



Solar Energy Innovation Network 2017-2024: Abbreviated Final Technical Report

Sara Farrar, Eric Lockhart, Joyce McLaren, Scott Belding,
Kamyria Coney, Isa Ferrall-Wolf, and Alexandra Kramer

National Renewable Energy Laboratory

**NREL is a national laboratory of the U.S. Department of Energy
Office of Energy Efficiency & Renewable Energy
Operated by the Alliance for Sustainable Energy, LLC**

This report is available at no cost from the National Renewable Energy Laboratory (NREL) at www.nrel.gov/publications.

Contract No. DE-AC36-08GO28308

Technical Report
NREL/TP-7A40-90374
July 2024



Solar Energy Innovation Network 2017-2024: Abbreviated Final Technical Report

Sara Farrar, Eric Lockhart, Joyce McLaren, Scott Belding,
Kamyria Coney, Isa Ferrall-Wolf, and Alexandra Kramer

National Renewable Energy Laboratory

Suggested Citation

Farrar, Sara, Eric Lockhart, Joyce McLaren, et. al. 2024. *Solar Energy Innovation Network 2017–2024: Abbreviated Final Technical Report*. Golden, CO: National Renewable Energy Laboratory. NREL/TP-7A40-90374. <https://www.nrel.gov/docs/fy24osti/90374.pdf>.

**NREL is a national laboratory of the U.S. Department of Energy
Office of Energy Efficiency & Renewable Energy
Operated by the Alliance for Sustainable Energy, LLC**

This report is available at no cost from the National Renewable Energy Laboratory (NREL) at www.nrel.gov/publications.

Contract No. DE-AC36-08GO28308

Technical Report
NREL/TP-7A40-90374
July 2024

National Renewable Energy Laboratory
15013 Denver West Parkway
Golden, CO 80401
303-275-3000 • www.nrel.gov

NOTICE

This work was authored by the National Renewable Energy Laboratory, operated by Alliance for Sustainable Energy, LLC, for the U.S. Department of Energy (DOE) under Contract No. DE-AC36-08GO28308. Funding provided by the U.S. Department of Energy Office of Energy Efficiency and Renewable Energy Solar Energy Technologies Office. The views expressed herein do not necessarily represent the views of the DOE or the U.S. Government.

This report is available at no cost from the National Renewable Energy Laboratory (NREL) at www.nrel.gov/publications.

U.S. Department of Energy (DOE) reports produced after 1991 and a growing number of pre-1991 documents are available free via www.OSTI.gov.

Cover Photos by Dennis Schroeder: (clockwise, left to right) NREL 51934, NREL 45897, NREL 42160, NREL 45891, NREL 48097, NREL 46526.

NREL prints on paper that contains recycled content.

Final Technical Report (FTR)
Abbreviated Format

a. Federal Agency	Department of Energy	
b. Award Number	32954	
c. Project Title	Solar Energy Innovation Network (SEIN)	
d. Recipient Organization	National Renewable Energy Laboratory (NREL)	
e. Project Period	<i>Start:</i> 7/1/2017	<i>End:</i> 6/30/2024
f. Principal Investigator (P.I.)	Eric Lockhart NREL P.I. of SEIN 32954 Eric.Lockhart@nrel.gov 303-275-4637	
g. Co-P.I.	Sara Farrar NREL Co-P.I. of SEIN 32954 Sara.Farrar@nrel.gov 303-384-7514	
h. Business Contact (BC)	Jeff Cook Solar Data Analysis and Tools (DAT) / Balance of Systems (BOS) Program Lead Jeff.Cook@nrel.gov 303-275-3676	

Eric Lockhart
Signature of Certifying Official

6/20/24
Date

1. **Acknowledgements:** This material is based upon work supported by the U.S. Department of Energy's (DOE) Office of Energy Efficiency and Renewable Energy (EERE) Solar Energy Technologies Office (SETO) under the **Agreement/Award Number 32954 for Solar Energy Innovation Network (SEIN) Project 2017-2024.**

The authors wish to acknowledge the collaborative program guidance of Michele Boyd, Nicholas Kasza, KC Payne Hirsh, and their colleagues with the SETO Strategic Analysis and Institutional Support group. The authors also wish to thank early and essential NREL research, analysis, and facilitator colleagues especially including Kristen Ardani, Lori Bird, Alison Holm, and Anthony Teixeira.

2. **Disclaimer:** This report was prepared as an account of work sponsored by an agency of the United States (U.S.) Government. Neither the U.S. Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the U.S. Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the U.S. Government or any agency thereof.
3. **Project Summary:** The [Solar Energy Innovation Network](#) (SEIN) is a dynamic program that assembles diverse teams of stakeholders to research solutions to real-world challenges associated with solar energy adoption. In conjunction with its partner organizations, NREL implemented the program by providing research, analysis, and technical expertise directly to project teams and groups of teams (cohorts), by facilitating networked learning through cohorts and peer exchange, and by facilitating dissemination and replication of solutions and lessons learned among stakeholders across the U.S. with similar challenges.

4. **Project Objectives and Outcomes:**

Project Objectives – This project had three objectives to:

- (1) Increase the relevance of solar research and analysis by using real-world data to address challenges of and propose solutions for increasing solar energy adoption;
- (2) Perform in-depth analysis to generate broader insights applicable to other stakeholders; and
- (3) Facilitate dissemination and replication of insights and solutions.

Project Outcomes – SEIN Rounds 1–3 explored challenges aligning distribution-scale solar photovoltaic (PV) system adoption with local needs. Solutions require

leveraging community assets, linking holistic approaches, addressing project economics, and innovating decision-making structures.

NREL conducted SEIN as a collaborative program for multi-stakeholder teams to research, develop, and share solutions to real-world challenges associated with distributed solar energy. Topics have included:

- Improving grid flexibility and resiliency through siting and operations
- Improving reliability and affordability through options analysis
- Solar in rural communities
- Solar for commercial-scale contexts
- Equitable residential and commercial-scale solar
- Replication of multi-stakeholder team results in new locations.

Extensive technical assistance (TA) to 25 multi-stakeholder teams producing well over 100 publications to date and expanding impacts to more than 30 replicators to date for adapting SEIN findings in other communities.

NREL made subcontract awards in three direct funding rounds to multi-stakeholder teams and technical assistance partners.

Ten larger and 70 smaller capacity-building and knowledge-sharing events—including seven working sessions and three symposiums gathering more than 600 stakeholders—created inspiration and collaboration on actionable concepts to drive solar adoption. Recent session topics included wealth building, Inflation Reduction Act (IRA) opportunities, and the importance of effective project storytelling.

SEIN Round 1 Symposium 2019 in-person participants engaged with shared insights, innovations, and lessons learned through SEIN. The collaborative meeting combined conference-style presentations and targeted, topic-based interactive sessions. A total of 140 people attended including existing and new stakeholders from utilities, state and local governments, non-profits, and system operators as well as NREL, subcontractors, and subject matter expert staff.

SEIN Round 2 Symposium 2021 on-line participants engaged with shared insights, innovations, and lessons learned. The responding participants indicated an average of 5.7 on a Likert scale of 1 to 7, or 81% agreement, that they are likely to pursue, incorporate, or adapt at least one of the identified solutions or approaches to increasing solar and distributed energy resource (DER) adoption presented during the Symposium.

SEIN Round 3 Symposium 2023 in-person participants shared approaches for overcoming barriers to equitable adoption of rooftop solar in underserved and diverse communities, including:

- Collaborating with trusted local leadership as facilitators
- Tailored outreach with relevant context
- Bundling rooftop solar with repairs, upgrades, or efficiency

- Fair access to financial resources and economic opportunity
- Community-centered decision-making structures.

The 25 place-based multi-stakeholder teams receiving subcontract funding were comprised of about 120 diverse organization members including community-based organizations (CBOs) and non-profits; utilities; local, city and state governments; universities; and private businesses. Highlights of their project outputs include:

- Round 1 analysis and partnerships provided decision-support information to the [Utah Clean Air and Climate Compact](#), an agreement between 100 government, business, and faith leaders in the state.
- Round 1 analysis contributed representative load profiles to NREL's Electric Vehicle Infrastructure – Projection ([EVI-Pro](#)) [Lite Tool](#), adding a valuable feature for modeling vehicle electrification needs, especially when paired with solar PV generation for charging.
- Round 2 [Early-Stage Decision model](#) designed to screen solar and storage projects, to fine-tune their design, and to facilitate their procurement by local electric co-ops and public power utilities.
- Round 2 [Clear Sky Toolkit](#) for evaluating the potential to deploy commercial-scale solar + storage applications on critical facilities to mitigate the effects of power outages on critical infrastructure and essential services.
- Round 2 [in-depth techno-economic analysis for solar + storage microgrids](#) at a [consortium of historically Black colleges and universities \(HBCUs\) in Atlanta](#) provided relevant examples of potential projects for additional campuses and facilities, in addition to documenting key project development insights for other stakeholders interested in resilience hubs.
- Round 3 Three Black, Indigenous, and people of color (BIPOC)-led houses of worship [signed solar finance contracts and have construction projects underway](#), for a total of 50-kW rooftop solar capacity, \$120,000 deployed.
- Round 3 dataset built to help RE-volv-led team's site selection is now a published national database that helps understand potential applicability of Federal incentives as well as facilitates dissemination and replication of solutions: the [Screening Tool for Equitable Adoption and Deployment of Solar \(STEADy Solar\)](#).
- Round 3 Exploration of consumer protection concerns in a local context—Austin, TX, through the Pecan Street-led project—that led to future research and informed new initiatives.

Over 30 additional replication partners in other locations receiving SEIN technical assistance included the following examples:

- Round 1 Peer Network led to multi-county solar energy master plan development in Colorado via the [Clean Energy Economy for the Region \(CLEER\)](#).
- [Community Planning for Solar Toolkit](#) to help municipalities in Massachusetts and throughout the Northeast proactively plan for solar PV development in their communities. This toolkit led to interest from the Massachusetts State

Legislative Delegation on rural solar deployment insights and a planned local Symposium on the topic organized by the SEIN project lead.

- Relationship building and assistance to HBCUs and minority-serving institutions (MSIs) interested in solar adoption through scaling findings of previous SEIN projects.

Outreach for SEIN partner and participant opportunities as well as results includes the SEIN NREL website (<https://www.nrel.gov/solar/market-research-analysis/solar-energy-innovation-network.html>) with the following available metrics:

- About 8,000 engagements with the website every year over the past 3 years.
- This trend shows a slight growth with 7,700 pageviews in 2022 and 4,400 users in 2024 (less than 6 months into the calendar year).
- The Round 3 webpage is by far the most popular page in the past year, attracting the majority of visits.
- *Note: In mid-2023, Google Analytics changed how it captures and counts web traffic. Previously, “pageviews” were the key statistic, and after, “users” became the key stat. These are generally similar metrics—they count similarly for the same site across this timeframe—but they’re not a 1:1 comparison.*

Additional follow-on successes include:

- The Round 2 Breaking Barriers project led to a community-driven resilience hub at a house of worship in Atlanta. [Vicars Community Center at Community Church Atlanta | Groundswell](#).
- The Round 3 multi-stakeholder team from Salt Lake City (SLC), Utah, received AMEX funding to mobilize capital to reach more underserved community businesses and non-profits, building on success during the SEIN project. SLC shared a portion of the \$1.2M grant with the Urban Sustainability Directors Network (USDN), plus \$325,000 to the city from American Express. [Project to increase solar power on Salt Lake's west side just got funding boost | KSL.com](#).
- The Round 3 Twin Cities project team secured a \$950,000 [Community Innovation grant](#) from the Bush Foundation to build on their SEIN project to support BIPOC- and immigrant-owned small businesses in decarbonizing (solar + buildings technologies).
- The Round 3 RE-volv-led team has seen a cascade of follow-on activities attributable to their SEIN project, including \$1.5M from The Schmidt Family Foundation and \$1.5M from The Kresge Foundation. [RE-volv secures investment to build solar projects for non-profits – pv magazine USA \(pv-magazine-usa.com\)](#).

Milestones from Technical Work Plan:

Year #	Task #	M #	Milestone Name	Planned Date
2	9	1	Conduct at least 1 in-person facilitated meeting to advance research and analysis needs and to facilitate networked learning between teams for the Round 1 cohorts.	12/31/2018
2	8	1	Provide at least three occurrences of research and analysis support to Round 1 cohort teams and peer network organizations as documented by email or letter reports; expert reviews; summary modeling results; learning session, webinar, or conference presentations; or white papers.	3/31/2019
2	9	2	Conduct a Solar Energy Innovation workshop open to all participating Round 1 teams, peer network organizations, and other expert stakeholders in appropriate geographies and contexts across the U.S. to share lessons-learned and innovative solutions developed during the program period.	6/30/2019
2	10	1	Finalize the Round 2 cohort collaboration topics, issue the Request for Proposals (RFP) solicitation for new Round 2 teams, promote the RFP with outreach, and receive proposals.	9/30/2019
3	8	1	Compile Round 1 research and analysis lessons learned and impacts final draft report, including findings and insights from analytical support and subcontractor team projects.	12/30/2019
3	9	1	Conduct at least 1 in-person facilitated meeting with each team to identify research and analysis needs and to facilitate networked learning between teams for the Round 2 cohorts.	3/30/2020
3	9	2	Conduct at least 1 in-person facilitated meeting to advance research and analysis needs and to facilitate networked learning between teams for the Round 2 cohorts.	6/30/2020
3	9	3	Conduct at least 1 in-person facilitated meeting to advance research and analysis needs and to facilitate networked learning between teams for the Round 2 cohorts.	9/30/2020
4	8	1	Compile and submit recommendations on the potential for Round 3 of program.	12/30/2020
4	8	2	Provide at least three occurrences of research and analysis support to Round 2 cohort teams and peer network organizations as documented by email or letter reports; expert reviews; summary modeling results; learning session, webinar, or conference presentations; or white papers.	3/30/2021
4	9	1	Conduct a Solar Energy Innovation workshop open to all participating Round 2 teams and other expert stakeholders in appropriate	6/30/2021

Year #	Task #	M #	Milestone Name	Planned Date
			geographies and contexts across the U.S. to share lessons-learned and innovative solutions developed during the program period.	
4	8	3	Compile Round 2 research and analysis lessons learned and impacts final draft report, including findings and insights from analytical support and subcontractor team projects.	9/30/2021
4	11	1	Priorities for updating the guidebook, with stakeholder input, in PowerPoint format for DOE review and further input, completed.	3/31/2021
4	11	2	Solar Powering Your Community document completed and submitted for DOE approval.	9/30/2021
4	15	1	Finalize the Round 3 cohort collaboration topics, issue the RFP solicitation for new Round 3 teams, promote the RFP with outreach, and receive proposals.	9/30/2021
5	12	1	Solar Power in Your Community Guidebook released; brief summary document posted online.	12/31/2021
5	13	1	Develop applied capacity building materials to support equitable solar adoption through selected Round 3 teams.	12/31/2021
5	12	2	Q2 Impact Analysis of the Solar Power in Your Community Guidebook completed and at least 1 presentation/workshop held.	3/31/2022
5	14	1	Conduct at least 1 in-person facilitated meeting with each team to identify research and analysis needs and to facilitate networked learning between teams for the Round 3 cohorts.	3/31/2022
5	12	3	Q3 Impact Analysis of the Solar Power in Your Community Guidebook completed and at least 1 presentation/workshop held.	6/30/2022
5	14	2	Conduct at least 1 in-person facilitated meeting to advance research and analysis needs and to facilitate networked learning between teams for the Round 3 cohorts.	6/30/2022
5	12	4	Q4 Impact Analysis of the Solar Power in Your Community Guidebook completed and at least 1 presentation/workshop held.	9/30/2022
5	14	3	Conduct at least 1 in-person facilitated meeting to advance research and analysis needs and to facilitate networked learning between teams for the Round 3 cohorts.	9/30/2022
6	12	1	Q2-Q4 Outreach and Impact Analysis of the Solar Power in Your Community Guidebook.	9/30/2023
6	13	1	Compile and submit recommendations on the potential for Round 4 of program.	12/31/2022
6	13	2	Provide at least three occurrences of research and analysis support to Round 3 cohort teams and peer network organizations as documented by email or letter reports; expert reviews; summary	3/31/2023

Year #	Task #	M #	Milestone Name	Planned Date
			modeling results; learning session, webinar, or conference presentations; or white papers.	
6	14	1	Conduct a Solar Energy Innovation workshop open to all participating Round 3 teams and other expert stakeholders in appropriate geographies and contexts across the U.S. to share lessons-learned and innovative solutions developed during the program period.	6/30/2023
6	13	3	Compile Round 3 research and analysis lessons learned and impacts final draft report, including findings and insights from analytical support and subcontractor team projects.	9/30/2023
7	13	1	Finalize launch plan of the Round 3 Assistance for Early Adopters with replication packages, application form, and outreach strategy.	12/31/2023
7	13	2	Finalize launch plan of the Round 4 multi-stakeholder team solicitation with cohort collaboration topics, RFP package, and outreach strategy.	3/31/2024

5. Path Forward:

SEIN has evolved with the solar PV market over the course of seven years. Topics initially focused on solar reliability and affordability with grid flexibility, then progressed to solar in commercial-scale and rural contexts, and then most recently to equitable adoption of solar in underserved communities. Work by SEIN subcontractor organizations has supported multi-stakeholder teams in making progress locally in their communities, which is then disseminated in publications and working sessions and replicated through technical assistance provided by SEIN. Future research directions include SEIN’s latest focus of equitable adoption of distribution-scale solar in underserved communities.

SEIN Round 3 explored how solar could meet underserved community needs effectively, with a focus on how community members and businesses could direct how solar could be adopted and serve in key decision making roles. SEIN teams discovered three core areas that warrant future research and partnership with underserved communities. The first area is *challenges*, which include topics such as how to navigate split incentive issues in neighborhoods with high percentages of renters. The second category is *emerging solutions*, which includes topics such as how to work with trusted messengers or liaisons to build awareness and then critically cultivate sustained engagement in how best to pursue solar in a given community. The third area is *facilitators*, which includes ideas such as how to leverage and anchor solar in locally owned small businesses. Each of these three categories comprise barriers and opportunities that need further research, analysis, and stakeholder engagement for beneficial impact.

An example of a future research area that intersects those three categories is considering how blended finance can overcome challenges in community-directed decision making by applying IRA incentives and funding sources and directly leveraging facilitators in communities. Capital from diverse sources such as green banks, commercial lenders, and foundations could be combined to effectively manage risk and channel meaningful benefits to communities. IRA programs, such as the Greenhouse Gas Reduction Fund, lay the groundwork for this type of financing approach, and multi-stakeholder groups could partner with clean energy finance and researchers to develop, de-risk, and scale them.

The SEIN model of combining direct funding, convening and facilitation, and analytical support has proven valuable in driving collaboration between stakeholders on the ground and researchers, in enabling peer exchange across stakeholders with common challenges, and ultimately in developing solutions that meet the needs of communities across the country that are interested in solar but are not sure what pathways make sense for them. Through this model, NREL staff have also had the opportunity to learn from the multi-stakeholder teams and in turn support expanding capacity to overcome barriers to solar adoption with community leaders, non-profits, local government, and utilities across the country.

This ongoing exchange between research and piloting in communities has led to the development of emerging solutions for the challenges of adopting solar that can then be scaled to additional locations. In replicating these solutions with next adopters, the outputs from SEIN teams are adapted, applied, and made more robust through iteration in new settings. The topics for potential research noted above align with SEIN's recent topical focus, and the model can be flexibly applied to future research and engagement across the solar deployment market.

6. Project Team: List all project participants and their individual roles.

Name	Role/Title
Eric Lockhart	P.I., Group Research Manager II
Sara Farrar	Co-P.I., Project Manager IV-Research
Scott Belding	Researcher III-Decision Support Analysis
Kamyria Coney	Researcher II-Policy Analysis
Harrison Dreves	Project Manager III-Research Support
Sara Fall	Professional III-Communications
Isa Ferrall-Wolf	Researcher III-Decision Support Analysis
Alexandra Kramer	Researcher II-Decision Support Analysis
Larson Lovdal	Researcher III-Decision Support Analysis
Joyce McLaren	Researcher V-Market Research Analysis
Tucker Oddleifson	Researcher II-Model Engineering
Adrienne Powell	Project Manager III-Research Support
Additional NREL Staff Contributors, 2017–2024	Researchers, see authors listed in section of Publications and Other Results

Name	Role/Title
Galen Barbose, et. al.	Lawrence Berkeley National Laboratory (LBNL) Researchers with separate project agreement
Many multi-stakeholder team partners via subcontracts	See authors and organizations listed in section of Publications and Other Results

7. Publications and Other Results (chronological order by year-month):

SEIN Round 1 (35 outputs)

Kristen Ardani. 2017-07. Introducing the Solar Energy Innovation Network, 7/19/17. Webinar.

NREL. 2017-07. Now Accepting Applications to Join the Solar Energy Innovation Network. News Release, <https://www.nrel.gov/news/program/2017/announcing-solar-energy-innovation-network.html>

NREL. 2017-07. Solar Energy Innovation Network. The 2018 Smart Cities Connect Conference and Exp, Tampa, FL. Website, <https://www.nrel.gov/solar/market-research-analysis/solar-energy-innovation-network.html>

Kristen Ardani. 2017-12. Solar Energy Innovation Network Kick-Off Meeting, Webinar, Kristen Ardani, 12/11/2017. Webinar.

NREL. 2018-01. Innovation Network Cohort Working Session #1, In-person Jan. 17-18, 2018, Golden, CO. Meeting.

NREL. 2018-04. The Solar Energy Innovation Network. Video, OSTI/1755674. <https://www.osti.gov/biblio/1755674>

NREL. 2018-04. NREL Models and Tools Overview for the Solar Energy Innovation Peer Network, April 19, 2018. Webinar.

NREL. 2018-05. Innovation Network Cohort Working Session #2, In-person May 21-23, 2018, Golden, CO. Meeting.

Andrew Burger (Solar Magazine). 2018-05. Two Cohorts, Nine Research Teams Leverage Network Learning Effect to Spur Solar Energy-Grid Innovation, Resilience. Solar Magazine, May 2, 2018. Article, <https://solarmagazine.com/teams-leverage-network-learning-effect-to-spur-solar-energy-grid-innovation-resilience>

Eric Lockhart. 2018-06. Transforming ENERGY through the Solar Energy Innovation Network. Fact Sheet, NREL/FS-7A40-71346. <https://www.nrel.gov/docs/gen/fy18/71346.pdf>

NREL and RMI. 2018-07. How to Design and Execute Pilots Effectively for the Solar Energy Innovation Network, July 26, 2018. Webinar.

Debbie Lew (GE Energy Consulting) and Samir Succar (ICF). 2018-08. Locational Value of Distributed Solar PV, August 23, 2018. Webinar.

Kristen Ardani (NREL), Luis Reyes (KCEC), Woody Hastings (CCP), Nate Hausman (CESA), Brian Ross (GPI). 2018-09. Improving Grid Flexibility through Advanced Siting

and Operations of Solar and other DERs (SEIN Panel). Solar Power International, Anaheim, CA. Conference Presentation.

Joyce McLaren. 2018-10. Solar Energy Innovation Network. The 2018 Smart Cities Connect Conference and Exp, Tampa, FL. Conference Presentation.

NREL. 2018-12. Innovation Network Cohort Working Session #3, In-person Dec. 3-5, 2018, Golden, CO. Meeting.

NREL. 2019-02. Regional Solar Energy Planning: Collaboration, Innovation, Acceleration (Western Colorado Peer Network), In-person Feb. 21, 2019, Glenwood Springs, CO. Meeting.

Wilson Rickerson, Jonathan Gillis, and Marisa Bulkeley, Converge Strategies, LLC. Prepared for The National Association of Regulatory Utility Commissioners (NARUC). 2019-04. The Value of Resilience for Distributed Energy Resources: An Overview of Current Analytical Practices. Subcontract Report, NREL/SR-7A40-90139, OSTI/2394652. <https://pubs.naruc.org/pub/531AD059-9CC0-BAF6-127B-99BCB5F02198>

NREL. 2019-05. Oak Park-River Forest Renewable Energy Roadmapping Workshop (Peer Network), May 15, 2019, Oak Park, IL. Meeting.

NREL. 2019-06. Solar Energy Innovation Symposium, June 5-7, 2019, Denver, CO. Meeting.

Andrew Satchwell, Peter Cappers, and Galen Barbose, LBNL. 2019-07. Current Developments in Retail Rate Design: Implications for Solar and Other Distributed Energy Resources. Report, OSTI/1545158. <https://www.osti.gov/biblio/1545158>

John Shenot, Carl Linvill, Max Dupuy, and Donna Brutkoski, Regulatory Assistance Project. 2019-08. Capturing More Value from Combinations of PV and Other Distributed Energy Resources. Subcontract Report, NREL/SR-7A40-90129, OSTI/2394648. <https://www.raponline.org/knowledge-center/capturing-more-value-from-combinations-of-pv-and-other-distributed-energy-resources/>

Emma Elgqvist and Josiah Pohl. 2019-11. Evaluating Utility Costs Savings for EV Charging Infrastructure, Technical Assistance Output. Presentation, NREL/PR-6A20-75269, OSTI/1573965. <https://www.nrel.gov/docs/fy20osti/75269.pdf>

Emma Elgqvist and Linda Parkhill. 2019-11. Economics of Solar with Storage for Municipal Sites in the City of San Diego, Technical Assistance Output. Presentation, NREL/PR-6A20-75270, OSTI/1573966. <https://www.nrel.gov/docs/fy20osti/75270.pdf>

Kathleen Krah and Emma Elgqvist. 2019-11. Economics of Solar with Storage for Municipal Buildings in the City of Orlando, Technical Assistance Output. Presentation, NREL/PR-6A20-75271, OSTI/1573967. <https://www.nrel.gov/docs/fy20osti/75271.pdf>

Emma Elgqvist. 2019-11. Economics of Solar PV and Stationary Storage for Electric Bus Charging in Missoula, Montana, Technical Assistance Output. Presentation, NREL/PR-6A20-75272, OSTI/1573968. <https://www.nrel.gov/docs/fy20osti/75272.pdf>

- Kristin Ardani. 2020-02. NREL Solar Data, Analysis, and Tools - FY19 Research Dissemination Statistics. Fact Sheet, NREL/FS-7A40-75489, OSTI/1599570. <https://www.nrel.gov/docs/fy20osti/75489.pdf>
- Nate Hausman. 2020-03. State Strategies for Valuing Distributed Energy Resources in Cost-Effective Locations. Subcontract Report, NREL/SR-7A40-90128, OSTI/2394654. <https://www.cesa.org/resource-library/resource/state-strategies-for-valuing-distributed-energy-resources-in-cost-effective-locations>
- Eric Lockhart. 2020-04. 2020 SETO Peer Review: Solar Energy Innovation Network. Poster, <https://www.energy.gov/eere/solar/2020-seto-peer-review>
- Kiera Zitelman, NARUC. 2020-04. Advancing Electric System Resilience with Distributed Energy Resources: A Review of State Policies. Subcontract Report, NREL/SR-7A40-90137, OSTI/2394650. <https://pubs.naruc.org/pub/ECD7FAA5-155D-0A36-3105-5CE60957C305>
- Kiera Zitelman, NARUC. 2020-04. Advancing Electric System Resilience with Distributed Energy Resources: Key Questions and Resources. Subcontract Report, NREL/SR-7A40-90138, OSTI/2394651. <https://pubs.naruc.org/pub/ECF144A6-155D-0A36-31B1-A131A6EE037D>
- Eric O'Shaughnessy (Clean Kilowatts), Kristen Ardani (NREL). 2020-04. Distributed rate design: A review of early approaches and practical considerations for value of solar tariffs. The Electricity Journal. Volume 33, Issue 3. Journal Article, NREL/JA-6A20-72064. <https://doi.org/10.1016/j.tej.2020.106713>
- Kate Bowman and Sarah Wright, Utah Clean Energy. 2020-06. Charting a Path for Reliable, Resilient and Affordable Clean Energy: A Roadmap for Three Communities in Utah. Subcontract Report, NREL/SR-7A40-90135, OSTI/2394649. https://hub.utahcleanenergy.org/newsite/wp-content/uploads/sites/12/2021/01/UCE_Roadmap_Web_June_1_2020.pdf
- Himanshu Jain, Gab-Su Seo, Eric Lockhart, Vahan Gevorgian, and Benjamin Kroposki, NREL. 2020-08. Blackstart of Power Grids with Inverter-Based Resources. 2020 IEEE Power and Energy Society General Meeting (IEEE PES GM). Conference Presentation, NREL/CP-5D00-75327. <https://www.nrel.gov/docs/fy20osti/75327.pdf>
- Andrew Valainis, Kyla Maki, Chase Jones, Natalie Meyer, and Amy Cilimborg, Montana Renewable Energy Association. 2020-09. Navigating Options for Transportation Electrification and Solar Charging: Steps and Lessons Learned in Montana. Subcontract Report, NREL/SR-7A40-90127, OSTI/2394647. <http://montanasolartransportation.org/wp-content/uploads/2020/11/Transportation-Electrification-and-Solar-Charging.pdf>
- Brian Ross, Katelyn Bocklund, Matthew Prorok, Dane McFarlane, Abby Finis, Brendan Jordan, Jenna Greene, and Kristoffer Acuna, Great Plains Institute (GPI). 2020-09. Solar Power + Electric Vehicle Charging: Capturing Synergies in Minnesota. Subcontract Report, NREL/SR-7A40-90140, OSTI/2394653. <https://betterenergy.org/wp-content/uploads/2020/10/Solar-Power-Electric-Vehicle->

[Charging-.pdf, https://betterenergy.org/blog/solar-power-plus-electric-vehicle-charging-capturing-synergies-in-minnesota/](https://betterenergy.org/blog/solar-power-plus-electric-vehicle-charging-capturing-synergies-in-minnesota/)

SEIN Round 2 (58+ outputs)

NREL. 2020-02. Solar Energy Innovation Network Round 2 – Orientation Webinar, Feb. 18, 2020. Webinar, <https://youtu.be/x1OuMKryaBQ>

NREL. 2020-04. SEIN Round 2 Team Kick-off Workshops - 8 total, March 17-April 17, 2020, On-line Video Conferences. Meeting.

NREL. 2020-05. SEIN Round 2 Peer Exchange Working Session No. 1, May 27-29, 2020, On-line video conference. Meeting.

NREL. 2020-05. SEIN Round 2 Technical Learning Session: Energy Storage and Micro-grids, May 13, 2020. Webinar.

NREL. 2020-05. SEIN Round 2 Technical Learning Session: System Design for Resilience, May 18, 2020. Webinar.

NREL. 2020-06. NREL Supports Innovators as They Pursue New Ideas for Rural and Commercial-Scale Solar, SEIN Provides Expertise and Support as Teams Explore Novel Applications of Solar Energy. News Release (640 views as of 2024-06), https://www.nrel.gov/news/program/2020/nrel_supports_new_ideas_for_rural_commercial_scale_solar.html

NREL. 2020-10. SEIN Round 2 Peer Exchange Working Session No. 2, Oct. 13-15, 2020, On-line Video Conference. Meeting.

NREL. 2021-03. Solar Energy Innovation Symposium, March 8-10, 2021, On-line Video Conference. Meeting.

Tria Case, Daniella Leifer, Laurie Reilly, Ronald Reisman, and Emily Sweeney, Sustainable CUNY University of New York (CUNY). 2021-05. Community Solar and Community Solar + Storage: A Roadmap of Barriers and Solutions for Commercial Systems in NYC. Subcontract Report, NREL/SR-7A40-90019, OSTI/2377973. <https://www.nrel.gov/docs/fy24osti/90019.pdf>

Sustainable CUNY. 2021-05. Evaluating Distributed Generation Economics (EDGE) Tool. Subcontract Report, <https://nysolarmap.com/resources/community-solar/>

Sustainable CUNY. 2021-07. Quick Start Guide Evaluating a New York City Building for Community Solar. Subcontract Report, NREL/SR-7A40-90020, OSTI/2377972. <https://www.nrel.gov/docs/fy24osti/90020.pdf>

Sustainable CUNY. 2021-07. Project Flow for Building Owners Pursuing Onsite Community Solar in New York City. Subcontract Report, NREL/SR-7A40-90021, OSTI/2377971. <https://www.nrel.gov/docs/fy24osti/90021.pdf>

David Sarkisian (North Carolina Clean Energy Technology Center) and Jill K. Cliburn (Cliburn and Associates). 2021-07. Institutional and Policy Landscape for Solar-Plus-Storage Deployment by Electric Cooperatives. Subcontract Report, NREL/SR-7A40-90017, OSTI/2377171. https://nccleantech.ncsu.edu/wp-content/uploads/2021/09/2021_07_14_SPECs_Policy_Landscape.pdf

Solar Value Project with Cliburn and Associates and the North Carolina Clean Energy Technology Center. 2021-07. Solar-Plus for Electric Co-ops (SPECs) Early-Stage Decision Model. Subcontract Report, <https://www.communitysolarvalueproject.com/decision-model.html>

Christian Casillas and Jill K. Cliburn (Cliburn and Associates), and Simon Sandler (North Carolina Clean Energy Technology Center). 2021-07. SPECs Early-Stage Decision Model: User Manual. Subcontract Report, NREL/SR-7A40-90018, OSTI/2394637. https://nccleantech.ncsu.edu/wp-content/uploads/2021/09/2021_07_14_esd_manual_v3.pdf

Chris Nichols, Groundswell, Inc. 2021-08. Solar HBCU Innovation in Microgrids and Resiliency with Solar + Storage, Breaking Barriers to Resilience in the Atlanta University Center Consortium (AUCC). Subcontract Report, NREL/SR-7A40-90011, OSTI/2394636. <https://groundswell.org/breaking-barriers-a-resilience-hub-serving-the-aucc,-atlanta-ga/>

Alana Todd and Sarah Vitale, Tampa Bay Regional Planning Council. 2021-06. Clear Sky Tampa Bay: Pre-Release Webinar. Subcontract Report, NREL/SR-7A40-90009, OSTI/2375029. <https://www.nrel.gov/docs/fy24osti/90009.pdf>

Eric Lockhart. 2021-07. SETO Lab Visit Presentation: Solar Energy Innovation Network (Internal Only). Presentation.

Wilson Rickerson, Jonathan Monke, and Erik-Logan Hughes, Converge Strategies. 2021-10. Clear Sky Tampa Bay: Tampa Bay Regional Policy Landscape Analysis (Florida Energy Resilience Policy Landscape). Subcontract Report, NREL/SR-7A40-90000, OSTI/2375025. <https://www.nrel.gov/docs/fy24osti/90000.pdf>

Tampa Bay Regional Planning Council. 2021-10. Subcontract Reports. <https://tbrpc.org/clearsky/>

- Clear Sky Decision Support Template.
- Alana Todd and Sarah Vitale. Clear Sky Tampa Bay: Project and Toolkit Overview - Resilience-Based Resources for Assessing Solar + Storage on Critical Facilities. NREL/SR-7A40-89992, OSTI/2375024.
- Randy Deshazo, Alana Todd, Sarah Vitale, and CJ Reynolds. Clear Sky Toolkit: Decision Support User Guide. NREL/SR-7A40-89999, OSTI/2373102.
- Sheila McNamara, Bart Weiss, Troy Salisbury, and Eric Pyzowski, Hillsborough County. Hillsborough County Clear Sky Assessment Process: Prioritizing Solar + Storage for Resilient Facilities and Communities. NREL/SR-7A40-90001, OSTI/2375030.
- Eric Caplan and Lea Harper, Manatee County, FL. Manatee County Clear Sky Assessment Process: Prioritizing Solar + Storage for Resilient Facilities and Communities. NREL/SR-7A40-90002, OSTI/2375026.
- Hank Hodde and Karim Molina-Oyola, Pinellas County, FL. Pinellas County Clear Sky Assessment Process: Prioritizing Solar + Storage for Resilient Facilities and Communities. NREL/SR-7A40-90003, OSTI/2375027.

- Laura Thomas and Cara McCown, City of Largo, FL. City of Largo Clear Sky Assessment Process: Prioritizing Solar + Storage for Resilient Facilities and Communities. NREL/SR-7A40-90007, OSTI/2375028.

Kathleen Krah. 2021-12. REopt® Lite Overview – Resilience Analysis Clear Sky Tampa Bay. Presentation, NREL/PR-7A40-81636, OSTI/1865881.

<https://www.nrel.gov/docs/fy22osti/81636.pdf>

Gabriel Chan, Matthew Grimley, Jamison Stallman, Joshua Anderson, and Mark Teklinski; University of Minnesota Center for Science, Technology, and Environmental Policy. 2021-10. Planning for Equitable Solar Deployment with Electric Cooperatives. Subcontract Report, NREL/SR-7A40-90024, OSTI/2377642.

<https://www.cooperativeinnovationcenter.org/planning-for-equitable-solar-deployment-with-electric-cooperatives>

Eric Lockhart. 2022-02. SETO 2022 Peer Review: Solar Energy Innovation Network. Presentation, <https://www.energy.gov/eere/solar/2022-seto-peer-review>

Dwayne Breger, Zara Dowling, River Strong, and Alison Bates. UMass Clean Energy Extension. 2022-03. Subcontract Reports. <https://ag.umass.edu/clean-energy/research-new-initiatives/solarplanning>

- Community Planning for Solar: Toolkit Overview. NREL/SR-7A40-90023, OSTI/2394638.
- Assessing Community Preferences Regarding Solar Development. NREL/SR-7A40-90086, OSTI/2395900.
- Community Planning for Solar: Compiling a Community Solar Action Plan. NREL/SR-7A40-90091, OSTI/2395903.
- Community Planning for Solar: Conducting a Community Solar Survey. NREL/SR-7A40-90089, OSTI/2395902.
- Community Planning for Solar: Conducting a Solar Resource and Infrastructure Assessment. NREL/SR-7A40-90070, OSTI/2394641.
- Community Planning for Solar: Conducting Focus Groups for Solar Planning. NREL/SR-7A40-90088, OSTI/2395901.
- Community Planning for Solar: Defining Realistic Solar Development Options. NREL/SR-7A40-90082, OSTI/2395899.
- Community Planning for Solar: Understanding and Evaluating Solar Financing and Ownership Options. NREL/SR-7A40-90079, OSTI/2394645.
- Forming a Collaborative Community Solar Planning Team. NREL/SR-7A40-90067, OSTI/2394639.
- Monitoring, Evaluating, and Updating Your Community Solar Action Plan. NREL/SR-7A40-90092, OSTI/2395904.
- Solar Finance and Ownership Options (Factsheet). NREL/SR-7A40-90081, OSTI/2394646.
- Solar Resource and Infrastructure Assessment for the Town of Blandford. NREL/SR-7A40-90075, OSTI/2394642.
- Solar Resource and Infrastructure Assessment for the Town of Wendell. NREL/SR-7A40-90076, OSTI/2394643.

- Solar Resource and Infrastructure Assessment for the Town of Westhampton. NREL/SR-7A40-90078, OSTI/2394644.
- The Electric Grid, Distributed Generation, and Grid Interconnection. NREL/SR-7A40-90068, OSTI/2394640.

Suzanne Groneman (City of Reno), Dr. Mohammed Ben-Idris (University of Nevada), Timothy Farkas (Ameresco), Alison Holm (NREL), Wilson Rickerson and Shoshana Cohen (Converge Strategies). 2022-03. Resilience Valuation and Planning for Solar and Storage on Critical Infrastructure, Case Study of the City of Reno. Subcontract Report, NREL/SR-7A40-90010, OSTI/2376835.

<https://www.reno.gov/home/showpublisheddocument/88601/63791507564449979>

Carrie Gill and Shauna Beland (RI Office of Energy Resources); Ryan Constable, Tim Roughan, Caitlin Broderick and Stephen Lasher (National Grid); Joyce McLaren and Sherin Abraham (NREL); Anthony Teixeira (RMI); Naim Darghouth and Sydney Forrester (LBNL). 2022-03. Use of Operating Agreements and Energy Storage to Reduce Photovoltaic Interconnection Costs: Conceptual Framework. Technical Report, NREL/TP-7A40-81960, OSTI/1854328. <https://www.nrel.gov/docs/fy22osti/81960.pdf>

Joyce McLaren and Sherin Abraham (NREL), Naim Darghouth and Sydney Forrester (LBNL). 2022-03. Use of Operating Agreements and Energy Storage to Reduce Photovoltaic Interconnection Costs: Technical and Economic Analysis. Technical Report, NREL/TP-7A40-80556, OSTI/1854327.

<https://www.nrel.gov/docs/fy22osti/80556.pdf>

Kevin Watson, LBNL. 2022-05. Best Practices and Considerations for Siting Battery Storage Systems. Fact Sheet, OSTI/ 2386913. https://eta-publications.lbl.gov/sites/default/files/battery_siting-sein-factsheet_052522.pdf

Kevin Watson, LBNL. 2022-05. Severe Weather Considerations for Siting Solar PV Systems. Fact Sheet, OSTI/ 2386913. https://eta-publications.lbl.gov/sites/default/files/severe_weather-sein-factsheet_052522.pdf

Scott Belding, Kathleen Krah, Rick Armstrong. 2022-06. SEIN: Breaking Barriers Resilient Energy System Analysis. Technical Report, NREL/TP-7A40-81623, OSTI/1878346. <https://www.nrel.gov/docs/fy22osti/81623.pdf>

NREL. 2023-01. A Treasure Trove for Rural and Commercial-Scale Solar Projects, Publications from 8 Teams Capture Insights for Communities Seeking to Harness Resiliency and Economic Benefits of Solar Energy. News Release (1,434 views as of 2024-06), <https://www.nrel.gov/news/program/2023/a-treasure-trove-for-rural-and-commercial-scale-solar-projects.html>

Scott Belding (NREL) and Wilson Rickerson (Converge Strategies). 2023-01. Boston Builds Equity and Resilience into Its Energy System. [SEIN Blog](#).

Wilson Rickerson and Shoshana Cohen, Converge Strategies. 2023-01. Solar and Resilience in Emergency Management: Lessons Learned from Solar Energy Innovation Network Round 2 Teams. [SEIN Blog](#).

Alexandra Kramer. 2023-01. Solar Energy Innovation Network Assistance for Early Adopters: Frequently Asked Questions. [SEIN Blog](#).

Emily Fekete Dalecki, Laura Beshilas, Abigail Randall (DOE), David Feldman, Jarett Zuboy, Kristen Ardani. 2023-03. Solar Power in Your Community, A guide for local governments on how to increase access to and deployment of solar PV. Technical Report, DOE/EE-2545, OSTI/1841660. [https://www.energy.gov/sites/default/files/2023-03/Solar Power in Your Community Guidebook March2023.pdf](https://www.energy.gov/sites/default/files/2023-03/Solar_Power_in_Your_Community_Guidebook_March2023.pdf)

Kamyria Coney. 2023-04. Floating Solar Q&A With Sika Gadzanku. [SEIN Blog](#).

Alexandra Kramer, Scott Belding, and Kamyria Coney. 2023-05. Community Resilience Options: A Menu for Enhancing Local Energy Resilience. Technical Report, NREL/TP-7A40-84493, OSTI/1972813. <https://www.nrel.gov/docs/fy23osti/84493.pdf>

Alex Kramer. 2023-06. A Menu for Enhancing Local Energy Resilience in Boston and Beyond. [SEIN Blog](#).

SEIN Round 3 (42+ outputs)

NREL. 2021-05. Solar Energy Innovation Network Round 3 - Request for Proposals (RFP) Informational Webinar, May 20, 2021. Webinar.

Harrison Dreves. 2022-02. NREL To Collaborate With Eight Teams on Innovations to Unlock Equitable Solar in Underserved Communities. News Release (1,767 views as of 2024-06), <https://www.nrel.gov/news/program/2022/round-three-announcement-solar-energy-innovation-network.html>

NREL. 2022-03. 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. Fact Sheet, NREL/FS-7A40-82172, OSTI/1848082. <https://www.nrel.gov/docs/fy22osti/82172.pdf>

NREL. 2022-06. SEIN Round 3 Team Scoping Workshops, 8 total, April 19 - June 16, 2022, On-line Video Conferences. Meeting.

NREL. 2022-07. SEIN Round 3 Peer Exchange Working Session #1, On-line July 27-29, 2022, Golden, CO. Meeting.

NREL. 2022-11. SEIN Round 3 Peer Exchange Working Session #2, In-person Nov. 14-16, 2022, Golden, CO. Meeting.

Kamyria Coney. 2023-01. Solar Energy Innovation Network Round 3 Teams Exchange Innovative Ideas for Equitable Solar Adoption. [SEIN Blog](#).

Galen Barbose and Sydney Forrester, LBNL. 2023-02. Solar PV on U.S. Houses of Worship: Overview of Market Activity and Trends. Presentation. <https://www.osti.gov/biblio/1958539>

NREL. 2023-04. SEIN Equity Insights (Internal Only). Posters.

NREL with Round 3 Subcontractor Teams. 2023-04. SEIN Round 3, Eight Team Projects (Internal Only). Posters.

- NREL. 2023-04. Solar Energy Innovation Symposium, In-person April 12-14, 2023, Denver, CO. Meeting.
- Kamyria Coney. 2023-06. 2023 Solar Energy Innovation Network Symposium: Exploring Visions for Equitable Solar Adoption. [SEIN Blog](#).
- NREL. 2023-06. 2023 SEIN Symposium, Exploring Visions for Equitable Solar Adoption (Extended Cut). Video, <https://www.nrel.gov/news/video/2023-solar-energy-innovation-network-symposium-exploring-visions-for-equitable-solar-adoption-text.html>
- Eric Lockhart. 2023-07. SETO Lab Visit Presentation: Solar Energy Innovation Network (Internal Only). Presentation.
- Eric Lockhart. 2023-11. Energy Justice Strategy Case Study: Deployment Project, Tallahassee, Florida: Partnering with the Community to Provide Pathways to Solar for Underserved Neighborhoods (Internal Only). Fact Sheet, NREL/FS-6A42-87179.
- Eric O'Shaughnessy (LBNL), Galen Barbose (LBNL), Alexandra Grayson (LBNL), Isa Ferrall-Wolf (NREL), and Deborah Sunter (LBNL). 2023-11. Impacts of non-residential solar on residential adoption decisions. *Frontiers in Sustainable Energy Policy*. 2:1203517. Journal Article, OSTI/2323272, <https://www.osti.gov/biblio/2323272>
- Margo Weisz (Texas Energy Poverty Research Institute), Steve Wiese (Frontier Energy), and Patrice Parsons (Texas Solar Energy Society). 2023-11. New Pathways for Equitable Solar Adoption in Texas. Subcontract Report, NREL/SR-7A40-89868, OSTI/2373101. <https://tepri.org/2023/11/tepri-teamed-up-with-texas-solar-energy-society-txes-and-frontier-energy-to-release-report-on-solar-innovation/>
- Ty Hedalen. 2023-12. Green Lending Program Insights for Twin Cities (Internal Only). Presentation.
- Rachel Jenkins, Pecan Street Inc. 2024-01. Safely Exploring Solar: A Guide for Austin Energy Customers. Subcontract Report, NREL/SR-7A40-89916, OSTI/2375021. <https://www.nrel.gov/docs/fy24osti/89916.pdf>
- Rachel Jenkins, Pecan Street Inc. 2024-01. Austin Solar Guide (Flyer). Subcontract Report, NREL/SR-7A40-89917, OSTI/2375022. <https://www.nrel.gov/docs/fy24osti/89917.pdf>
- Isa Ferrall-Wolf and Kamyria Coney. 2024-02. Commercial-Scale Solar PV Increases Local Residential Solar Adoption. [SEIN Blog](#).
- Eric O'Shaughnessy (LBNL), Galen Barbose (LBNL), Alexandra Grayson (LBNL), Isa Ferrall-Wolf (NREL), and Deborah Sunter (LBNL). 2024-02. Impacts of non-residential solar on residential adoption decisions, February 7, 2024. Webinar, <https://emp.lbl.gov/impacts-non-residential-solar-residential-adoption-decisions>
- Sara Fall and Harrison Dreves. 2024-02. Making Solar Work for Everybody—How NREL Helps Envision a More Just Energy System, Analysts Share Tools for Communities, Tribes, and Jurisdictions Looking for Ways to Make Solar Energy Meet Their Needs. News Release (709 views as of 2024-06), <https://www.nrel.gov/news/program/2024/making-solar-work-for-everybody-how-nrel-helps-envision-a-more-just-energy-system.html>

Kazinka, Matt (Lake Street Council), Aaron Backs (GPI), Diana McKeown (GPI), and William Weber, Jr. (William Weber Consulting). 2024-03. Advancing Small Business Solar Equity: Final Technical Insights Report. Subcontract Report, NREL/SR-7A40-89510, OSTI/2375019. <https://www.visitlakestreet.com/business-blog/sein-report>

Erifili Draklellis, Roberto Zanchi, and Rachel Gold, RMI. 2024-03. Collaborating With Utilities to Meet Underserved Community Needs: A Guide to Equitable Commercial Solar and Solar + Storage. Subcontract Report, NREL/SR-7A40-89918, OSTI/2375023. <https://rmi.org/insight/collaborating-with-utilities-to-meet-underserved-community-needs/>

Eric Lockhart and Sara Farrar. 2024-03. The SETO 2024 Peer Review: SEIN Poster and Panel Presentation, SEIN explored challenges aligning PV with local needs. Solutions require leveraging community assets, linking holistic approaches, addressing project economics, and innovating decision-making structures. Poster, <https://www.energy.gov/sites/default/files/2024-04/SAIS%20Posters%202024%20SETO%20Peer%20Review-compressed.pdf>

Ashley Malyszka and Andreas Karelak, RE-volv. 2024-04. Bringing Solar to BIPOC Houses of Worship, SEIN Final Technical Report. Subcontract Report, NREL/SR-7A40-89887, OSTI/2375020. <https://re-volv.org/solar-for-bipoc>

Ty Hedalen. 2024-04. CDFI Small Business Green Energy Loan Fund, Insights from SEIN Twin Cities (Internal only). Presentation.

Joyce McLaren and Eric Lockhart. 2024-04. CESA Summit, April 17–18, 2024, with NREL speakers Joyce McLaren (Technical Assistance for States), Eric Lockhart (Centering Energy Equity). Conference Presentation, <https://www.cesa.org/event/2024-ira-bil-summit/>

Isa Ferrall-Wolf and Joyce McLaren. 2024-04. Locating Equitable Solar Opportunities by Census Tract: A Guide to the Screening Tool for Equitable Adoption and Deployment of Solar (STEADy Solar). Presentation, NREL/PR-7A40-85722, OSTI/2340124. <https://www.nrel.gov/docs/fy24osti/85722.pdf>

Andreas Karelak (RE-volv) and Kamyria Coney (NREL). 2024-05. Advancing Solar Adoption in Black, Indigenous, and People of Color Communities One House of Worship at a Time. [SEIN Blog](#).

Erifili Draklellis and Ben Proffer, RMI. 2024-05. Collaborating with Utilities to Meet Underserved Community Needs. [SEIN Blog](#).

Kamyria Coney. 2024-05. Facilitating Equitable Solar Access Through Federal Assistance Programs, with co-promotion of newly published SCEP/WAP guidelines: Solar Resources in WAP and LIHEAP. [SEIN Blog](#).

Aaron Backs and Diana McKeown, GPI. 2024-05. Twin Cities Team Finds Opportunities to Expand Rooftop Solar for Underserved Small Businesses. [SEIN Blog](#).

Isa Ferrall-Wolf and Joyce McLaren. 2024-05. Screening Tool for Equitable Adoption and Deployment of Solar (STEADy Solar). NREL Data Catalog. Golden, CO: National Renewable Energy Laboratory. Last updated: May 25, 2024. DOI: 10.7799/2361133. Dataset, <https://data.nrel.gov/submissions/238>

Isa Ferrall-Wolf and Joyce McLaren. 2024-06. Screening Tool for Equitable Adoption and Deployment of Solar (STEADy Solar). [SEIN Blog](#).

Jennifer Eden (Utah Clean Energy) and Christopher Thomas (Salt Lake City Department of Sustainability). 2024-06. Solar + Storage Toolkit for Small- or Mid-sized Business. Website, <https://hub.utahcleanenergy.org/solar-power/>

Joyce McLaren (NREL), Jennifer Eden (Utah Clean Energy), and Christopher Thomas (Salt Lake City Department of Sustainability). 2024-06. Financing Solar + Storage for Small Businesses in Underserved Communities. Fact Sheet, NREL/FS-7A40-87133, OSTI/2370984. <https://www.nrel.gov/docs/fy24osti/87133.pdf>

Joyce McLaren (NREL), Jennifer Eden (Utah Clean Energy), and Christopher Thomas (Salt Lake City Department of Sustainability). 2024-06. Utility Programs Supporting Customer-Sited Battery Storage: Program Design to Ensure Mutual Benefits. Fact Sheet, NREL/FS-7A40-87134, OSTI/ 2404301. <https://www.nrel.gov/docs/fy24osti/87134.pdf>

Sara Fall and Kamyria Coney. 2024-06. Follow in the Footsteps of Communities Planning Solar Deployment That Works for Them, Apply to the Solar Community Assistance for Local Equity (Innovation at SCALE) Initiative to Receive Technical Assistance for Communities and Organizations Across the Country. News Release, <https://www.nrel.gov/news/program/2024/follow-in-the-footsteps-of-communities-planning-solar-deployment-that-works-for-them.html>

Isa Ferrall-Wolf and Joyce McLaren. 2024-06. Locating Equitable Solar Opportunities by Census Tract: A Guide to the Screening Tool for Equitable Adoption and Deployment of Solar (STEADy Solar), Public Webinar, June 5, 2024. Webinar, <https://youtu.be/CwdknxBPuM>

Kamyria Coney, Alex Kramer, Scott Belding, Tucker Oddleifson. 2024-06. Technical Assistance for Communities and Organizations from the Solar Energy Innovation Network. [SEIN Blog](#).

Media Mentions of SEIN Projects

Fiscal Year (FY) 2019

- <https://www.solarpowerworldonline.com/2019/04/naruc-releases-report-analyzing-value-of-der-resilience>
- <https://www.politico.com/newsletters/morning-energy/2019/04/25/bidens-union-push-428679>
- <https://www.83degreesmedia.com/features/tampa-bay-area-partners-win-grant-to-pursue-solar-power-as-solution-to-disaster-recovery-092920.aspx>

FY2020

- <https://www.masslive.com/news/2020/04/grant-will-bring-solar-planning-to-3-western-massachusetts-towns.html>
- <https://www.utilitydive.com/news/as-extreme-weather-spurs-billions-in-utility-resilience-spending-regulator/576404/> (NARUC Resilience Paper linked in story)

- <https://www.umass.edu/newsoffice/article/grant-umass-amherst-clean-energy-extension>
- <https://www.cns.umass.edu/news-events/news/community-focused-approach-solar-energy>

FY2022

- <https://www.greenbiz.com/article/atlanta-community-resilience-project-seeks-become-model-energy-equity>
- <https://www.unr.edu/nevada-today/news/2021/ben-idris-pursues-green-energy>
- <https://www.solarpowerworldonline.com/2022/03/nrel-backed-nonprofit-team-solar-bipoc-houses-of-worship/>
- <https://pv-magazine-usa.com/2022/03/02/three-non-profits-receive-nrel-support-to-help-bipoc-houses-of-worship-to-go-solar/>

FY2023

- <https://sahanjournal.com/climate-environment/solar-power-lake-street-university-avenue-west-broadway-business-districts-minnesota/>
- <https://www.cbsnews.com/minnesota/video/underserved-neighborhoods-given-boost-to-switch-to-solar-energy/#x>