

RESILIENTPOWER

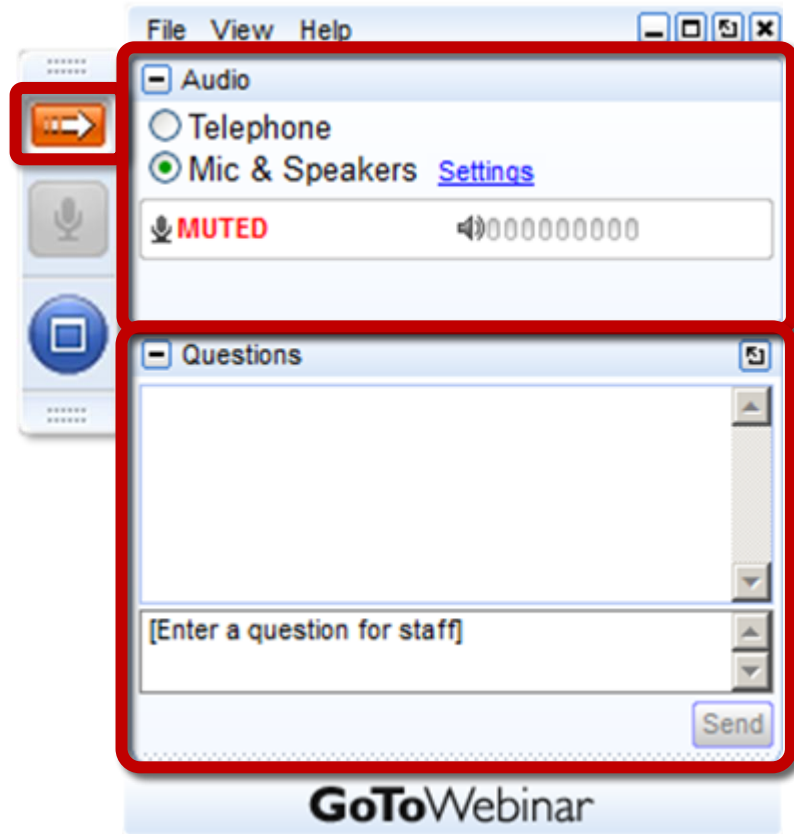
A project of CleanEnergyGroup



Overcoming Barriers to Solar+Storage in Critical Facilities Serving Low-Income Communities

May 6, 2021

WEBINAR LOGISTICS



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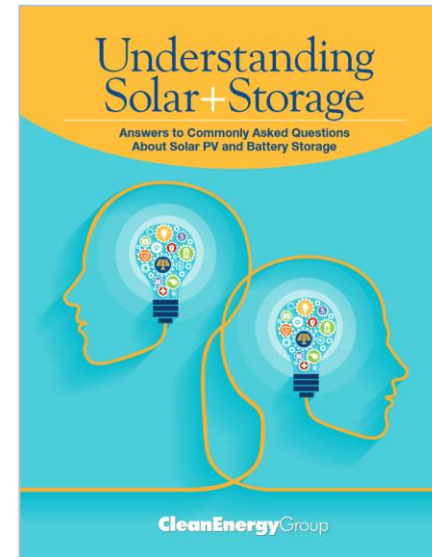
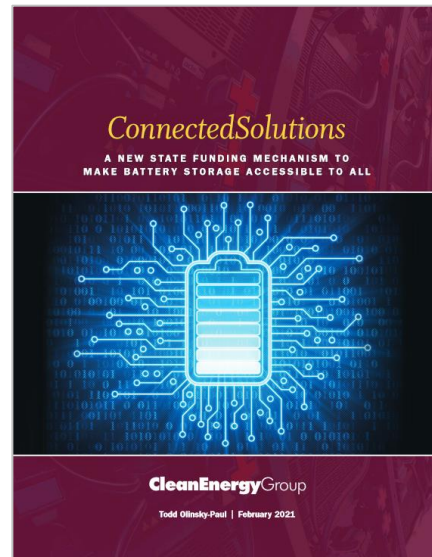
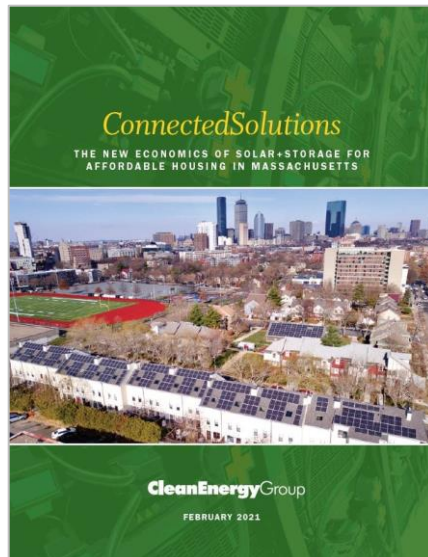
Submit questions and comments via the Questions panel

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THE RESILIENT POWER PROJECT

- Increase public/private investment in clean, resilient power systems (solar+storage)
- Protect low-income and vulnerable communities, with a focus on affordable housing and critical public facilities
- Engage city, state and federal policy makers to develop supportive policies and programs
- Visit www.resilient-power.org for more information and resources



SUPPORTING 250+ PROJECTS ACROSS THE COUNTRY



WEBINAR SPEAKERS



Abbe Ramanan

Project Manager, Clean
Energy Group



Nicole Lim

Executive Director,
California Indian Museum
and Cultural Center



Seth Mullendore

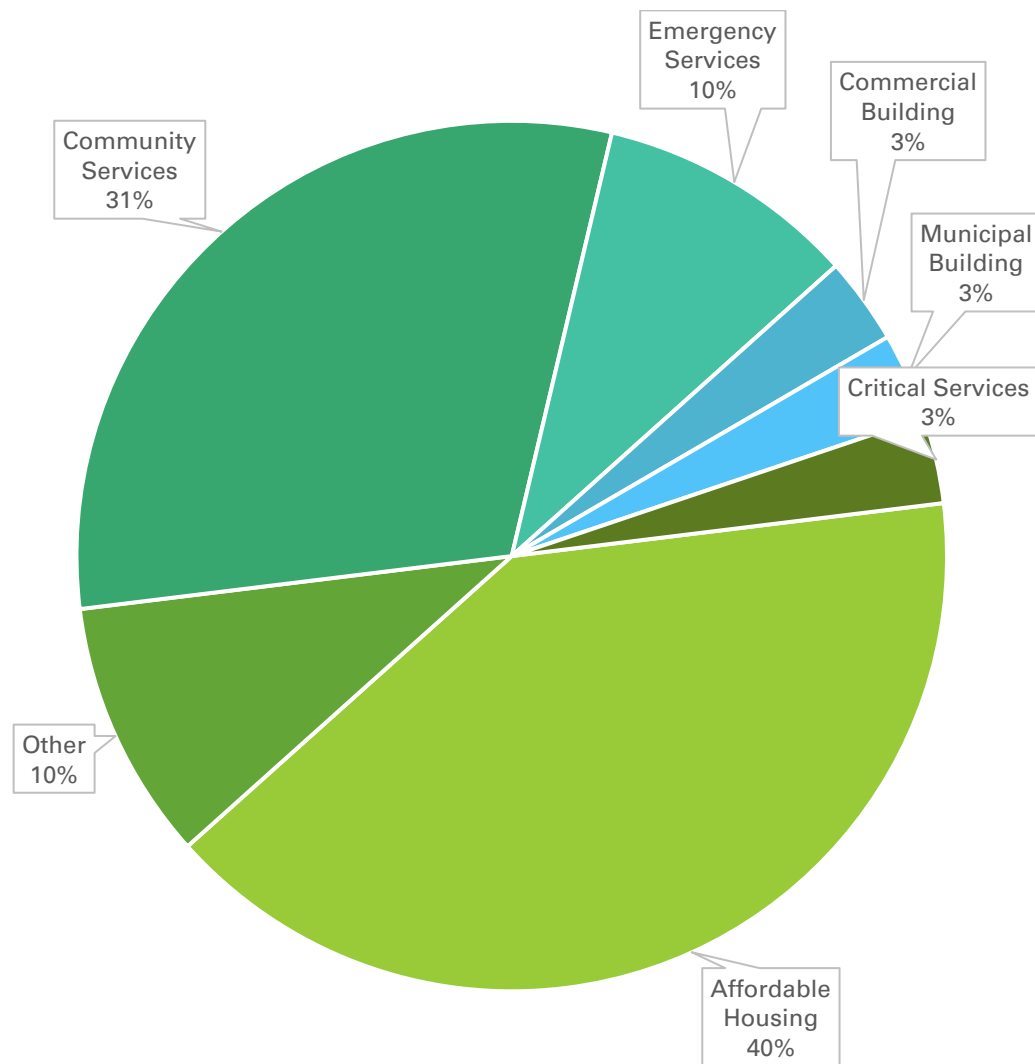
Vice President,
Clean Energy Group
(moderator)





Overcoming Barriers to Solar+Storage in Critical Facilities Serving Low-Income Communities

- This report was funded by Clean Energy Group's Resilient Power Project and based upon work supported by the U.S. Department of Energy Office of Energy Efficiency and Renewable Energy (EERE) under the Solar Energy Technology Office (SETO) Award Number DE-EE0008758. This award is managed by the Clean Energy States Alliance (CESA). The views expressed herein do not necessarily represent the views of the U.S. Department of Energy or the United States Government.
- Solar PV and battery storage have proven benefits, but implementation among critical service providers remains low.
- To dig into the potential reasons behind this, CEG surveyed 60 community-based organizations, municipalities, affordable housing developers, and technical service providers that were planning, developing, or recently completed solar+storage projects

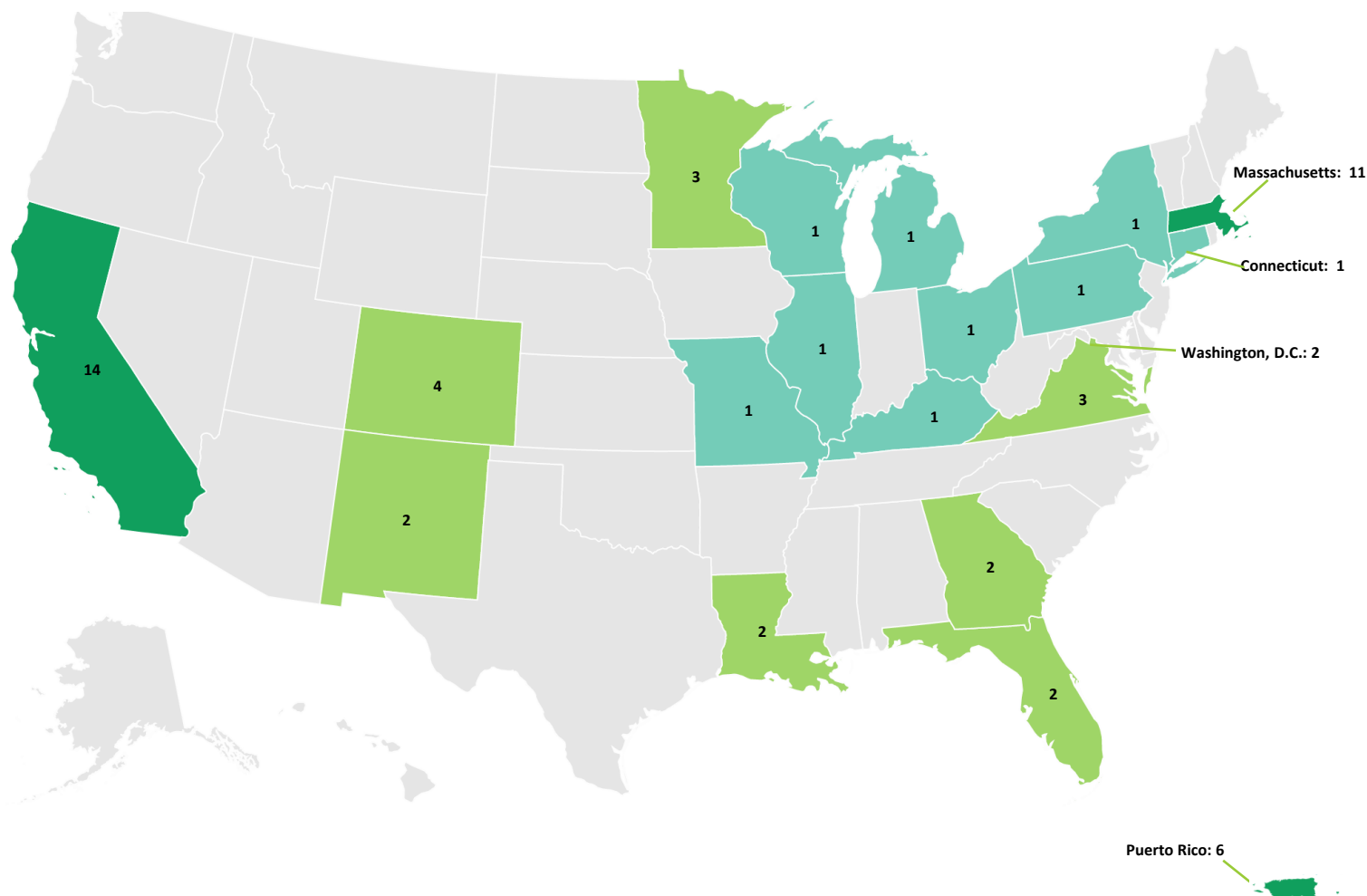


Primary Sectors

Most respondents were from affordable housing (40%), community services (e.g., resilience hubs and community centers) (31%). Our report examined some key differences in the experiences of these two large groups in terms of solar+storage development, including:

- Project motivations
- Barriers encountered
- Services/policies needed

Geography

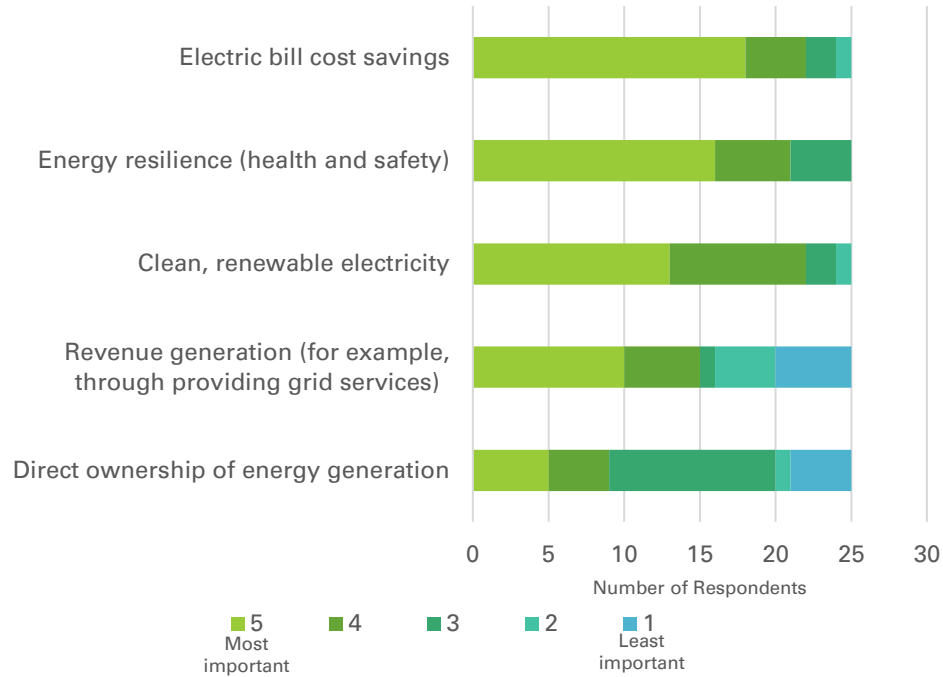


Most survey responses were from affordable housing and community service providers. Solar+storage projects were primarily in California (14), Massachusetts (11), and Puerto Rico (6). The remaining 29 projects were dispersed across 16 states and the District of Columbia. Colorado had 4 projects. Minnesota and Virginia each had 3 projects, and the District of Columbia, Florida, New Mexico, and Georgia each had 2 projects. The remaining states – Connecticut, Illinois, Kentucky, Michigan, Missouri, New York, Ohio, Pennsylvania, and Wisconsin – each had one project.

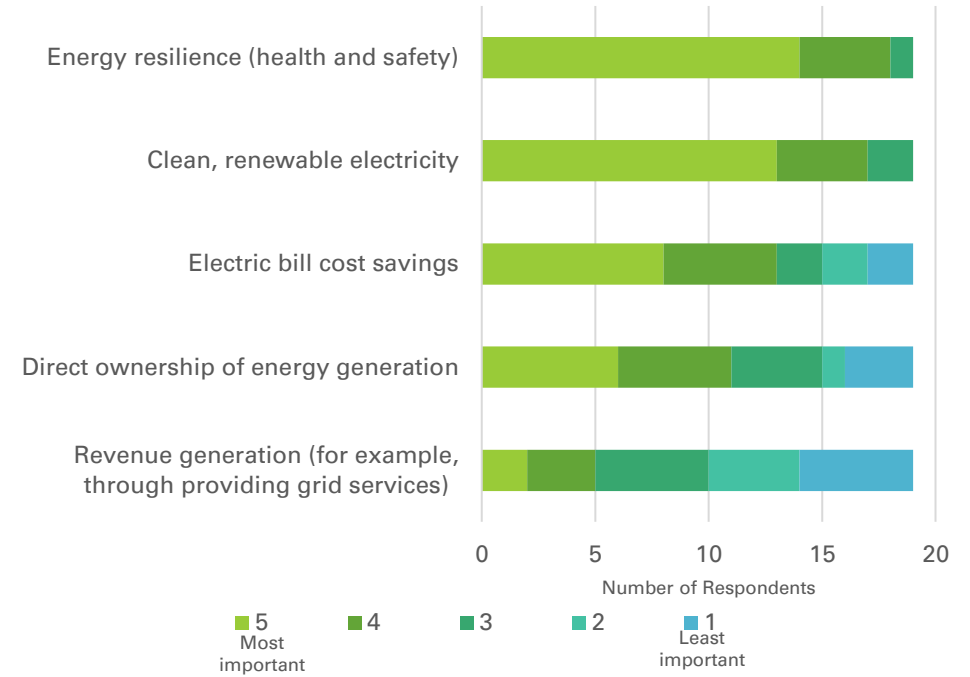
The concentration of projects in certain regions reflects the strong regulatory environment and incentive support for solar+storage in some states, including the [ConnectedSolutions](#) program in Massachusetts and [Self-Generation Incentive Program](#) (SGIP) in California.

Project Motivations

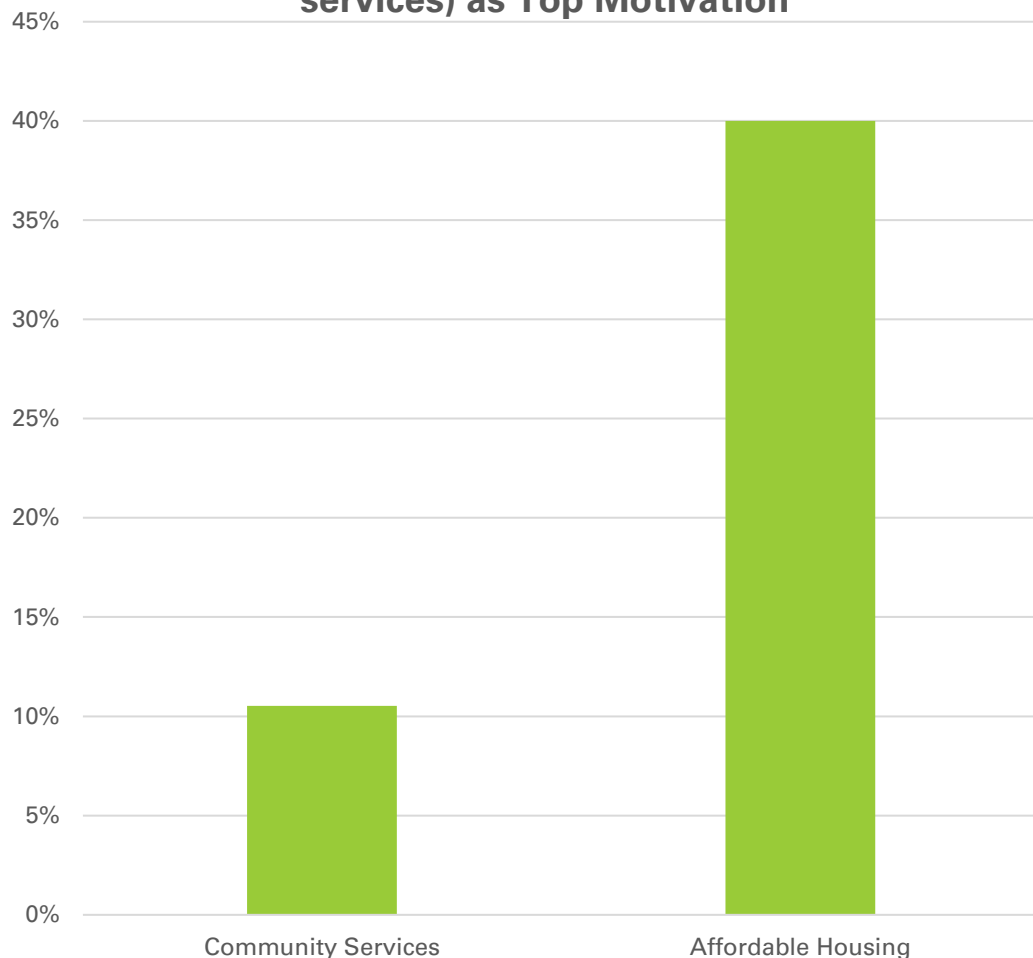
Energy Resilience: Affordable Housing



Energy Resilience: Community Services



Percentage of Respondents Who Ranked Revenue Generation (e.g., providing grid services) as Top Motivation

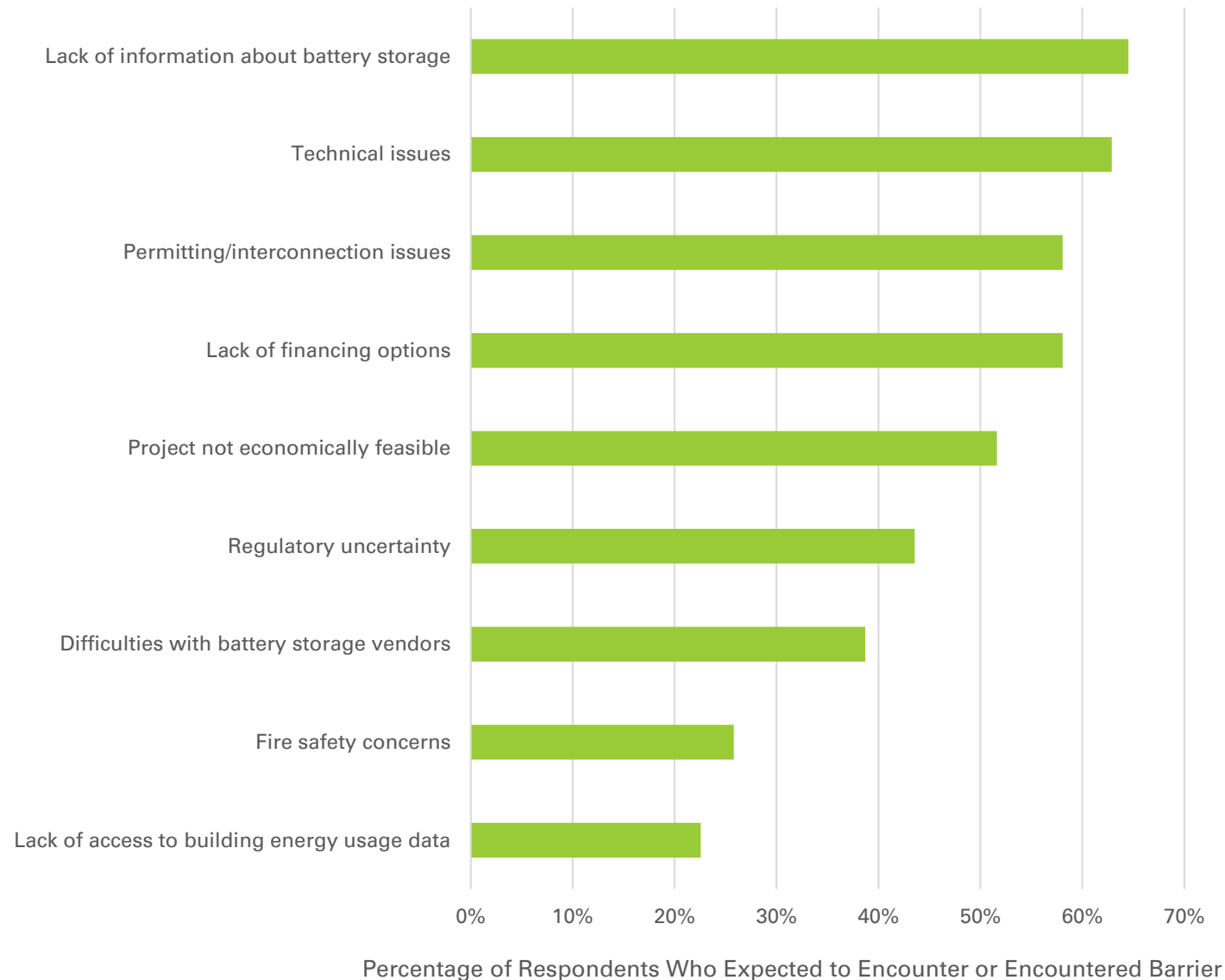


Project Motivation: Revenue Generation

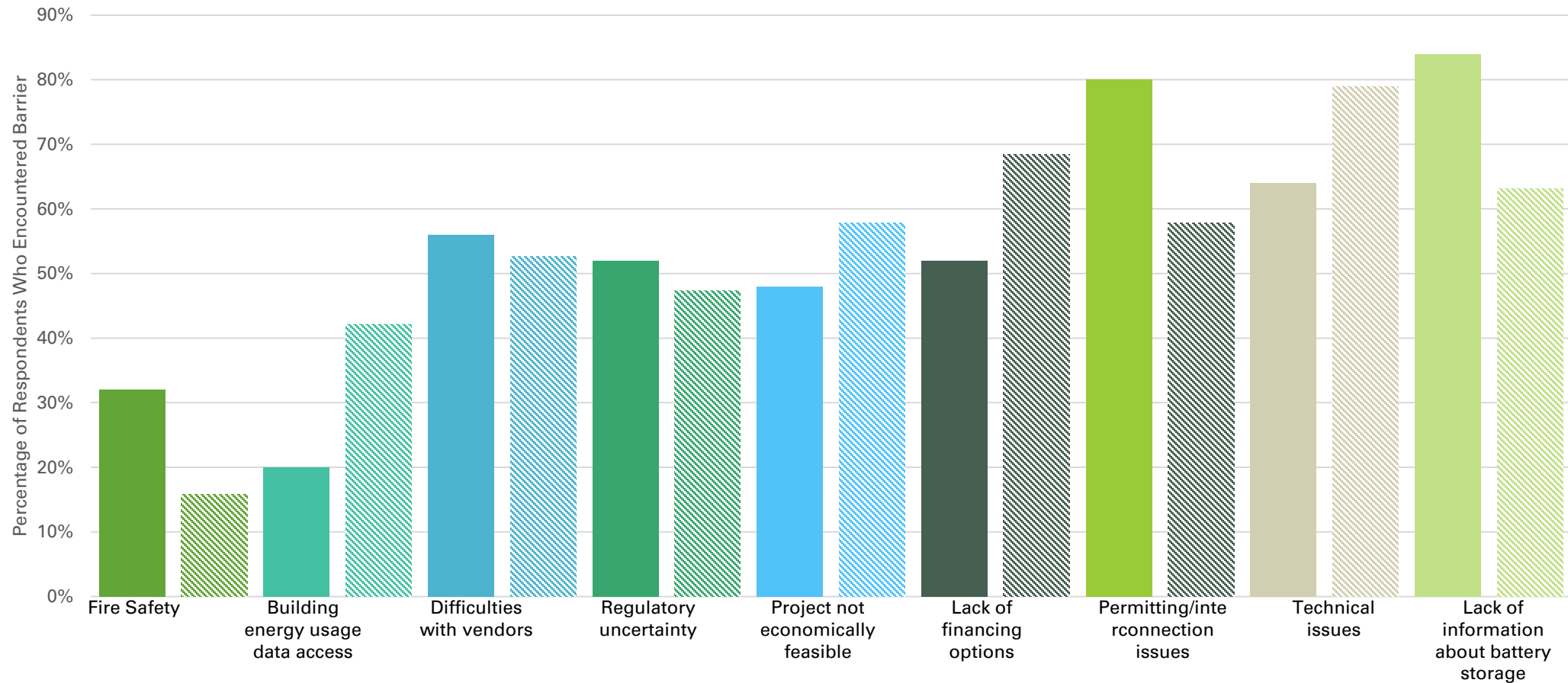
Another notable difference in motivation is the gap between affordable housing developers and community service providers who ranked revenue generation as their top motivation. 40% of affordable housing developers ranked revenue generation as their top motivation, whereas only 11% of community service providers gave revenue generation the same ranking.

Barriers

65% respondents either expected to encounter or had encountered a lack of information about battery storage, the highest percentage of all barriers. Technical issues ranked as a close second.



Barriers: Differences Between Affordable Housing and Community Services



Recommendations

- **Increase Awareness of Battery Storage**
- **Create Opportunities for Capacity Building**
- **Provide Technical Assistance Support**
- **Develop Innovative Incentive and Finance Options**
- **Establish a Monetary Value for Resilience**

Resilient Native Generations



CALIFORNIA
INDIAN
MUSEUM
& CULTURAL
CENTER

California Indian Museum and Cultural Center

The purpose of the California Indian Museum and Cultural Center (CIMCC) is to educate the public about the history, culture and contemporary life of California Indians and to honor their contributions to civilization.



Community, Culture, Connectivity

- Culturally Sustaining Pedagogy
- Youth Centered
- Intergenerational Learning Opportunities
- People not Objects



Wildfires

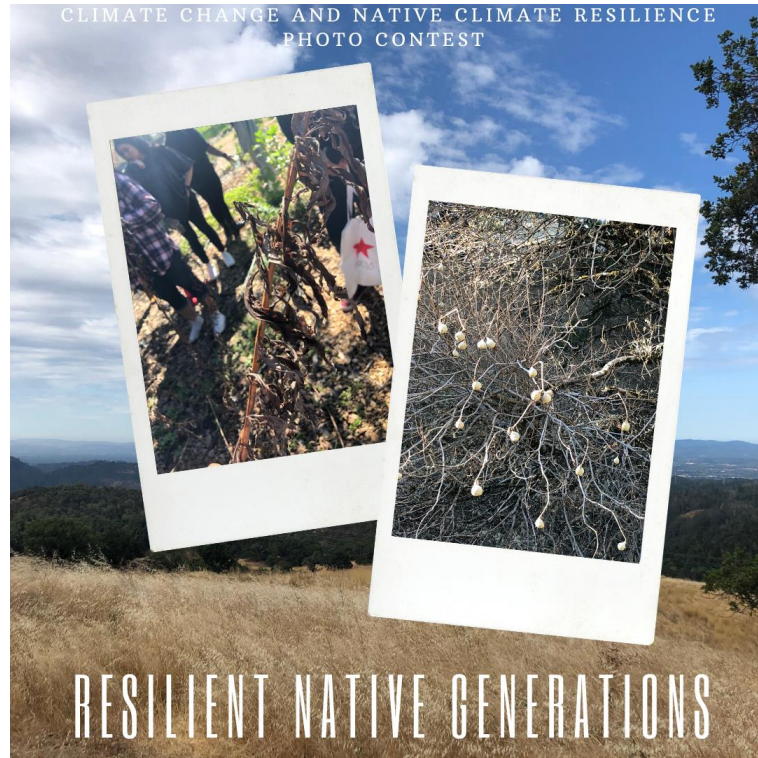


2017 Tubbs Fire, 36,807 acres, 5,643 structures

2017 Nuns Fire, 54,381 acres, 1,355 structures

2020 LNU Lightning Complex Fire, 363,220 acres,
1,491 structures

Renewal, Regrowth and Stewardship of our Ancestral Territory



Climate Vulnerabilities and Native Climate Resilience Tribal Community Survey

CIMCC collected community input on identifying climate vulnerabilities, solutions, and Native advocacy efforts concerning Native climate resilience in our tribal communities throughout Sonoma, Mendocino and Lake Counties. The goal of the project was to ensure that Native voices and perspectives are represented in city and county climate change planning and adaptations.

- **Policy and Infrastructure Impacts:** emergency response, transportation/evacuations and equitable distribution of aid
- **Health Impacts:** Water quality, accessing medical treatments, exposure to fire related toxins
- **Cultural Impacts:** Loss of traditional foods, gathering areas, cultural resources
- **Environmental Impacts:** Wild fires and rise in sea temperatures
- **Social and Economic Impacts:** home displacement and affordable housing, economic losses from power outages
- **Other:** chemicals and pesticides
- **Priority issues:** wildfires, water, loss of traditional foods, loss of cultural resources, health issues and Future Generations



Community Climate Change Stories

I believe the fossil fuel consumption outside of the valley, has a greater effect on what's happen on the Reservation. However, I see a change and greater respect for our "reservation" from the youth. They are learning and understandings that they must be involved and take a leadership role in the preservation of our land. Through them, and their persistence, they may be able guarantee the future of their children and their great grand children.

-Alberta Manuel,(Round Valley Tribal Member)



Healing Hub and Strengths-Based Approaches



CIMCC Resilient Power System

74.25 kW Rooftop Solar Array

30kW/360kW Battery Storage – 72 hours of operation

Clean Air Filtration and Cooling Center

Traditional Food Incubator

Reduced energy costs of \$21,700 annually

Off set 68 metric tons of carbon per year

Provide services during Public Power Safety Shut Offs, Wildfires and Poor Air Quality

Sustaining Values for Traditional Ecological Knowledge and Stewardship





Challenges

Waiting for the SGIP Equity Resilience Program to re-open before installing the battery.

Option 1: The SGIP Equity Resilience Program would give us a \$1,000 kWh rebate towards the battery and totally cover the cost. Currently the program is oversubscribed and awaiting more funding. With our letter of support from the Sonoma County Board of Supervisors, we are well positioned to apply when it reopens in the future.

Option 2: Apply to the SGIP Commercial Facilities Program - \$250 kWh rebate towards the battery. The remaining cost for the battery would have to be absorbed through the PPA and would make it less financially favorable toward savings in our electric costs.

CIMCC is seeking additional funding opportunities for the battery- due to the status of the SGIP and these prospects, we are taking a phased approach.





Lessons Learned

EQUITABLE DISTRIBUTION OF RESOURCES

VISIBILITY, REPRESENTATION AND
COLLABORATION – COMBATting USURPATION OF
AUTHORITY

COMMUNITY LEAD: STEWARDSHIP AND FOOD
SOVEREIGNTY

INCREASING GREEN INFRASTRUCTURE
CAPACITIES WITHIN COMMUNITY AND OUR
ORGANIZATION



**CALIFORNIA
INDIAN
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& CULTURAL
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Contact Information

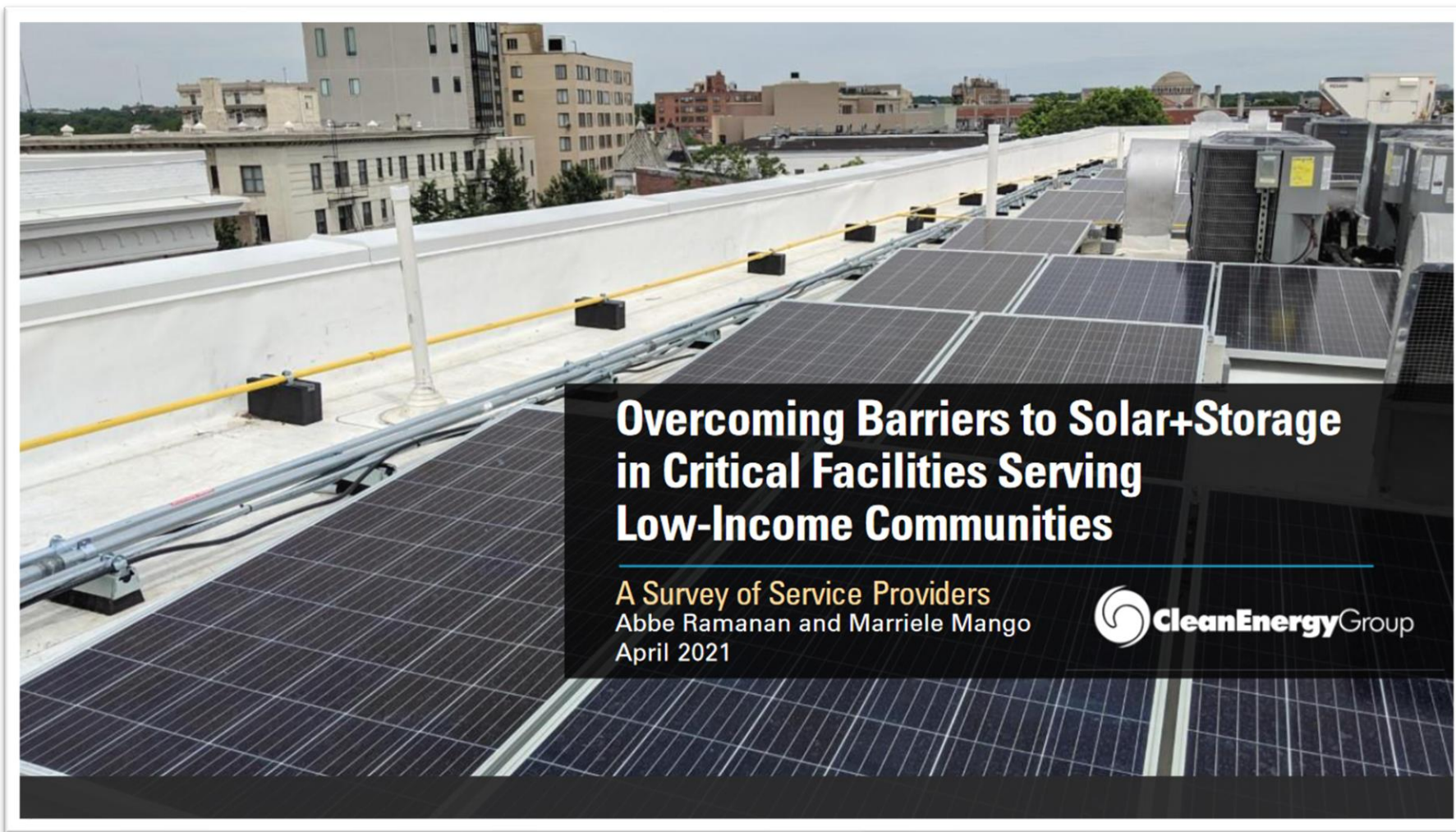
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www.californiamissionsnativehistory.org

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www.cleangroup.org/ceg-resources/resource/overcoming-barriers-to-solar-storage-in-critical-lmi-facilities

Overcoming Barriers to Solar+Storage in Critical Facilities

Serving Low-Income Communities: Q&A



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Seth Mullendore

Vice President,
Clean Energy Group
(moderator)



Thank you for attending our webinar

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Upcoming Webinars

Solar for Manufactured Homes

Thursday, May 13, 1-2pm ET

NREL Solar Permitting Tools: An Introduction to SolarAPP+ and TRACE Tool

Wednesday, May 19, 1-2pm ET

How Low- and Moderate-Income Solar Programs are Evaluated: Trends and Best Practices

Thursday, May 20, 1-2pm ET

Evaluating the Financial Performance of Connecticut's Low- and Moderate-Income Solar Lease Program

Wednesday, May 26, 1-2pm ET

Read more and register at: www.cleangroup.org/webinars