Resilience Hubs: Model Overview and Community Case Studies
WEBINAR LOGISTICS

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Clean Energy Group (CEG) works at the forefront of clean energy innovation to accelerate an equitable and inclusive transition to a resilient, sustainable, clean energy future.

Visit [www.cleanegroup.org](http://www.cleanegroup.org) to learn more about our current initiatives, recent publications, and upcoming events.
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

Boulder: Nonprofit transportation center serving elderly and disabled residents

Puerto Rico: Supporting the installation of solar+storage at multiple community medical clinics

Boston: Multiple housing properties representing 1,000+ units of senior and affordable housing

New Mexico: Added resilience for remote wildfire operations command center

DC: First solar+storage resilience center at affordable housing in DC

Puerto Rico: Supporting the installation of solar+storage at multiple community medical clinics

Clean Energy Group - Resilient Power Project
WEBINAR SPEAKERS

**Kristin Baja**  
Director of Direct Support and Innovation at Urban Sustainability Directors Network

**Chase Engelhardt**  
Policy Analyst and Organizer at Climate Resolve

**Ross Keller**  
Development Officer at Cambridge Community Center

**Marriele Mango**  
Project Director, Clean Energy Group (moderator)
RESILIENCE HUBS

A Holistic Approach to Shifting Power to Communities

Kristin Baja ("Baja")
Director, Direct Support & Innovation
USDN
WHO IS USDN
REJECT THE COOKIE CUTTER
RESILIENCE FOR HUBS

- Social Infrastructure
- Comprehensive
- Community centered
- Focused on shifting power and capacity to communities
- Self determination
- Health & Well-being
Resilience Hubs are community-serving facilities augmented to support residents, coordinate communication, distribute resources and increase adaptive capacity while enhancing quality of life. They provide an opportunity to effectively work at the nexus of community resilience, emergency management, climate mitigation, and social equity while also providing opportunities for communities to become more self-determining, socially connected, and successful before, during, and after disruptions.
## Resilient Services and Programming

The Hub has additional services and programs that build relationships, promote community preparedness, and improve residents’ health and well-being.

Examples:
- Maker Space
- How To Courses (ex. computers)
- Job Trainings and Recruitment
- Health Services

## Resilient Communications

Building relationships and respect within the neighborhood (service area) year-round. Ensuring the ability to communicate within and outside the service area during disruptions.

Examples:
- CERT Training with extra section for proactive outreach
- Radio
- Translated Info

## Resilient Building and Landscape

Strengthening the resilience of the facility to ensure that it meets operational goals in all conditions. Identify opportunities to utilize surrounding landscape for resilience benefits.

Examples:
- Air Filtration
- Water Capture and reused
- Weatherization
- Earthquake-proof
- Urban Gardening

## Resilient Power Systems

Ensuring uninterrupted power to the facility during a hazard while also improving the cost-effectiveness and sustainability of operations in all three resilience modes.

Examples:
- Hybrid Power Solutions include battery-back up and generator
- Solar Panels

## Resilient Operations

Ensuring personnel and processes are in place to operate the facility year-round and also continue operating during disruption and recovery.

Examples:
- Site Leadership
- Accessibility
- Site Retrofits and Assigned Task Management
- Roles in all Modes
# USDN Resilience Modes

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| **Everyday** (non disruption) | All infrastructure and services are available  
No major disruptions are present  
Primary focus is on community services and programming and relationship-building |
| **Disruption**     | Disruption to normal everyday function for any duration.  
Disruptions can include natural disasters, health-disasters (pandemic) and human-influenced disruptions.  
Disruption can vary from minutes to months or years. |
| **Short-term**     | Related to shocks or events that hit relatively quickly |
| **Long-term**      | Related to disruptions that last longer and impact “everyday mode” such as global pandemic or war |
| **Recovery**       | Process of returning to everyday mode.  
The aftermath of the disruption during which the community works to restore normal or better conditions.  
Can last days to years. |
PHASING IN OVER TIME

**Baseline**
What elements do we need for this site to transition from it’s current use to a community ‘Resilience Hub’

**Optional**
What elements does this site need in order to better meet community needs in all resilience modes?

**Ideal**
If we had all the money, capacity and support desired, what would your site have?
Chronic under-investment
A legacy of discriminatory policies and practices have made low-income and communities of color more vulnerable to all types of impacts and disruptions.

Shift Power and Capacity to Communities
Can help reduce stress on systems and infrastructure such as public safety, hospitals and transportation while increasing community adaptive capacity.

Year-Round Holistic Approach
Resilience Hubs can become community cornerstones where neighbors come together to better understand one another, cooperate toward common goals and bolster the health of their shared community. They can also help expedite and improve logistics for support networks and other relief agencies in the event of a disruption by providing established and well-trusted sites where people can access relief materials and resources easily and efficiently.
Resilience Hubs are community-serving facilities augmented to support residents, coordinate communication, distribute resources, and reduce carbon pollution while enhancing quality of life. Hubs provide an opportunity to effectively work at the nexus of community resilience, emergency management, climate change mitigation, and social equity while providing opportunities for communities to become more self-determining, socially connected, and successful before, during, and after disruptions.

Climate change is happening now. Due to a history of marginalization and disinvestment, people of color, immigrants, refugees, and lower-income populations experience increased exposure and sensitivity to climate hazards and a reduced capacity to adapt. Resilience Hubs are intended shift power to neighborhoods and residents, provide opportunities to address root causes of disproportionate exposure and sensitivity to climate impacts, and enhance communities' capacity to adapt.

Resilience Hubs are flexible both in their application and design. Sites are as diverse as the communities they serve. Hubs typically require enhancements and upgrades that improve their capacity to provide service in all three operating conditions (everyday, disruption, and recovery). Upgrades can range in complexity and cost. This website and the USDN Guide to Developing Resilience Hubs provide guidance for developing a Resilience Hub in your community.

http://resilience-hub.org/
USDN RESOURCES

• Introduction to Hubs
• Simple and Easy to Understand
• Power Shifting and basic language as the focus

• Solar & Storage Framework
• Techno-Economic Feasibility Analysis
• Cost of energy
• Hybrid Solution

• Step-by-Step Guidance for Hub Development
• Steps align with Analysis Tool

• Project & Site Team
• Program Goals
• Services & Specs
• Site Survey
• Security & Kitchen Assessments
USDN HUBS IN PROGRESS
QUESTIONS?
RESILIENCE HUBS
Creating Equity and Empowering Resilient Communities
CENTERING PEOPLE

Vs.
PARTNERSHIPS AND ORGANIZING

Local

- promesa BOYLE HEIGHTS
- Eastside LEADS
- INCLUSIVE ACTION FOR THE CITY
- COMMUNITY POWER COLLECTIVE
- USGBC LA
- American Red Cross Los Angeles Region
- LA DWP
- City of LA Chief Resilience Office

Statewide

- USDN urban sustainability directors network
- APEN ASIAN PACIFIC ENVIRONMENTAL NETWORK
- CALIFORNIA ENVIRONMENTAL JUSTICE ALLIANCE
COMMUNITY ENGAGEMENT
COMMUNITY CO-DESIGN

How should this resilience hub support the community?
Cómo debería apoyar la comunidad el hub?

How does the BHAC contribute to community resilience today?
Cómo contribuye BHAC a la resiliencia de la comunidad hoy en día?

What do we want to integrate into the hub to improve community resilience?
Qué queremos integrar en el hub para mejorar la resiliencia de la comunidad?

CLIMATE RESOLVE | RESILIENCE HUBS
COMMUNITY SURVEY

What have you changed in your lifestyle to adapt to extreme heat specifically? (select all that apply)

- Stay inside and use air conditioning
- Use a fan
- Find shade to rest in and stay hydrated when I’m outside
- Wear light colored, loose fitting clothing
- Go to a place with air conditioning
- Bring an umbrella with me when I go out
- Planted trees to provide shade
- Retrofitted my home (insulation, dual pane windows)
- Other

Notable Findings:
- Outdoor cooling (shade/parks) are an important resource to almost 60% of respondents
- 42% of respondents have jobs that require them to work outside, an important consideration when we think about heat adaptation.

Does your job require you to work outside?

- Yes
- No
Top Climate Concerns Rankings

- Extreme heat
- Air Quality
- Wildfires
- Drought
- Sea Level Rise
- Extreme precipitation/flooding

Legend:
- 1
- 2
- 3
- 4
- 5
- 6
Assets and Needs

**Assets**
- 61% of respondents report having access to **air conditioning** (physical and financial).
- 66% of respondents report having access to **72 hours of stored food**.
- 58% of respondents report having **an emergency plan**.
- 52% of respondents reported having **a place** they could go outside of their neighborhood in the event of a disaster.

**Needs**
- 52% of respondents reported **not having access to an air purifier** or filter.
- 45% of respondents reported knowing an **older adult that lives alone**. The need for senior care was emphasized in various open-ended responses.
- 34% of respondents reported that they or a family member are **medically reliant on electricity**.
- 25% of respondents reported living with someone who has **limited mobility**.
- 28% of respondents reported that someone in their household would be **afraid to call for help** in an emergency.
Assets and Needs (Continued)

After a disaster or other disruption I would need (check all that apply):

- Food Support
- Economic Support
- A Place to Stay if my Home Became Uninhabitable
- Mental Health Support
- Childcare
- Help with My Business
- Other

Notable Findings:
- Many respondents expressed the need for senior care in open-ended responses
Communications

Where do you get alerts about emergency information?

Notable Findings:
- 84% of respondents report receiving emergency alerts through their preferred method of communication. Open-ended responses showed a strong preference for texts or phone calls.
- 90% of respondents report receiving alerts in their language of choice. Interestingly, 95% of Spanish speaking respondents reported receiving alerts in Spanish, whereas several English respondents reported that their monolingual Spanish speaking family were unable to access alerts in Spanish.
- Other Languages requested were Vietnamese, Zapotec, Tagalog, and Chinese.
NEXT STEPS

Offsets 9.3 metric tons of Carbon Dioxide
Cambridge Community Center

Out-of-School Time Program

- Social-Emotional Development
- Full-Time, On Site Social Worker
- Building Relationships
- Family Engagement
The Mental Health ACCESS Program
(Advancement of Culturally Competent Education to Stop Stigma)
Discovering a Resilience Hub

- 2019 Resilience Hub Business Plan and Resilience Audit
- 2021: Meeting USDN
- Finding Funding
Resilient Facility

- Commercial Grade Kitchen
- Upgraded HVAC
- ADA Accessibility
- Pre-K Classroom
Resilient Power

- American Microgrid Solutions
- Solar & Battery Power
- Climable
- Cambridge Microgrid
Resilient Minds
Reimagining Mental Health Care
Thank you for attending our webinar

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Upcoming Webinars

Mobile Solar+Storage for Emergency Management
Tuesday, May 10, 12-1:30pm ET

Building Community Resilience with Green Mountain Power
Wednesday, May 18, 3-4pm ET

Quantifying the Health Benefits of Clean Energy Policies with EPA’s AVERT and COBRA Tools
Thursday, May 19, 1-2:30pm ET

Exploring Peaker Power Plant Inequities with Clean Energy Group’s New Mapping Tool
Thursday, June 23, 3-4pm ET

Read more and register at www.cleanegroup.org/webinars