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Sustainable Solar Education Project

Final Metrics Report

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Clean Energy States Alliance

SUSTAINABLE SOLAR EDUCATION PROJECT



**SOLAR ENERGY
TECHNOLOGIES OFFICE**
U.S. Department Of Energy





SUSTAINABLE SOLAR EDUCATION PROJECT

About the Sustainable Solar Education Project: Since the project's launch in March of 2016, the Sustainable Solar Education Project provided information and educational resources to help states and municipalities ensure distributed solar electricity remains consumer friendly and benefits low- and moderate-income households. The project developed a series of program guides, webinars, interactive webinar discussions, and in-person training for government officials on topics related to strengthening solar equitability, improving consumer information, and implementing consumer protection measures. The project concluded in August 2018. It was managed by the Clean Energy State Alliance (CESA) and funded through the U.S. Department of Energy Solar Energy Technologies Office through its Solar Training and Education for Professionals program. More information about the project can found at www.cesa.org/projects/sustainable-solar.



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The following report offers a summary of attendance and distribution results of project outputs for the Sustainable Solar Education Project:

Project Advisory Committee

The Sustainable Solar Education Project was guided by an advisory committee made up of a dozen individuals with backgrounds in the fields of solar policy, program design, and implementation, and solar regulation and consumer protection from across the country. The project's advisory committee reviewed the project work plan, provided input on project outputs, helped keep CESA informed of relevant information related to solar consumer protection and equitability, and assisted us in making sure our workshops reached our target audience. The 12 members of our advisory committee are listed below:

- Shannon Baker-Branstetter, Policy Counsel, Energy and Environment, Consumers Union
- Shauna Beland, Program Development Chief, Rhode Island Office of Energy Resources
- Michael Forrester, Energy Manager, City of Cincinnati
- Mark Gaiser, Clean Energy Program Manager, New Mexico Energy Minerals and Natural Resources
- Jeni Hall, Solar Project Manager, Energy Trust of Oregon
- Elizabeth Hutchison, Energy Specialist, California Energy Commission
- Max Joel, Program Manager, New York State Energy Research and Development Authority
- Michael Mendelsohn, Senior Director of Project Finance and Capital Markets, Solar Energy Industries Association
- Stacy Miller, Solar Policy Specialist, Minnesota Department of Commerce
- Selya Price, Senior Manager, Connecticut Green Bank
- Daniel White, Energy Program Specialist, Department of Energy & Environment
- Elizabeth Youngblood, Senior Project Manager, Massachusetts Clean Energy Center

Organizational Outreach

CESA reached out to various organizations to inform them about our project. State-based policy organizations that CESA reached out to on this project include:

- Council of State Governments
- National Association of Attorneys General
- National Association of Regulatory Utility Commissioners
- National Association of State Energy Officials
- National Council of State Legislatures
- National Energy and Utility Affordability Coalition

Local government-based organizations that CESA reached out to about our project include:

- American Planning Association
- ICLEI – Local Governments for Sustainability
- International City/County Management Association
- National Association of Regional Councils
- National League of Cities

CESA also conducted project outreach to various environmental advocates, consumer advocates, low-income advocacy groups, and the solar industry, including:

- Consumers Union
- Institute for Sustainable Communities
- The Interstate Renewable Energy Council
- The National Association for the Advancement of Colored People
- Solar Energy Industries Association
- Vote Solar

Project Newsletter

To enhance our project's impact, CESA released a free monthly electronic newsletter with updates on project activities and information starting in June 2016. By the end of the project, 3,627 people were subscribed to the Sustainable Solar Education Project newsletter's distribution list.

Below is a table showing each issue of the Sustainable Solar Education Project newsletter that we have published and the number of people the newsletter was sent to. We cannot know with certainty how many of those people read each edition of the newsletter.

Month/Year Issued	Number of Contacts Sent To
Jul-18	3627
Jun-18	3653
May-18	3635
Apr-18	3492
Mar-18	3515
Feb-18	3454
Jan-18	3268
Dec-17	3193
Nov-17	3093
Oct-17	2988
Sep-17	2953
Aug-17	2979
Jul-17	2961
Jun-17	2963
May-17	2440
Apr-17	2463
Mar-17	2263
Feb-17	1923
Jan-17	1706
Dec-16	1712
Nov-16	1538
Oct-16	1537
Sep-16	1527
Aug-16	1529
Jul-16	1548
Jun-16	1191

CESA's Sustainable Solar Education Project newsletter archive is available at <http://cesa.org/projects/sustainable-solar/newsletter/>.

Project Publications

CESA published six guides and one report under the Sustainable Solar Education Project:

- [*Solar Information for Consumers: A Guide for States*](#)
- [*Publicly Supported Solar Loan Programs: A Guide for States and Municipalities*](#)
- [*Standards and Regulations for Solar Equipment, Installation, and Licensing & Certification: A Guide for States and Municipalities*](#)
- [*Solar+Storage for Low- and Moderate-Income Communities: A Guide for State and Municipalities*](#)
- [*Bringing the Benefits of Solar Energy to Low-Income Consumers: A Guide for States and Municipalities*](#)
- [*Consumer Protection for Community Solar: A Guide for States*](#)
- [*State Solar Contract Disclosure Requirements*](#)

The table below shows each of the publications that CESA has released under the Sustainable Solar Education Project, the date each guide was published, the number of page views for each guide, and the number of times each guide has been downloaded. (CESA is not able to track when a person directly shares a pdf link to one of our reports. In addition, the table below does not include instances where a copy of the guide was sent as an email attachment to an interested party or where hardcopy versions were disseminated. For these reasons, the actual number of views for each guide is likely to be considerably higher than the data below indicates.)

Publication Title	Date Published	Number of Page Views	Number of Downloads
State Solar Contract Disclosure Requirements	8/1/2018	164	101
Consumer Protection for Community Solar	6/8/2017	630	345
Bringing the Benefits of Solar Energy to Low-Income Consumers	5/15/2017	1224	598
Solar+Storage for Low- and Moderate-Income Communities	3/13/2017	890	506
Standards and Requirements for Solar Equipment, Installation, and Licensing and Certification	1/20/2017	392	150
Publicly Supported Solar Loan Programs	1/3/2017	418	208
Solar Information for Consumers	11/8/2016	505	117

Webinars & Interactive Follow-Up Discussions

CESA conducted 30 Sustainable Solar Education Project webinars.

Two of these webinars were project overview webinars—one on [residential solar financing](#) and one on [solar consumer protection](#). Three hundred thirty-one people attended one or both of those webinars.

CESA conducted a webinar on each of the six project guides it released:

- [Solar Information for Consumers](#)—November 17, 2016
- [Publicly Supported Solar Loan Programs](#)—January 12, 2017
- [Solar Equipment, Installation, and Licensing & Certification](#)—February 9, 2017
- [Solar+Storage for Low- and Moderate-Income Communities](#)—March 16, 2017
- [Bringing the Benefits of Solar Energy to Low-Income Consumers](#)—April 18, 2017
- [Consumer Protection for Community Solar](#)—June 22, 2017

CESA conducted additional Sustainable Solar Education Project webinars on project-related topics:

- [DOE's Solar in Your Community Challenge](#)—January 10, 2017
- [Low-Income Solar, Part 1: Lessons Learned from Low-Income Energy Efficiency Programs](#)—March 23, 2017
- [Low-Income Solar, Part 2: Using the Tools of Low-Income Energy Efficiency Financing](#)—March 30, 2017
- [Crowd-Financing Solar for Nonprofits Serving Low-Income Communities](#)—May 25, 2017
- [Community Solar for Low- and Moderate-Income Consumers](#)—June 1, 2017
- [Utility-Driven Solar Projects for Low-Income Customers](#)—June 8, 2017
- [Principles and Policies for Low- and Moderate-Income Solar, Part 1](#)—October 6, 2017
- [Colorado's Low-Income Community Solar Demonstration Project](#)—October 26, 2017
- [Principles and Policies for Low- and Moderate-Income Solar, Part 2](#)—November 17, 2017
- [Financing Solar Projects for Public and Affordable Housing](#)—February 15, 2018
- [Solar+Storage for Public and Affordable Housing](#)—February 22, 2018
- [Promising Solar PV Financing Strategies for Low- and Moderate-Income Customers](#)—March 1, 2018
- [Income Trends of Residential Solar Adopters](#)—May 2, 2018
- [Electricity Affordability Metrics for the U.S.](#)—June 14, 2018

CESA also arranged and hosted a series of webinars and interactive, follow-up discussions on particular aspects of low- and moderate-income solar program design. Related webinars in this series occurred during consecutive weeks and were followed by a facilitated webinar conversation for state and municipal officials to discuss the featured topic with webinar panelists.

- [Income Verification for Low-Income Solar Programs](#)—October 13, 2017
- [Follow-Up Discussion on Income Verification for LMI Solar Programs](#)—October 19, 2017
- [Approaches for Involving Low-Income Communities with Solar](#)—November 30, 2017
- [Connecticut's Low- and Moderate-Income Solar Customer Segmentation Analysis](#)—December 5, 2017

- [Follow-Up Discussion on Customer Acquisition for LMI Solar Programs](#)—December 14, 2017
- [Using Weatherization Assistance Program \(WAP\) Funds for Low-Income Solar](#)—January 11, 2018
- [Using Low Income Home Energy Assistance Program \(LIHEAP\) Funds for Low-Income Solar](#)—January 16, 2018
- [Follow-Up Discussion on Using Federal Low-Income Energy Assistance Programs for Solar](#)—January 25, 2018

CESA recorded and posted all of the Sustainable Solar Education Project webinars on its [website](#). Our Sustainable Solar Education Project webinar Vimeo archive is [available here](#).

Below is a table showing each of the webinars that CESA has conducted, the date of the webinar, the number of people who registered to attend each webinar, the number of people who attended each webinar, and the number of post-webinar Vimeo views of each of the webinar recordings.

Title	Date	Registered	Attended	Vimeo Views*
Residential Solar Financing 101	6/22/2016	456	211	196
Advice for States on Providing Solar Information to Consumers	11/17/2016	178	87	35
Solar Consumer Protection	12/8/2016	233	120	72
DOE's Solar in Your Community Challenge	1/10/2017	252	145	109
Designing Publicly Supported Solar Loan Programs	1/12/2017	193	98	50
Solar Equipment, Installation, and Licensing & Certification	2/9/2017	181	80	52
Solar+Storage for LMI Communities	3/16/2017	582	262	140
Low-Income Solar, Part 1: Lessons Learned from Low-Income Energy Efficiency Programs	3/23/2017	414	202	111
Low-Income Solar, Part 2: Using the Tools of Low-Income Energy Efficiency Financing	3/30/2017	341	124	60
Bringing the Benefits of Solar to Low-Income Customers	5/18/2017	410	188	145
Crowd-Financing Solar for Nonprofits Serving Low-Income Communities	5/25/2017	406	181	101
Community Solar for Low- and Moderate-Income Consumers	6/1/2017	397	228	143
Utility-Driven Solar Projects for Low-Income Customers	6/8/2017	288	137	124
Consumer Protections for Community Solar	6/22/2017	252	119	82

Principles and Policies for Low- and Moderate-Income Solar, Part 1	10/6/2017	67	49	n/a
Income Verification for Low-Income Solar Programs	10/13/2017	222	93	75
Follow-Up Discussion on Income Verification for LMI Solar Programs **	10/19/2017	36	19	n/a
Colorado's Low-Income Community Solar Demonstration Project	10/26/17	385	184	74
Principles and Policies for Low- and Moderate-Income Solar, Part 2	11/17/17	149	69	n/a
Approaches for Involving Low-Income Communities with Solar	11/30/2017	263	147	90
Connecticut's Low- and Moderate-Income Solar Customer Segmentation Analysis	12/5/2017	151	78	46
Follow-Up Discussion on Customer Acquisition for LMI Solar Programs **	12/14/17	53	19	n/a
Using Weatherization Assistance Program (WAP) Funds for Low-Income Solar	1/11/18	288	144	99
Using Low Income Home Energy Assistance Program (LIHEAP) Funds for Low-Income Solar	1/16/18	265	123	129
Follow-Up Discussion: Using Federal Low-Income Energy Assistance Programs for Solar **	1/25/18	85	38	n/a
Financing Solar Projects for Public and Affordable Housing	2/15/2018	429	195	104
Solar+Storage for Public and Affordable Housing	2/22/2018	379	158	65
Promising Solar PV Financing Strategies for Low- and Moderate-Income Customers	3/1/2018	297	123	66
Income Trends of Residential Solar Adopters	5/2/2018	390	175	83
Electricity Affordability Metrics for the U.S.	6/14/2018	285	123	55

**as of 7/23/2018*

***These webinars were open to state and municipal officials only*

Project Workshops

CESA held three full-day, in-person trainings under this project. For each of the workshops, CESA conducted an application process to ensure we had an appropriate group of participants. We posted workshop materials and conducted post-workshop evaluations for each workshop we held. The three workshops are listed below:

- On June 14, 2017, CESA conducted a [workshop for state officials on bringing the benefits of solar to low- and moderate-income residents](#) in Washington, D.C. The workshop was attended by 31 state officials and 18 other stakeholders including federal and municipal officials.*
- On October 17, 2017, CESA held a [workshop on solar for public and affordable housing](#) in Denver, Colorado. The workshop was attended by 20 officials from state housing agencies, 6 officials from municipal housing agencies and 13 other stakeholders.*
- On May 17, 2018, CESA conducted a [workshop on solar consumer protection](#) in Chicago, Illinois. The workshop was attended by 29 state officials and 6 other stakeholders.*

** Workshop participant numbers exclude CESA staff*

Conference and Meeting Presentations

Through our Sustainable Solar Education Project, CESA and its project team partners have presented on topics related to solar consumer protection and solar equitability at meetings and conferences of solar stakeholders and national associations of state officials. Project presentations are listed below:

- CESA conducted two project-related sessions—one on states' role in solar consumer protection and one on state solar programs for low-income residents and communities—at its [spring 2016 membership meeting](#). Approximately 45 people attended each of the presentations, including state energy agency representatives from 12 states.
- Under the project, Bentham Paulos, who authored a project guide titled *Bringing the Benefits of Solar to Low-Income Consumers*, presented on a panel on low-income solar program design at a Sustainable Communities Leadership Academy in Chicago, Illinois in November 2016.
- CESA staff presented on low- and moderate-income solar access during two sessions at Renewable Energy Vermont's 2016 Conference. Approximately 25 people attended each of the sessions.
- CESA presented on a panel on making the clean energy transition accessible for low-income earners at a conference for Vermont town energy committee members in December 2016. This session was attended by approximately 25 people.
- CESA presented on solar consumer protection during a virtual meeting of the National Association of State Utility Consumer Advocates' distributed energy resources committee in March 2017. Approximately 15 people attended the virtual meeting.
- CESA presented on a panel on solar policy consideration for low-income households at the [National Energy and Utility Affordability Coalition's Annual Meeting](#) in Orlando, Florida in June 2017. Approximately 75 people attended the session.
- CESA presented on community solar consumer protection to a virtual meeting of the Solar Market Pathways (SMP) community solar affinity group in August 2017. Approximately 12 members of the affinity group attended the presentation.
- Through our Sustainable Solar Education Project, Jenny Heeter from the National Renewable Energy Laboratory presented on low-income community solar design at the [American Solar Energy Society national solar conference](#) in October 2017 in Denver, Colorado. Jenny Heeter presented to about 50 participants in the Solar in Your Community Challenge workshop at the conference.
- CESA conducted a project-related session on low-income solar programs at its [spring 2018 membership meeting](#). Approximately, 40 people attended each of the presentations, including state officials from 12 different states.
- CESA will present on the resources it has produced under the Sustainable Solar Education Project on a low-income solar policy call hosted by Vote Solar in August of 2018.



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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, industry representatives, and other stakeholders to develop and promote clean energy technologies and markets. It supports effective state and local policies, programs, and innovation in the clean energy sector, with an emphasis on renewable energy, power generation, 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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