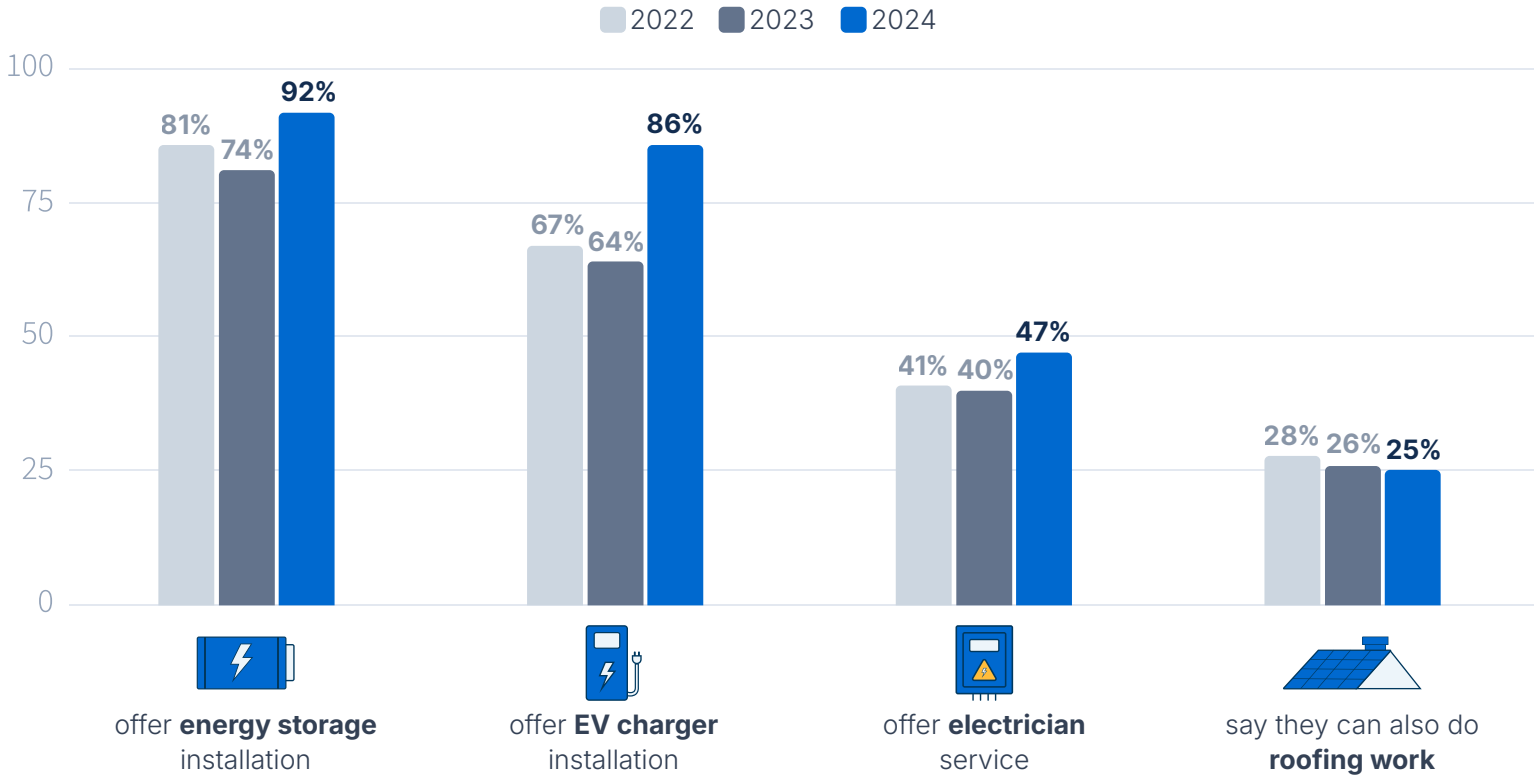
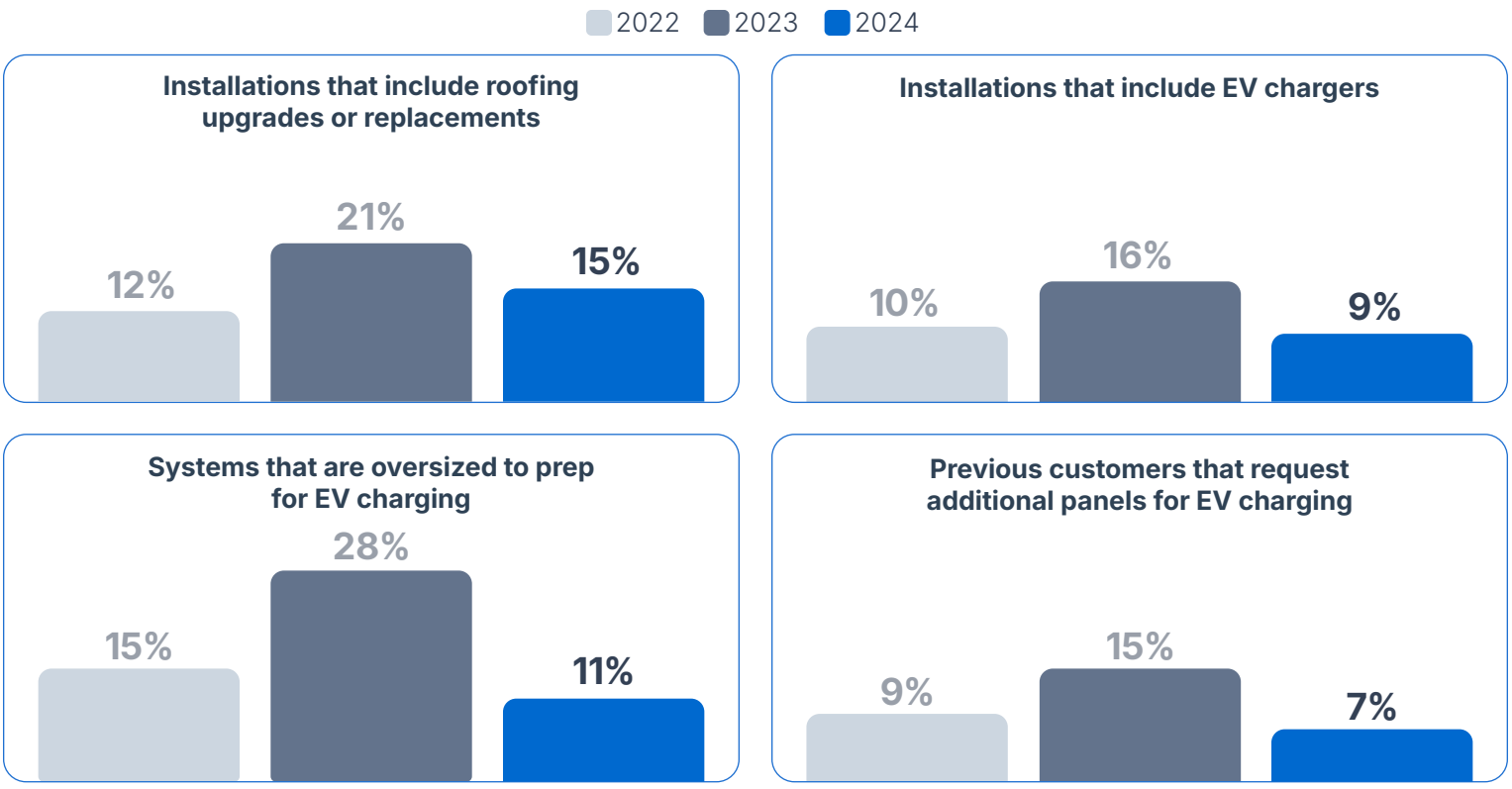
Residential solar takeaways

Residential installers continue to diversify their offerings, with more respondents saying their businesses provide energy storage installation, EV chargers, and electrician services than ever before.



Despite these increased service offerings, installers reported fewer "add-ons" to solar installations in 2024.



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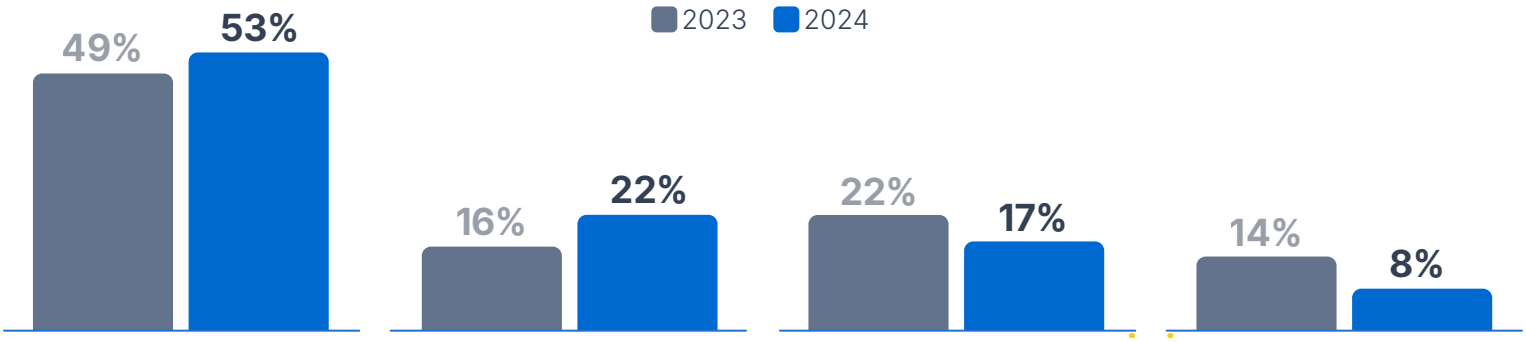
Residential solar sales and demand

2024 was the third year of our survey, and the third time that residential installers overwhelmingly reported a drop in demand. While interest rates remain high, residential solar in states with low electricity prices remains a difficult sell for many homeowners.

Residential solar demand in 2024 vs. 2023



said **demand went down** compared to the previous year

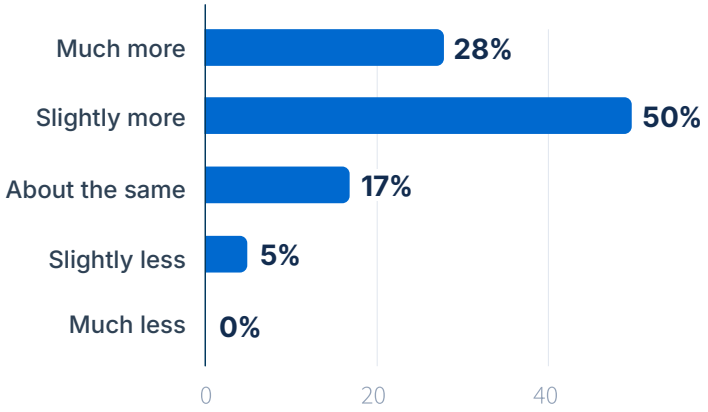
said **demand stayed roughly the same**

said **demand went up a little**

said **demand went up a lot**

At the end of 2023, **54%** of companies said they expected to sell more solar in 2024. Unfortunately, this looks like a case where expectations exceeded reality.

Do you expect to install more or less solar in 2025 than you did in 2024?



For the third year in a row, residential installers expect a good year ahead. Time will tell if they were once again too optimistic.

Spotlight: Closure of competitors

Several high profile residential solar companies went bankrupt in 2024, and 81% of installers reported the closure of at least one large competitor in their service territory. In their responses to our open-ended question about effects of the closures, respondents frequently pointed out that customers are more wary of solar companies. Any news of major solar company closures in the future could depress the market for home solar even more.

In all, 57% of the responses focused on the negative effects of closures on surviving residential solar companies. Here are some of the responses:

> "With fewer options available, customers expected higher levels of service and quality from our business. We had to focus on improving customer experience and satisfaction to retain and attract customers."
>
> *Solar installer in Arizona*

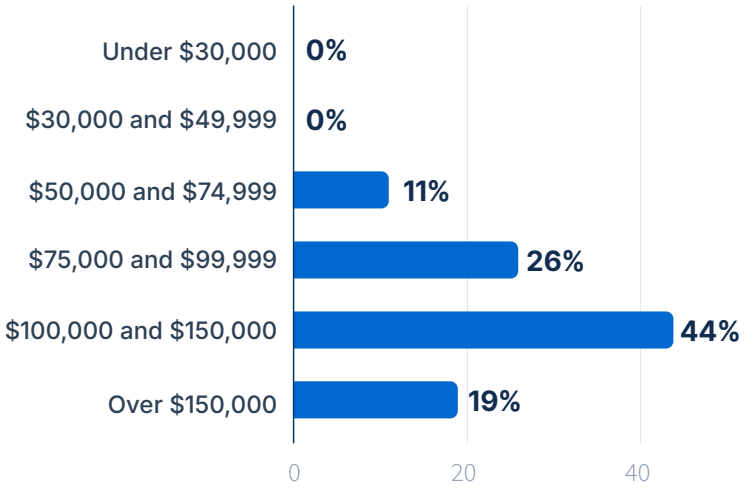
> "We had far more service calls, and (there is now) far less trust in the industry."
>
> *Solar installer in Colorado*

> "(There were) more objections for us about 'what happens if you guys go out of business?'"
>
> *Solar installer in Iowa*

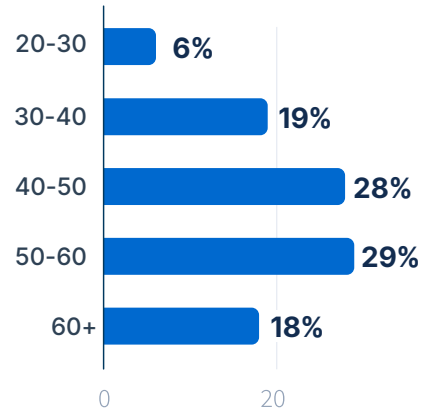
Customer demographics

Low-income customers were missing from survey responses this year, with average income and age trending toward higher and older, respectively. We'll continue to watch these demographics as more states bring their IRA-funded low-income programs online.

Solar customers' average income



Solar customers' average age group



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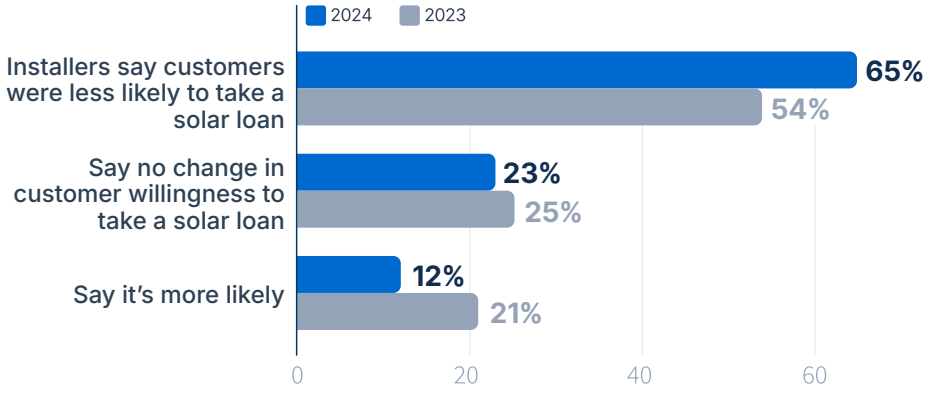
Home solar financing

With 31% of respondents saying that financing remains a significant barrier to their success, the topic of how homeowners pay for their solar installations is as important as ever. This year, the data shows that the mixture of ways homeowners pay for solar installations has not changed much, even as interest rates have begun to decline.

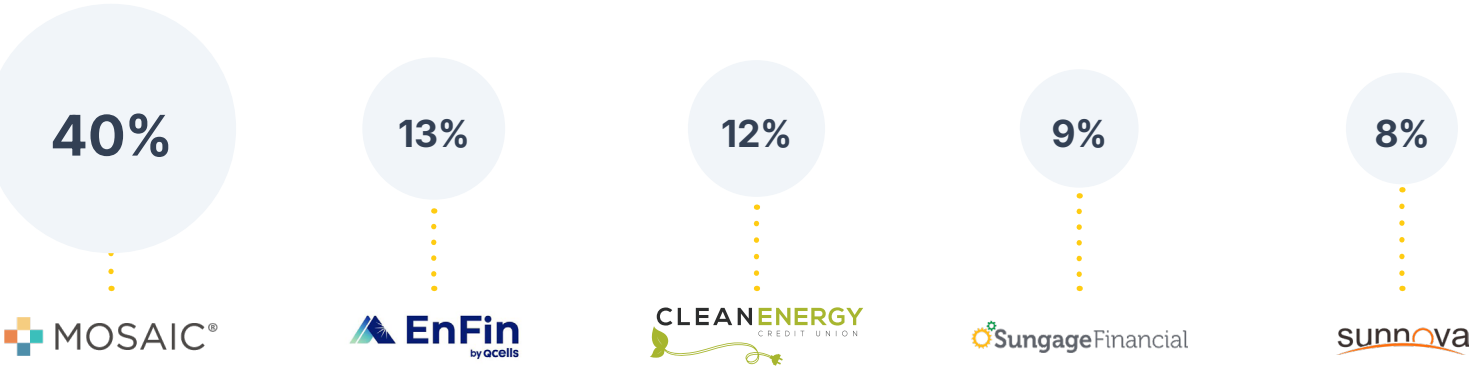
Type of solar sales reported

Cash	40%
Solar-specific loan	44%
Home equity line of credit (HELOC)	6%
Power purchase agreement (PPA)	12%
Lease	6%

Customer willingness to take a loan



Top 5 solar financing companies



We also asked residential installers about the best loan terms they could get from their financing partners, and came up with these results:

With fees

term	15 years	20+ years
interest rate	1.99%	6.12% 6.88% - 2023
dealer fee	38%	22.6% 22.9% - 2023

Without fees

term	Under 10 years	10-15 years	20+ years
interest rate	5.995%	6.625% 6.98% - 2023	9.04% 9.71% - 2023

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Most-used brands in residential solar

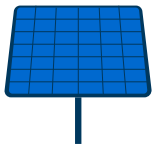
Finding the best installation equipment is crucial for a successful solar company. We asked survey respondents to tell us which brands they choose for their business in each of the three main categories of products: solar panels, inverters, and energy storage.

Top 5 factors installers consider when choosing a brand

1st	Product performance/quality
2nd	Brand name/reputation
3rd	Pricing
4th	Product warranty
5th	Product availability from distributor

Installers report that **18%** of their customers request a specific solar panel brand, but most still rely on the experts to make the right choice.

Percentage of equipment sourced directly through a manufacturer

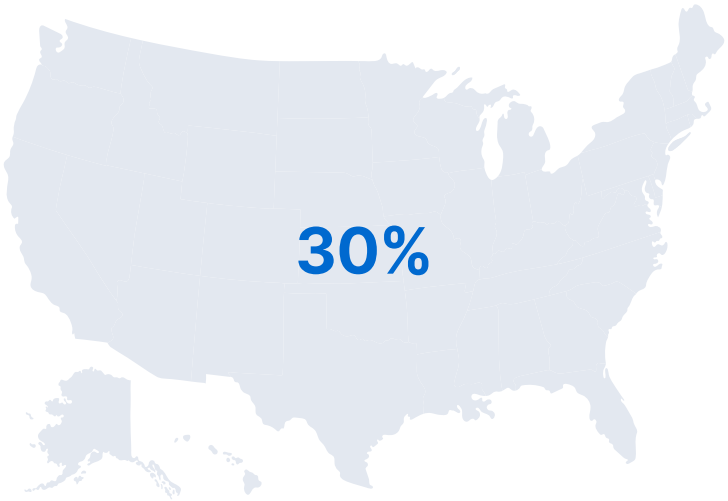


19%
Solar panels

27%
Solar inverters

23%
Energy storage products

Percentage of equipment manufactured in the United States



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Most-used solar panel brands

For the third year in a row, Qcells is the top solar module brand among residential installers, with over half of all companies saying they installed the brand's products this year. REC and Silfab were popular second choices for many installers.

- **58%** Qcells
- **44%** REC
- **44%** Silfab Solar
- **33%** JinkoSolar
- **31%** CanadianSolar

Most common solar panel brand pairings

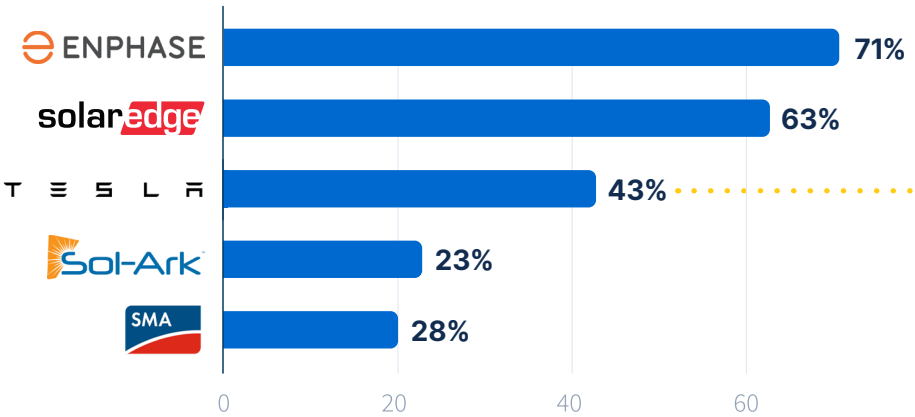
34% of installers offer both Qcells + Silfab Solar

28% of installers offer both Qcells + REC

9% of installers only offer a single brand, but the majority provide customers with alternative panel options to find what best fits their needs.

Most-used inverter brands

Top 5 most-used inverter brands
(by % of installers that use them)



The number of installers who say they use Tesla inverters **more than doubled** this year, from 21% last year. This is likely due to the number of companies installing the Tesla Powerwall 3, which has a built-in solar inverter.

9% of installers only carry a single inverter brand

And **56%** say they install both Enphase and SolarEdge products, based on the needs of the project.

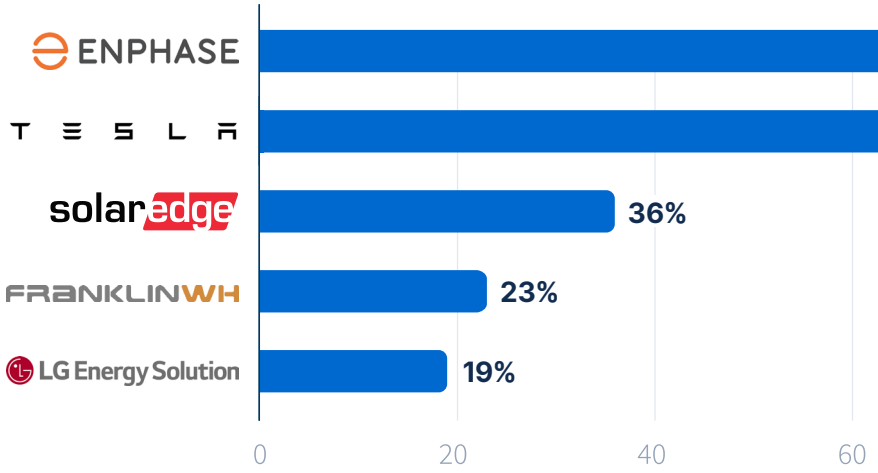
Most-used energy storage brands

92% of installers now offer energy storage alongside rooftop solar, and they report that **30% of new solar installations include batteries.**

Primary reasons to add energy storage

80%	of installers said customers added batteries for electricity backup
13%	said the primary reason was reduced net metering benefits
7%	said batteries were installed to offset time of use rates

Top 5 most-used battery brands
(by % of installers that use them)



42% of installers say the Tesla Powerwall is the **easiest battery to install** in a residential setting.

Residential solar maintenance and repairs

Maintenance and repairs are becoming an essential part of running a successful solar installation business.

97% of the companies we surveyed service their own installations, and 72% of them service installations performed by competitors who have closed.

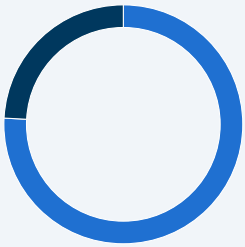
70% of solar installers get calls from system owners seeking service

The most common after-installation repairs are:

Monitoring/communication/internet issues	**52%**
Inverter hardware failure/replacement	**30%**
Inverter software/setup issues	**6%**
All others	**12%**

Warranty coverage

24% offer third-party warranty coverage through a provider like Solar Insure or Omnidian



76% of installers offer their own warranties

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Looking forward

As the industry begins 2025, the survey shows this: There have been some hard times, and certain struggles continue. Political uncertainty is high, but so is confidence that solar is the right solution for the challenges our nation faces.

A 2022 analysis from Goldman Sachs[1] indicates that demand for electricity could increase by 2.4% per year through 2030—in large part due to the demands of AI. The Lawrence Berkeley National Laboratory[2] recently showed that retail electricity prices rose at double their historical rate between 2019 and 2023. These trends will each lead to increased demand for solar energy and energy storage at grid-scale and behind the meter.

Despite uncertainties, there is ample opportunity for well-run companies to thrive as they address the need for affordable, renewable energy. Because that need is so urgent, we hope that any political uncertainties will be resolved quickly in 2025, and the way forward will be made clearer.

1 https://www.goldmansachs.com/insights/articles/AI-poised-to-drive-160-increase-in-power-demand
2 https://emp.lbl.gov/news/new-berkeley-lab-report-summarizes-trends-retail-electricity-prices-and-price-drivers

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About SolarReviews

SolarReviews is America's leading independent website for solar leads for installers, consumer reviews, and comparisons of solar panel installation companies and residential solar panel brands for homeowners. They offer consumer and expert reviews, specifications and warranty details, panel prices, and quote comparison tools that streamline the solar installation process and make it easy for homeowners.

For more information, visit www.solarreviews.com.

Thank you to our partners for sharing the survey with your networks

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