

Key Findings from Two Reports on US Community-Based Organizations and Solar Energy

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ABOUT THIS PAPER

This paper, prepared by the Clean Energy States Alliance (CESA), presents a brief overview of key findings from two reports based on a national survey of community-based organizations (CBOs) that are engaged or interested in solar development in low- and moderate-income communities. The two reports are *US Community-Based Organizations and Their Relationship to Solar Energy Development* and *Understanding the Relationships and Solar Experiences of US Community-Based Organizations*. Both those reports were produced for the Solar with Justice project and are available on the CESA website at: <https://www.cesa.org/projects/solar-with-justice>.

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About the CBO Survey

In 2022, a team of MIT researchers, led by Janelle Knox-Hayes, the Lister Brothers Associate Professor of Economic Geography and Planning in the MIT Department of Urban Studies and Planning, surveyed community-based organizations (CBOs) that do work related to solar.

CBOs in the United States work at the local level to provide services and access to resources that improve the resiliency, health, and wellbeing of their community. CBOs can play an essential role by helping low- to moderate-income (LMI) communities access the benefits of solar energy by bridging the gap between regulators, policymakers, and the needs of the community.

The survey was sent to 563 organizations, most of which appear in a [National Database of Community and Renewable Energy Organizations](#) compiled by the Clean Energy States Alliance (CESA). The researchers received 134 fully completed responses and 27 partial-but-usable responses between October 2022 and February 2023.

The survey, which included dozens of questions, yielded rich, nuanced information about the landscape of CBOs, their attitudes and experiences. Findings from the survey are published in two reports:

- [US Community-Based Organizations and Their Relationship to Solar Energy Development](#) by Janelle Knox-Hayes and six current and former MIT graduate students. That report focuses on the characteristics of CBOs that do work related to solar, including their size, location, organization

tenure, funding, and the focuses of their work. It also explains the origins of the survey and its relationship to previous research.

- [Understanding the Relationships and Solar Experiences of US Community-Based Organizations](#) by Warren Leon and Lizzy Diaz of CESA. The second report covers some of the survey responses that are not fully explored in the longer report from MIT, focusing on CBOs' relationships to their communities, stakeholder groups, and state governments, as well as CBOs' experiences with solar work in their communities.

This current brief summary highlights some of the key findings and takeaway messages from the two reports.

A High-Level View of CBOs and Their Relationship to Solar Energy Development

Below are a few findings about the size, nature, funding, and focus of the CBOs. You can see more in Figure 1 on page 4.

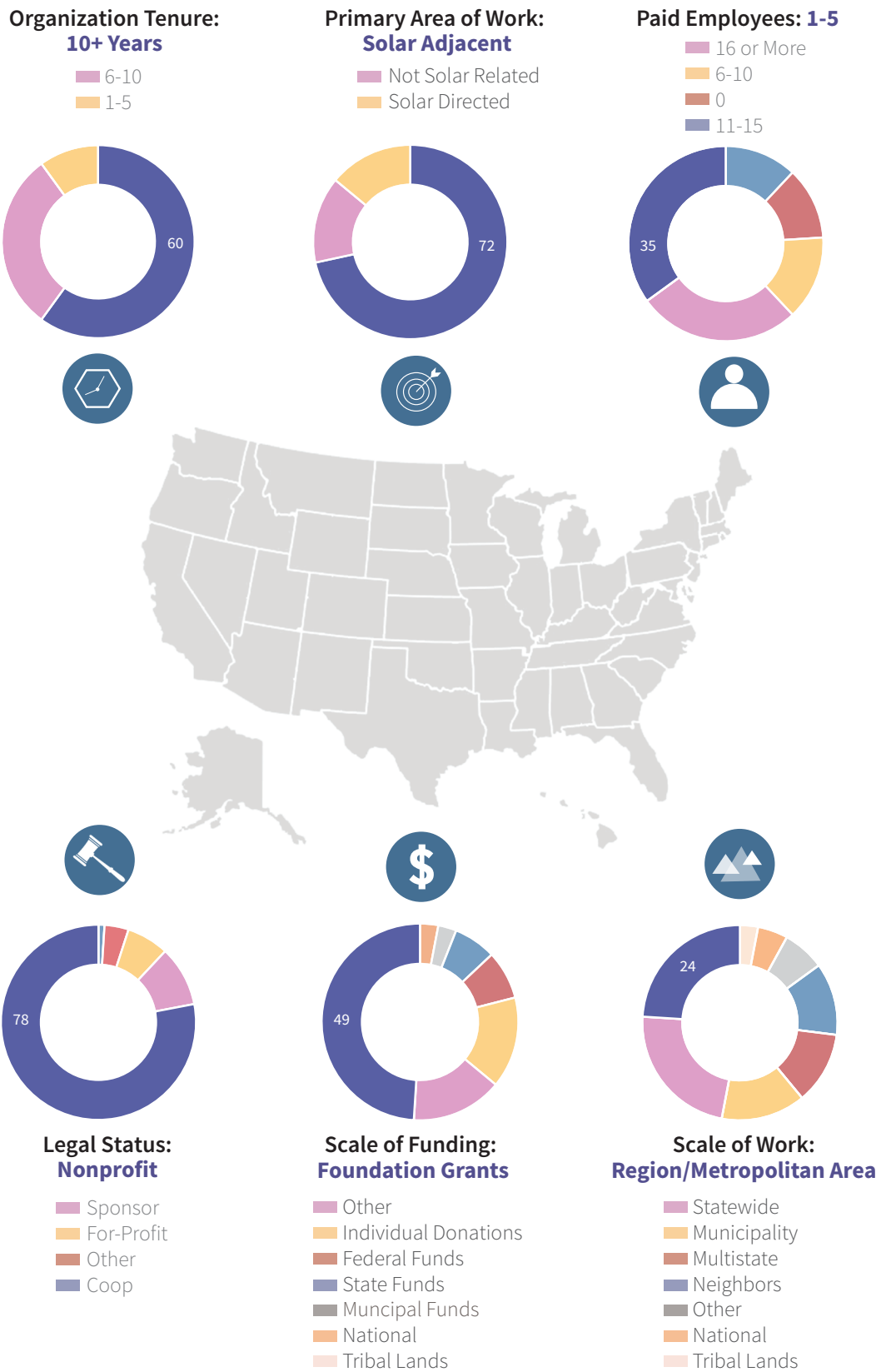
- **Primary Area of Solar Work:** the largest share of CBOs (38 percent) said their primary area of solar work is Community Awareness. Other CBOs identified their primary focus as Solar Project Development (24 percent), Policy Advocacy (18 percent), Capacity Building (10 percent), Solar Installation (5 percent), and Solar Workforce Training (5 percent).
- **Organization Type:** most CBOs (72 percent) are classified as Solar Adjacent, meaning that their main organizational focus is not solar energy, but that they engage on solar issues in part. The remaining CBOs are relatively equally split between ones that are Solar Directed, meaning that they focus explicitly and primarily on solar development, and ones that identify as Not Solar Related, meaning that they do not view solar development as part of their mission but may undertake activities that involve solar to advance their mission (e.g., install solar on their own building to reduce operating costs or share information about solar with community members for economic development reasons).
 - Solar Adjacent organizations are more likely to focus on Policy Advocacy, with 23 percent identifying that as their primary focus.
 - All the Not Solar Related organizations focus either on Community Awareness (67 percent) or Solar Project Development (33 percent)
- **Legal Status:** 78 percent of the CBOs are Nonprofit Organizations, with another 10 percent operating under the aegis of a nonprofit that serves as its fiscal sponsor.
 - Nonprofit Organizations and ones that answered “Other” are more likely to focus on Policy Advocacy, with 25 percent of them choosing that answer.
- **Tenure:** most CBOs (60 percent) have an organization tenure of over 10 years. Ten percent have 6–10 years and 30 percent have 1–5 years of tenure.
 - Organization tenure does not make a dramatic difference in the primary areas of solar work, although more of the older organizations (25 percent) identify Policy Advocacy as their primary focus.

- **Employees:** slightly more than one-third of CBOs (35 percent) have 1-5 employees. Slightly more than a quarter (27 percent) have 16 or more employees. The remaining CBOs have 11–15 employees (12 percent), 6–10 employees (14 percent) or no employees (12 percent).
 - The size of the staff does not dramatically change the types of activities the organization works on, although Policy Advocacy is more common among larger organizations.
- **Volunteers:** most CBOs have 11 or more volunteers.
- **Funding:** nearly half (49 percent) of the organizations rely most heavily on foundation grants for funding. Another 15 percent rely most heavily on individual donations. The remaining organizations rely primarily on grants from the federal government (8 percent), state government (7 percent), municipal government (3 percent), member dues (3 percent), and other (15 percent).
 - Those organizations that rely most heavily on foundation grants are much more likely to focus their solar work on Policy Advocacy, with 50 percent of them emphasizing that.
 - All those organizations that say state or federal funds are their primary source of funding focus on Community Awareness, as do 44 percent of the organizations that rely primarily on member dues.

The MIT researchers used factor analysis and regression analysis to analyze responses to groups of survey questions. Findings from that analysis include the following:

- CBOs show a heightened awareness of energy burden if they are familiar with green finance, as evidenced by familiarity with the electric grid, power purchase agreements, resilience hubs, and green banks.
- Locally oriented CBOs whose key staff reside in the local community, especially small organizations, are less likely to be familiar with green finance, solar tax credits, low-income solar programs, or aspects of energy independence.
- CBOs in states that are perceived to be supportive of solar are more likely to serve communities with higher solar awareness.
- Organizations with a moderate to large number of volunteers are more likely to be involved in workforce development and solar installation.
- Volunteer engagement plays an important role in CBO efforts to address energy burden.
- The organizations that have the most focus and experience doing solar projects do not have a typical nonprofit CBO legal structure, but rather some other structure.

Figure 1: Overview of CBOs Across Regions



Regional Differences Among CBOs

There are significant differences between CBOs in different regions in terms of their size, tenure, attitudes towards state government, knowledge of solar development, and the focus of their solar work. Some of those differences reflect the maturity of the solar market in a CBO's state and the availability of low-income solar programs and incentives from state government. Regional profiles of CBOs are presented in a companion short report on [US Community-Based Organizations and Their Relationship to Solar Energy Development: Regional Summaries](#).

Here are a few of the more notable regional differences, some revealed by factor analysis that examines the responses to several questions:

- 90 percent of the CBOs in the Northeast have an organizational tenure greater than 10 years.
- 60 percent of the CBOs in the Southeast get the largest share of their funding from foundation grants.
- The vast majority of CBOs in the Northeast and West believe that their state government is pro-solar.
- CBOs in the Mid-Atlantic, Northeast, Southwest, and Alaska score high on Green Finance Awareness, indicating familiarity with the electric grid, power purchase agreements, resilience hubs, and green banks.
- CBOs in the Mid-Atlantic, Northeast, and Hawaii perceive their communities to be more aware of and excited about solar projects and their benefits.
- CBOs in the Mid-Atlantic, Midwest, Southeast, Southwest, West, Alaska, and Hawaii all score high on Community Energy Sovereignty, indicating that the organizations are significantly motivated by community empowerment, economic opportunity, and environmental justice. The Midwest has an especially strong focus on energy sovereignty.
- CBOs in the Northeast, Southwest, and Hawaii are more likely to be focused on workforce training and solar installation.
- Reflecting the region's less developed low-income solar programs, CBOs in the Southeast are least likely to focus on solar installation projects and are less familiar with community solar.

CBOs' Relationships and Solar Experiences

CBOs believe that they have strong relationships with the communities they serve. Not only do they have established methods of communicating with their communities, but over 90 percent of CBOs report that they have learned from the communities that they serve, indicating that their communities are able to effectively communicate with the organizations. The vast majority of CBOs also report that they have spent significant time building trust and relationships with the communities they serve.

CBOs use various methods of communication to connect to communities. Email and social media are most common, but in-person and virtual gatherings are also widely used, with 80 percent of CBOs reporting that they interact with their community in one of those ways at least monthly. Canvassing and paid advertising are much less common communication methods.

CBOs believe that most community residents understand the benefits of solar energy, have seen solar panels in their communities, and that the communities they serve are excited about solar energy, but only 21 percent of CBOs agree that their communities are aware of available solar programs.

Community members generally lack confidence in solar installation companies—nearly half of CBOs believe that the communities they serve consider solar installation companies to be untrustworthy, while only 17 percent of the CBOs believe that the communities they serve trust solar installation companies.

CBOs identify many obstacles to solar project development, including limited access to technical assistance, difficulty developing projects according to the anticipated timeline, and insufficient grant funding. Most agree that solar projects usually take longer than the projected timeline. Most respondents believe that solar installation projects require grant funding, with only 4 percent disagreeing.

CBOs have had difficulty engaging with utilities and see them as a barrier to solar development in their communities. There is significant variability in the extent of CBOs' interactions with state government, in part depending upon the availability of state solar programs. There is also significant variation in whether they perceive their state government to be pro- or anti-solar. In general, most CBOs find relationships with political leadership and state government to be difficult.

ABOUT CESA

The Clean Energy States Alliance (CESA) is a national, nonprofit coalition of public agencies and organizations working together to advance clean energy. CESA members—mostly state agencies—include many of the most innovative, successful, and influential public funders of clean energy initiatives in the country. CESA works with state leaders, federal agencies, and other stakeholders to develop and promote clean energy programs and markets, with an emphasis on renewable energy, energy equity, financing strategies, and economic development. CESA facilitates information sharing, provides technical assistance, coordinates multi-state collaborative projects, and communicates the views and achievements of its members.



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