

Solar

My homeowner nightmare

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• 3h • 7 min read

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The moment I saw I had an email from my solar company, I knew my nightmare was about to take another unsettling turn.

For weeks, I'd been wrangling with my solar dealer about the panels it had installed on my roof months earlier. I'd passed all the necessary inspections. Someone just needed to flip a switch and turn them on, and my family would finally start saving about \$400 a month in electricity during the blistering summers here in Fresno, California. But Sun Solar, the redundantly named dealer, kept giving me the runaround. I nagged them so much that I eventually got a call from a supervisor who told me the company couldn't turn the panels on until it had approval from its partner, SunPower.

And that email from SunPower finally confirmed my suspicions: The company, one of the biggest solar providers in the country, announced it was filing for bankruptcy protection.

I was furious. I frantically called back Sun Solar, demanding answers. The sales rep was empathetic and candid. He, too, had a lot of questions for SunPower — what did its going under mean for his business? But he didn't know any more than I did about how much longer my solar panels would remain useless.

I hung up, dejected. Then I went through a tailspin of self-doubt. Why had I become a homeowner in the first place? Our apartment in New York City was tiny, but if anything happened, all I had to do was call my super. Also, how could I have missed that this company was in trouble? I'm a business journalist, after all, and I thought I'd done my research on SunPower. It was one of the oldest and most respected companies in residential solar still in operation.

But after digging a bit further, I quickly learned that SunPower was far from alone. At a time when solar is most needed to stave off the climate crisis, much of the industry is cooling. Over the past few years, high interest rates have decimated demand for residential solar, resulting in layoffs (more than 17,000 in 2023 among California solar companies alone), questionable financial engineering that's been compared to the subprime-lending crisis that sparked the Great Recession, and many, many bankruptcies — more than 100 across America so far this year. *

Meanwhile, my solar panels have been sitting on my roof for four months, entirely unused, taunting me from above. Over another summer of record-breaking heat, my electricity bills were astronomical. As it's only getting hotter, the solar industry threatens to leave us in the dark.

California's Central Valley is prime solar-power country. There's rarely a rainy day here and ample sunlight for solar panels to take in and convert to electricity. It's rare to see a house here without solar panels. But there are a few, and mine was one of them. Solar companies knew that.

Earlier this year, I'd get calls every day from solar companies eager to pitch me on getting a system installed on my house. Sales reps from companies like Sunrun would also frequently knock on my door, asking whether I would consider solar. It happened so much that my wife and I decided to post a "no soliciting" sign out front.

But in the end, all that nagging worked — I was sold on the potential for savings. Getting electricity from my provider, Pacific Gas and Electric, one of the three main providers in the state, is staggeringly expensive. Since 2020, PG&E's residential-electricity rates have risen 38% after you adjust for inflation, Severin Borenstein, a professor at Berkeley's Haas School of Business, wrote in a blog post. In the past 15 months alone, PG&E has hiked its rates four times. During previous summers, when daily highs averaged over 100 degrees for weeks on end, several of my neighbors' monthly electricity bills reached nearly \$1,000 — close to the average monthly rent in Fresno. I did not want that.

Neither do many homeowners across America. From 2015 to 2022, residential solar installations climbed by an average of 15% a year. Some can afford to buy an entire solar system, which costs about \$12,500 on average, or finance it with a loan. Often, though, homeowners enter into arrangements like power purchase agreements, in which there are no up-front costs. The company goes out and finds capital to fund the project, installs the system, and then charges a monthly rate over a 20- or 25-year lease. Over the past five years, nearly one-quarter of homeowners in California who have had solar panels installed have gone with that agreement — including me. After I called Sun Solar in March, the SunPower dealer, my solar project was in motion within a week. *

But as my project progressed, I missed several signs that SunPower, along with much of the solar industry, was in a downward spiral. The company lost \$200 million in 2023, and 2024 was shaping up to be worse. In the months since I called Sun Solar, had my panels installed, and waited, and waited, for an update, SunPower received notice from Nasdaq that it was out of compliance for not filing forms on time, its accounting firm, Ernst & Young, resigned, and its stock cratered to less than \$0.70 a share.

Gordon Johnson, the founder and CEO of the equity-research firm GLJ Research, said the solar-panel systems offered by companies like SunPower and its main rivals, Sunnova and Sunrun, rarely make any money for the companies. "Solar is extremely uneconomical," he said. *

Part of what makes solar attractive is the 30% federal tax credit. Homeowners are eligible for it if they buy the panels themselves. If they opt for a power purchase agreement, the solar company ↘

can claim a similar credit — a practice that has recently come under scrutiny. Johnson said many solar companies use questionable accounting practices to inflate the value of solar systems and get larger government tax credits, which they then go shop on the open market and sell to companies such as Alphabet and Meta.

"This industry is rife with fraud," Johnson said. ✱

Stock analysts aren't the only ones calling the residential-solar model into question. Late last year, Forbes said an industry whistleblower had reported to the IRS that bloated tax-credit claims were widespread across the residential-solar space. In August, the Stanford professor David F. Larcker and Brian Tayan, a corporate-governance researcher at the school, published an alarming analysis titled "Solar Flare Up: Systemic Organizational Risk in the Residential Solar Industry". The authors said a cocktail of convoluted financing, tax credits, high sales commissions, and uncertain costs "have combined to create an incredibly complex industry with multiple points of potential breakdown." They cited the recent bankruptcies of the solar giants Titan Solar, iSun, SunPower, and various others "due to financial distress, changes in regulatory standards, or fraud" as harbingers for a wider collapse. The insurer Solar Insure says nearly 75% of solar installers in California are at a "high risk" of shutting down. ✱

Some, however, remain optimistic about residential solar's long-term prospects. "The fact that SunPower went bankrupt was largely self-inflicted," Pavel Molchanov, a managing director at Raymond James, said. "There are plenty of other companies who do rooftop solar in this country that are alive and well." He pointed out that the cost of electricity from utility providers is only going to go up — the national average cost increased 11% in 2022 and 6% in 2023 — and the cost of solar equipment has become cheaper, making solar electricity an attractive option for consumers. There's also still a huge market since 95% of single-family US homes don't have solar.

But among the 5% of us who do, many of us remain in purgatory, awaiting our troubled corporate sun gods to decide our fate.

A few days after my deflating call with the Sun Solar sales rep, I heard from the company's vice president of sales. While he was empathetic, he made clear that there wasn't much I could do: SunPower had communicated to the company that it couldn't touch the panels on my roof, which meant I was stuck with a lifeless solar system and couldn't seek out alternatives. A couple of days later, he called me back with a couple of options: I could buy the system outright in cash, for just over \$54,000 — \$38,000 with the tax credit — or finance it.

In response to a detailed list of questions I asked for this story, SunPower directed me to the same press release announcing it was filing for bankruptcy protection that it had sent me as a customer, adding that it would provide updates when they became available. The dealer, Sun Solar, did not respond to these questions, either.

I also reached out to California's Contractors State License Board, which regulates solar companies, asking what recourse SunPower's customers had. In an emailed statement, it said

the board had "identified substantial violations or concerns related to SunPower's operations" and "initiated formal disciplinary proceedings" to revoke the company's contractor license. It added that it had received complaints about SunPower. It has forwarded the case to the state's attorney general's office. For customers, the board recommends they consult with an attorney.

I still haven't decided what I'll do. But it seems ludicrous to buy a solar system that I had no intention of buying in the first place. And with the state of residential solar in limbo, it's an option I have serious doubts about.

I'm reminded of this ordeal every day I return to my house and see the gleaming, useless solar panel ornaments adorning my roof. It feels like I'm trapped in a dark comedy sitcom depicting life as a millennial homeowner. Then, like a bad punchline, I pull into the garage and turn on the lights.

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