

TUCSON ENERGY EQUITY



PILOT Program Overview

Solar United Neighbors launched solar co-op programs in 2021 and 2023 to promote a clean energy transition in Tucson, Arizona. In addition to the co-op, SUN used philanthropic funds to offer subsidies ranging from \$5,000 to \$7,000 to partially cover installation costs to help low and moderate income (LMI) households go solar.



Project Funding

The project was funded by a private donor in 2021 and 2023. SUN managed the design and implementation of the program.

Barriers to Solar

Subsidies provide specific households with some space to finance rooftop solar. LMI households continue to face barriers to accessing solar energy and energy efficiency measures which would allow them to reduce their energy bills.¹ Some barriers are:

- Homeownership status
- Lack of an eligible credit score
- Inability to finance upgrades
- Solar education

AZ Energy Landscape

- Literature suggests the energy burden is **not decreasing** and **remains high** in specific populations and geographies.²
- Low-income households still spend a **higher percentage** of their income on energy costs.²
- Arizona had the **third-highest** average monthly electricity bills nationally in 2022.³
- The average monthly bill **increased by 5.1%** between 2021 and 2022.³
- The solar adoption rate continues to be **disproportionately lower** for low-income households even though the price for solar declined by 42% over the last 10 years.⁴
- 2022 solar adopters **tend to be or have** higher incomes and own a single-family home.⁵

1. Department of Energy, Office of State and Community Energy Program, Low-Income Community Energy Solutions

2. Progress in Energy, High energy burden and low-income energy affordability: conclusions from a literature review

3. MAP Dashboard, Energy Use in Tucson, AZ

4. SEIA, Arizona Solar

5. Berkeley Lab, Residential Solar-Adopter Income and Demographic Trends: 2023 Update

Program-Level Impact

We recognize the historical, identity, and affordability implications that have led to only specific households adopting solar. Part of SUN’s mission is to promote an equitable energy systems that benefits the local community. Using private funds to offer a \$7,000 subsidy is expected to lead to an average of \$9,000 in additional lifetime energy savings for each pilot program participant even when using a loan to cover the remaining cost. Piloting the program within a co-op allowed SUN to negotiate an affordable price with a reputable installer and create local jobs. This drives our mission of building a new energy system with rooftop solar as the cornerstone. More information about program impact is below.

Co-op Year	Pilot Program Members	Total Subsidy Amount	Total Installation Cost	kW Capacity	Projected Total Energy Savings*	lbs. of Carbon Lifetime Offset*
2021	7	\$45,000	\$122,900	42.84	\$223,041	1,264,347
2023	4	\$28,000	\$70,952	23.85	\$124,172	703,891
Total	11	\$73,000	\$193,852	66.69	\$347,213	1,968,238

*Information is internal data for a 25 year period tracked by SUN.

Lessons Learned:

- Partial subsidies offset the cost of solar for households who are unable to afford solar on their own.
- Many participants qualified for the 30% federal tax credit and \$1,000 Arizona state credit which reduced out-of-pocket costs and shortened the payback period.
- Self-attestation for income verification reduced barriers for participants.
- Using an energy justice tool ensured the funds were streamlined to neighborhoods that would most benefit.
- A local lender with an appropriate loan product was important.
- Many people who qualified for the subsidy live in older homes and may need minor roof repairs before going solar. It proved the importance of having a contingency budget.

Next Steps:

In 2024, we plan to launch another round of subsidies with the help of private funds. To efficiently scale, we plan to:

- Conduct targeted outreach to Spanish speaking communities by partnering with organizations that serve the population.
- Further our relationship with an organization called CHIRPA. CHIRPA helps low-income households pay for home repairs. Working with them can connect SUN to eligible candidates.
- Connect with organizations, like CHIRPA, that can help homes become “solar ready.”
- Initiate more in-person events for LMI members to establish connections.