

## SOLAR FOR SINGLE-FAMILY HOUSING IN PHOENIX, AZ

### Project Summary

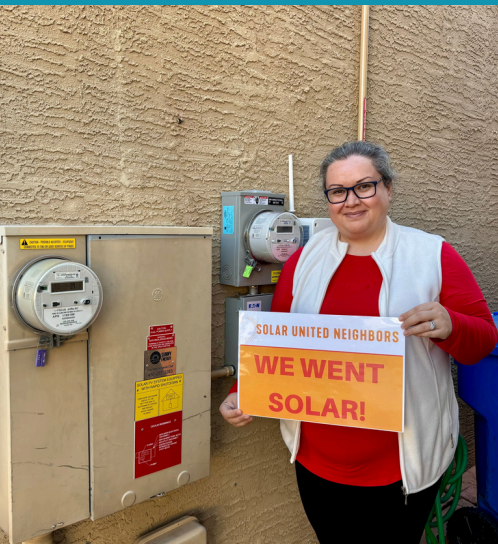
USDN partnered with [Solar United Neighbors](#) and the City of Phoenix to install rooftop solar energy systems on ten single-family homes in Phoenix. In an effort to promote equitable adoption of solar power, the partners identified eligible families that would benefit most from savings on their monthly electric bills. These installations will save participants an average of nearly \$1,000 annually in their electric costs and the project has been used to explore ongoing efforts aimed to provide more solar power to households across the region.

### Key Partners

Solar United Neighbors (SUN) envisions a clean, equitable energy system that directs control and benefits back to local communities, with solar on every roof and money in every pocket. SUN Arizona worked closely with the City of Phoenix and the companies Sunny Energy and Solar Insure on this project. SUN and the City of Phoenix worked together to raise awareness of this project and to review residents' applications to ensure they met criteria for participation, such as residential location and income. Sunny Energy conducted the solar installations, and Solar Insure provided third party warranty protection on the installed solar panels.

### Results

Overall, this project was a resounding success. SUN released a request for proposals with requirements for installation and helped participants through the process. The City of Phoenix validated applicants' income and residential location within a historically underserved community to determine their eligibility. Ten residential solar systems were installed, with eight households receiving 6.93 kW systems and two receiving smaller systems (at 2.92 and 4.75 kW). It is estimated that the installations will result in a total savings of 845.9 metric tons of carbon over 25 years, and will save participants an average of \$937 in electric costs annually, exceeding initial goals for the project.



## Community Impacts

Participants reported very positive impacts. One family expressed that they used to keep their thermostat high during the summer months prior to the solar installation, but now they are able to maintain a comfortably cool temperature in their home without concern for cost. Another family reported that in addition to cost savings, they are now more conscious of their energy consumption and have begun to adopt sustainable habits, such as shifting energy-intensive tasks to the middle of the day to maximize solar use and turning off unused devices. Finally, one participant who works as a mechanic and occasionally fixes cars in his garage indicated that the solar installation has helped to both reduce his household expenses and increase the profitability of his business.

## Lessons Learned

One major unanticipated challenge was identifying a sufficient number of qualifying homeowners. Many community members were skeptical of offers of "free solar" due to the pervasiveness of false advertising making similar promises. An effective solution to this challenge was to co-promote the program with the City of Phoenix and add their logo to promotional materials to increase credibility. It was also challenging to identify applicants who met all eligibility criteria of owning their own home, living in an underserved census tract, meeting income requirements, and having a structurally sound home. To increase the number of applicants, the partners lifted an initial requirement that homeowners needed to be customers of a specific utility. They reviewed 67 total applications to find 10 qualifying properties. Additionally, Sunny Energy unexpectedly went bankrupt, creating the need to purchase third-party warranties through Solar Insure to ensure that the solar units are kept in good repair.

## Influencing Change

While most homeowners who joined the program were motivated primarily by financial benefits, after installation was complete many reported being proud to be part of the solution to climate change. One family has now begun having conversations with their neighbors about solar. Another homeowner was inspired by her participation to begin volunteering with SUN. Seeing local homeowners get inspired to become climate advocates has been one of the most exciting and encouraging results of this program. This program is also highly adoptable, and SUN is already working with the City of Tucson to set up a similar program based on the experience in Phoenix.

### KEY METRICS



**Solar Installed** - 63.11 total kW across 10 sites



**Electrical Cost Reduction** - \$937 per year per household (average)



**Carbon Offset** - 33.8 metric tons per year



**Jobs Impacted** - Estimated 1.41 jobs created; 15 positions involved; 850 total working hours across the project

## About USDN

Established in 2008, USDN empowers cities, counties and towns to tackle their most urgent sustainability and climate challenges. USDN brings local government sustainability practitioners together to learn, collaborate, and accelerate the work of local sustainability. By equipping them with the knowledge, resources, and partnerships they need to succeed, USDN helps advance change locally in member communities as well as across the field of practice. The aggregate impact and influence of our collective work makes an equitable, resilient, and sustainable society more attainable.

If you would like to connect to discuss and learn more about our vision and efforts in the years ahead, please reach out to [support@usdn.org](mailto:support@usdn.org).