Solar installations bring financial relief to low-income homeowners

Installation of solar PV panels on a single family home in the TCC project area. Photo credit: GRID Alternatives

BACKGROUND

This case study explores how TCC-funded solar installations have financially benefited low-income homeowners in Stockton. The study does so through the lens of two individuals, Carolyn Hopkins and Mayra Delgado, who are using the savings from their lower energy bills to better maintain their homes and personal well-being. For more on Stockton's solar projects, see **page 52.**

Interviews for this case study were conducted in March 2022.

CAROLYN HOPKINS is a longtime Stockton resident who moved to the city when she was 1-year old. Sixty-five years later, she's now a retired homeowner, living with her son and granddaughter, and trying to make ends meet. Rising energy costs haven't been kind to her in that regard and were ultimately what motivated her to go solar.

> **"Prior to going solar, my electricity bills were getting so big that I couldn't pay them all at once, and I had to get on a payment plan ."**
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> CAROLYN HOPKINS

Hopkins first heard about Stockton's solar program for low-income homeowners through her son, who had an internship with GRID Alternatives, the organization leading Stockton's solar installations. At first, Hopkins was skeptical that she wouldn't have to pay anything for her new solar panels. However, after going over the program details with a representative at GRID Alternatives, Hopkins realized that there was no catch. The cost of the panels and their installation is covered by TCC funds, and are exclusively reserved for homeowners that qualify as low income. In addition to the TCC grant, GRID Alternatives also receives philanthropic funding, which has allowed the organization to upgrade Hopkins' roof so that it could safely support the panels.

The upfront costs of rooftop solar are often what deter many low-income individuals from investing in solar on their own. Stockton's solar program, however, eliminates that issue, enabling homeowners to access measurable cost savings soon after their solar panels go live. By generating on-site electricity, the panels offset the consumption charges that ratepayers are billed. In Hopkins' case, her solar panels have produced enough electricity to save her as much as $100 per month.

> **"My summer utility bill, which includes both electricity and gas, is where I have seen the greatest cost savings, they went from over $200 down to around $100."**
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> CAROLYN HOPKINS

Now that she's paying lower energy bills, Hopkins plans to use her cost savings to pay off her property taxes. She also is looking forward to taking a vacation with her family. Time with family is particularly important to Hopkins. For example, when GRID Alternatives awarded her a $200 incentive for a referral she made, Hopkins spent the money on taking her grandchildren out to dinner.

The rooftop solar panels have also enabled Hopkins to spend more money on maintaining a comfortable living environment. For example, during the winter, Hopkins used to rely primarily on space heaters to heat her home room-by-room because central heating was too expensive.

The energy cost savings from the solar panels have allowed Hopkins to turn on her central heater during the winter without having to worry so much about her resulting bill.

"My home is two stories and it gets really cold downstairs during the winter. When I didn't have the solar panels, I was too afraid to turn the central heat on. Now I can afford to do that."

CAROLYN HOPKINS

Hopkins' switch from electric space heaters to gas powered central heating is a certainly win for her well-being, but it's important to note that it may not be a clear environmental win. This points to the challenge of achieving deep GHG reductions in low-income settings, where residents live in older buildings that are not yet fully electrified, and often lack the funds to invest in electrification themselves. Thus, while rooftop solar systems are a critical step forward in the path toward decarbonization, they are certainly not the last step. To achieve a zero-carbon future, greater investment is needed to help low-income homeowners like Hopkins upgrade their central heating system to an electric one, which thanks to her solar panels, she could power on-site.

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MAYRA DELGADO is another Stockton resident who decided to go solar to help make ends meet. Originally, from Mexico, Delgado moved to Stockton about 20 years ago with her former husband on the recommendation of her brother, who was already living there. Delgado was attracted to Stockton for the lower cost of living relative to the San Francisco Bay Area, where she had initially landed.

For a while, Delgado was able to take full advantage of the lower cost of living. With the modest income she and her husband both earned working at Mervyn's, a national chain of department stores, they were able to buy a home for themselves and their three daughters. But when the Great Recession came in 2008, the Delgado family was hit hard: Mervyn's went bankrupt, Delgado and her husband lost their jobs, the interest rate on their home loan soared, and they were forced into foreclosure.

Delgado eventually recovered from the loss. She started working as a teacher's assistant, rebuilt her savings, and bought another home. But her recovery was interrupted by the pandemic and subsequent school closures. Now a single mom, Degaldo was forced to decide between working full time or caring for her youngest daughter, a high school student with special needs. Delgado ultimately chose her daughter, and quit her full-time job for a part-time one at Amazon. The loss in income is when she started falling behind on her electricity bills, and like Hopkins, had to get on a payment plan.

"In December, my utility bill was $340 or $380, I had no idea how I was going to pay it.... Things got so bad that I owed my utility a total of $600."

MAYRA DELGADO

In search of a way to save money, Delgado started searching on the internet for options, and that's when it occurred to her that going solar could help. She first explored getting panels through a for-profit solar company, but it didn't make financial sense for her because of all the upfront costs. She eventually discovered Stockton's no-cost solar program for low-income homeowners.

Like Hopkins, Delgado was skeptical at first, and it was her interactions with GRID Alternatives that made her feel confident that she wasn't being scammed. She was particularly impressed by the follow through from GRID Alternatives to address issues at her property that made installing solar panels challenging. Like Hopkins, Delgado needed repairs to her roof and tree trimming around her property, all of which GRID Alternatives covered at no cost to Delgado.

"GRID Alternatives was always looking for ways to save me money, they knew I was a single mom and wanted to make sure I didn't have to spend any of my own money on the solar panels."

MAYRA DELGADO

After her solar panels were connected to grid, Delgado saw a dramatic decline in her utility bills. This has helped her catch up on the money she owes to her gas and electricity provider. Once those are paid off, Delgado plans to invest her savings back into her home and the health of her family. In practice, that means repainting her home and maintaining a healthy and diverse diet, all of which have been hard for Delgado to afford in the face of inflation.

"Before I got the panels, I had to make some tough choices. I could pay my bills or I could buy fresh fruits and vegetables. Not having to choose between the two gives me great peace of mind."

MAYRA DELGADO