

The Power of a Network

The Solar Energy Innovation Network (SEIN) helps communities discover transformative ways of adopting solar energy. Teams develop their ideas in real-world contexts, yielding results that can unlock tomorrow's solar markets.

Solar energy already provides clean power, financial savings, and energy resilience to many Americans. But many individuals, organizations, and communities still face complex and intimidating barriers to adopting solar energy. To date, solar deployment has skewed toward some communities and demographics. For example, Lawrence Berkeley National Laboratory found that the median income of households that adopt solar is significantly higher than that of the average U.S. household. Research published in *Nature Sustainability* found that Black- and Hispanic-majority census tracts have installed significantly less rooftop photovoltaic (PV) than other tracts.

These underserved communities may face barriers to solar adoption that differ from communities in which solar energy is already common. In addition, different communities will have differing priorities that lead them to value solar's various benefits differently. In SEIN Round 3, underserved communities are confronting the solar barriers and unlocking the solar benefits that are most relevant to their own contexts.

About the Solar Energy Innovation Network

The Solar Energy Innovation Network (SEIN) helps communities discover transformative ways of adopting solar energy. Teams develop their ideas in real-world contexts, yielding results that can unlock tomorrow's solar markets.

SEIN seeks to overcome barriers to solar adoption by connecting teams of stakeholders that are pioneering new ideas with the resources they need to succeed. Teams receive analytical support from U.S. Department of Energy national laboratories and participate in peer-to-peer learning with other teams tackling similar challenges.

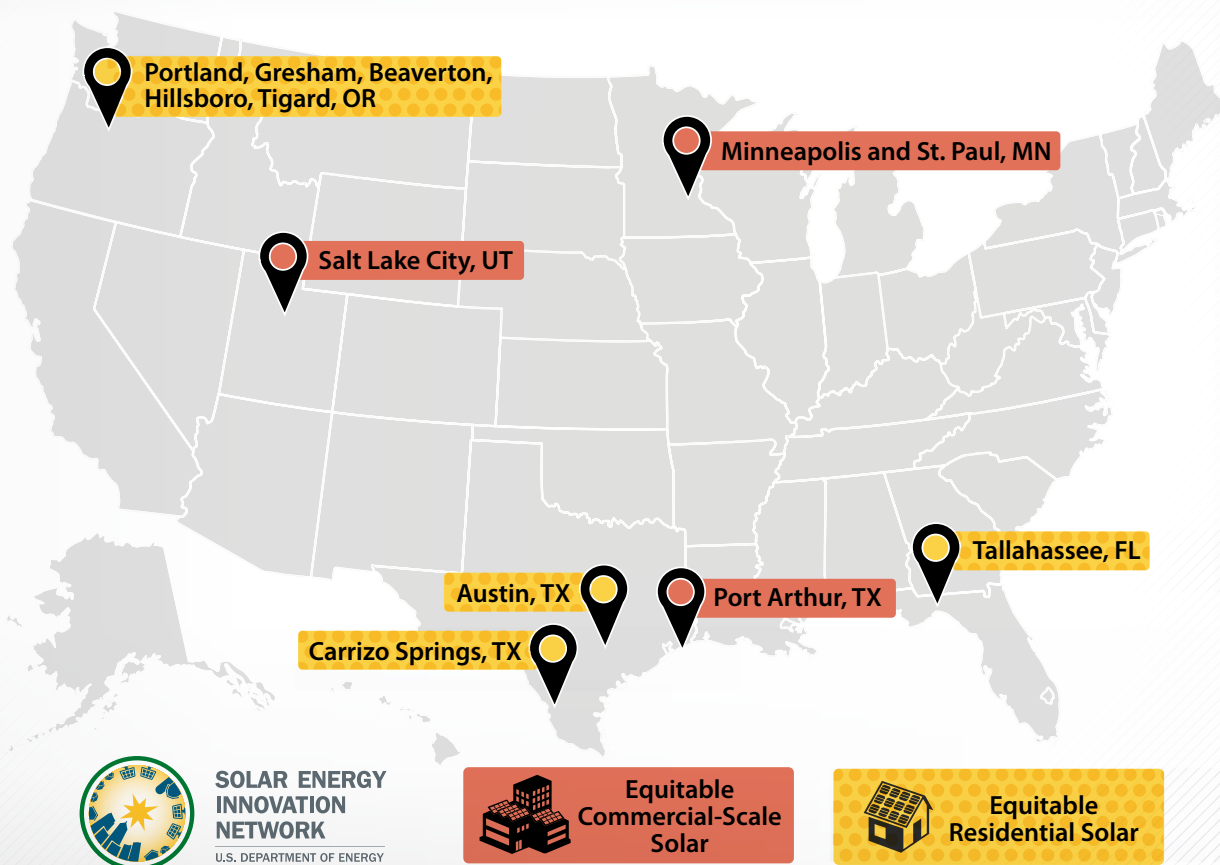
These teams are developing and documenting their solutions for solar adoption with scale in mind so that others can adapt these solutions to their own contexts. Ultimately, these teams' efforts will enable a wide array of communities to adopt solar solutions that meet their specific needs.

SEIN is funded by the U.S. Department of Energy Solar Energy Technologies Office and is led by the National Renewable Energy Laboratory.



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In December 2021, eight teams were selected from across the United States to participate in SEIN Round 3. Over the course of 15 months, these teams will receive tailored analytic support from U.S. Department of Energy national laboratories. They will collaborate frequently with local stakeholders and other teams in workshops and test their resulting solutions in their communities. Ultimately, each team will publish their findings in detail, paving the way for other communities in different contexts to adopt and expand upon their solutions.

Vibrant communities are composed of both individual homes and larger entities like schools, stores, businesses, and houses of worship. All parts of a community can potentially benefit from solar energy and help bring the benefits of solar energy to the broader community. SEIN Round 3 includes teams that are pursuing solutions at both the residential and commercial scales. Teams are divided into cohorts for much of their peer-to-peer learning, but they also collaborate across cohorts, building a community-spanning network of stakeholders who are advancing equitable solar adoption.

Elevating Equity in Residential Solar Deployment

This cohort focuses on developing solutions that expand equity in residential, behind-the-meter solar deployment. Many of these teams aim to boost solar outreach and education within underserved communities. Teams are considering community workshops, solar ambassadors, and workforce development programs—among many ideas—to highlight how the different benefits of solar energy can match the unique needs of each community.

New Pathways for Equitable Rooftop Solar in Texas

Lead Organization: Texas Energy Poverty Research Institute

Location: Austin and Carrizo Springs, Texas

This team is identifying opportunities to more equitably deploy solar to properties owned or rented by families in underserved communities by leveraging utilities' low-income energy efficiency programs and Weatherization Assistance Program funding. This team is collaborating to identify, refine, demonstrate, and evaluate strategies

to widen access to residential rooftop solar among underserved communities and develop guidelines and implementation approaches to apply identified pathways.

Multi-Stakeholder Team Members: AEP Texas, Austin Energy, Colony Park Community Development Corporation, Colony Park Neighborhood Association, Community Services Agency of South Texas, Frontier Energy, Houston Advanced Research Center, National Association for the Advancement of Colored People (NAACP) Austin, Texas Solar Energy Society, and Travis County.

Reducing Barriers to Solar in Tallahassee's Low-to-Moderate Income Neighborhoods

Lead Organization: ReThink Energy Florida, Inc.

Location: Tallahassee, Florida

This team plans to unlock the market potential for solar PV in low-to-moderate income (LMI) neighborhoods by evaluating technical potential, economic feasibility, and financial tools and programs. The project aims to provide a pathway to install solar at a neighborhood scale that can be replicated in other LMI neighborhoods through awareness of solar benefits in underserved communities and business awareness of LMI funding opportunities.

Multi-Stakeholder Team Members: City of Tallahassee, Greater Bond Neighborhood Association, Greater Frenchtown Revitalization Council, Griffin Heights Neighborhood First Plan, Jacobs Law Office, Public Private Partnership for Sustainable Community Development, and Solar Energy Loan Fund.

Solar Ambassadors for Oregon Communities

Lead Organization: Energy Trust of Oregon

Location: Portland, Gresham, Beaverton, Hillsboro, and Tigard, Oregon

The team aims to address solar deployment barriers and disproportionately low solar awareness in Black, Indigenous, and people of color (BIPOC) communities of Portland, Gresham, Beaverton, Hillsboro, and Tigard, Oregon. The team will work to identify pathways for installing solar on BIPOC homes through innovative incentives for solar-related energy retrofits and home upgrades. The team will also build a network of BIPOC "Solar Ambassadors" to educate and build capacity in their respective communities.

Multi-Stakeholder Team Members: Adelante Mujeres, African American Alliance for Homeownership, Community Energy Project, Portland Community Reinvestment Initiative, Solar Oregon, Unite Oregon (Clackamas Chapter), and Verde.

Fair Solar Lending for Historically Underserved Neighborhoods in Austin, Texas

Lead Organization: Pecan Street Inc.

Location: Austin, Texas

This team aims to address energy affordability and reliability in communities that have historically been negatively impacted by discriminatory housing practices and unjust lending programs. The team will develop community-based research models and leverage peer-to-peer information exchange to define pathways for adapting and expanding low-to-zero-percent interest solar loans for underserved neighborhoods of Austin, Texas.

Multi-Stakeholder Team Members: Austin Energy and GAVA (Go! Austin/Vamos! Austin).

Elevating Equity in Commercial-Scale Solar Deployment

This cohort focuses on expanding equity in solar deployment at the commercial scale, such as at offices, warehouses, hospitals, hotels, retail stores, schools, nonprofits, and higher-education facilities. This applies only to commercial-scale solar that is sited within underserved communities. Many of these teams seek to improve the solar financing options available to small businesses and nonprofits, while also expanding solar workforce development opportunities in underserved communities.

Solar for Safety and Success (3S): Commercial Solar, Disaster Resilience, Job Training, and Long-Term Financing

Lead Organization: Houston Advanced Research Center

Location: Port Arthur, Texas

This project team aims to address the lack of knowledge, affordability, and capital barriers to equitable commercial-scale solar. The team will develop an effective, replicable, and scalable approach to implement solar-plus-storage microgrids that build community wealth in underserved neighborhoods of Port Arthur, Texas.

Multi-Stakeholder Team Members: City of Port Arthur, Clean Energy Fund of Texas (TxCEF), Community In-Power and Development Association (CIDA), Digital Workforce Academy Golden Triangle Empowerment Center (GTEC), Entergy Texas, Lamar State College, Port Arthur Independent School District, Port Arthur Transit, Renewable Energy Partners, Social Wealth Partners, and Solar Energy Loan Fund (SELF).

Driving Resilient and Economic Commercial Solar and Storage in Underserved Communities

Lead Organization: Salt Lake City Department of Sustainability

Location: Salt Lake City, Utah

This team will develop a framework to increase the uptake of commercial solar and storage in underserved communities by engaging community and business stakeholders, hosting community listening sessions, and developing culturally relevant outreach tools and resources that address solar market barriers and economically entrenched energy injustices. Resources will include findings from listening sessions, solar and storage case studies, battery storage incentive program recommendations, and best practices for financing commercial solar.

Multi-Stakeholder Team Members: Rocky Mountain Power, Suazo Business Center, and Utah Clean Energy.

Project Advisory Partners: Centro Civico Mexicano, Intermountain Healthcare, McKinstry, Utah Division of Multicultural Affairs, Utah Office of Energy Development, and Zions Bank.

Advancing Solar for Underserved Small Businesses: New Engagement Practices for Energy and Economic Security

Lead Organization: Lake Street Council

Location: Minneapolis and St. Paul, Minnesota

This team is engaging minority-owned businesses in underserved neighborhoods to increase solar deployment. The team is collaborating to apply human-centered design to understand stakeholders' lived

experiences, gain insights, and challenge assumptions. The team is co-creating solutions to reduce inequities in solar adoption, increase business resilience, and build capacity and leadership to sustain ongoing community action.

Multi-Stakeholder Team Members: City of Minneapolis, City of Saint Paul, Great Plains Institute, Neighborhood Development Center, Northside Energy Opportunity Network, Weber Consulting, and Xcel Energy.

Bringing Solar to Houses of Worship Led by Black, Indigenous, and People of Color

Lead Organization: RE-volv

Location: Multiple

This team aims to increase solar adoption by houses of worship led by Black, Indigenous, and people of color (BIPOC) by strengthening existing partnerships and scaling up successful efforts. The team will streamline the solar project pipeline of identifying promising locations, presenting proposals, financing projects, and highlighting successes.

Multi-Stakeholder Team Members: Green The Church and Interfaith Power & Light.



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NREL/FS-7A40-82172 • March 2022

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