



Mobile Solar+Storage: Emergency Response in New Orleans with the First Beehive Microgrid



August 18, 2026

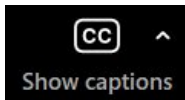
Webinar Logistics

All attendees are in “**listen only**” mode – your webcam and microphone are disabled.
The Chat function is also disabled.

Submit questions and comments via the Q&A panel



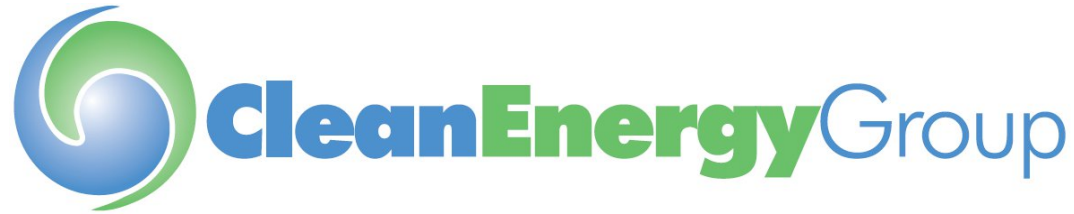
Automated **captions** are available



Speaker bios will be made available in the Chat

This webinar is being recorded. We will email you a webinar recording within 48 hours. This webinar will be posted on CEG’s website at www.cleanegroup.org/webinars

We encourage you to provide feedback for us via post-webinar survey or email.



Affordable, reliable, clean energy for all.



**Climate Resilience and
Community Health**



**Distributed Energy Access
and Equity**



**Energy Storage and Flexible
Demand**



Fossil Fuel Replacement

Resilient Power Project

Building the foundation for energy resilient communities.

USDN | urban sustainability
directors network

footprintproject.org™

AMERICAN MICROGRID
SOLUTIONS



ELEVATE

GEMINI
ENERGY
SOLUTIONS

Rooftop solar installation in Dorchester, MA. Credit: Resonant Energy

Technical Assistance Fund

Providing technical support to build local resilience.



footprintproject⁶org™



AMERICAN MICROGRID
SOLUTIONS

Clean
Coalition

USDN | urban sustainability
directors network



Solar installation in Puerto Rico. Credit: Solar Responders

July 2026

The Beehive Microgrid Model: Mobile Solar+Storage in New Orleans

Olivia Tym, Anna Adamsson, Marriele Mango

Clean Energy Group

Available at:

www.cleanegroup.org/publication/beehive-microgrid-model

www.cleanegroup.org

RESILIENT POWER PROJECT CASE STUDY

The Beehive Microgrid Model: Mobile Solar+Storage in New Orleans

Olivia Tym, Anna Adamsson and Marriele Mango, Clean Energy Group
July 2026



Webinar Speakers

Mobile Solar+Storage: Emergency Response in New Orleans with the First Beehive Microgrid



Nate Heegaard

Associate Director of
Technology
Footprint Project



Jeffrey Cantin

Owner/President
Solar Alternatives



Todd Reynolds

Executive Director
Groundwork New Orleans



Marriele Mango

Project Director
Clean Energy Group
(Moderator)



Upcoming Webinars

Data Centers and Energy Usage 101: Impacts on the Electric Grid
(September 1)

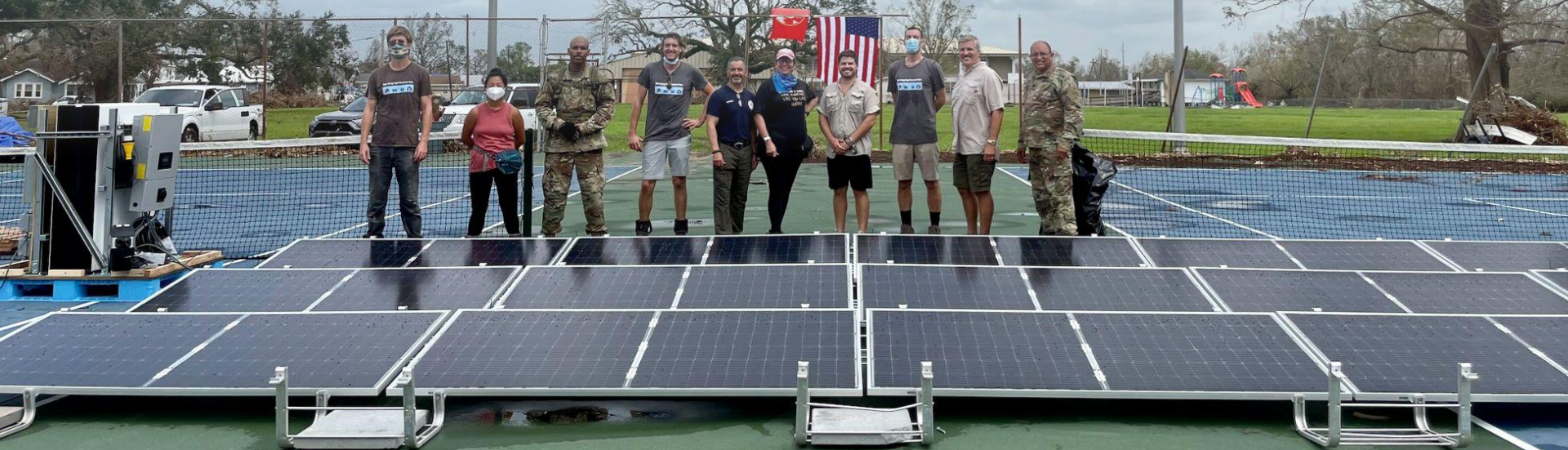
An Introduction to Virtual Power Plants (VPPs)
(September 29)

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

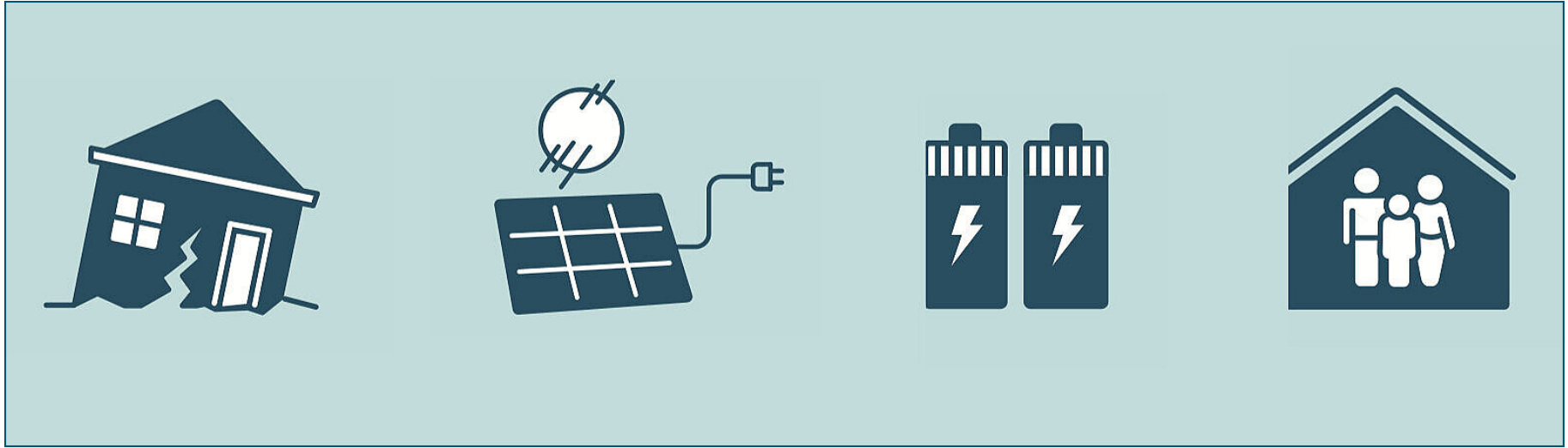


www.cleanegroup.org | info@cleanegroup.org

footprintproject.org™



Our mission is to
build back greener after disasters



by mobilizing cleaner energy infrastructure
to communities in crisis.

Beehive

e
#1

Preliminary
Layout

Site Plan

Hive: 6601 Franklin Ave, New Orleans, LA, 70122



Bee during Blue Skies



Bee during Grey Skies



Beehive e #1

Building
the
The 1st
Beel



Bees

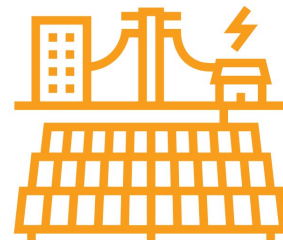
Mobile, renewable technologies that serve as alternatives to fossil-fuel-dependent equipment.



Hives

Stationary microgrid sites where Bees can securely charge between deployments.

Stretch Goal - Hives allow Bees to both charge *and* discharge power to support broader grid energy resilience goals.



BEEHIVE

TECHNOLOGIES

Portable



Inverter: 1-2 kW
Battery: 2-5 kWh
Solar: Up to 2 kW

Towable



Inverter: 2-20 kW
Battery: 10-100 kWh
Solar: 2-10 kW

Palletized



Inverter: 10-50 kW
Battery: 10-100 kWh
Solar: 10+ kW

Containerized



Inverter: 50+ kW
Battery: 100+ kWh
Solar: 10+ kW



Water
Generation +
Filtration



Cold
Storage



Battery
Libraries

How Beehives are Developing

footprintproject.org

PO Box #19389, New Orleans, LA 70179

Beehive Microgrid™ Request for Proposals

Mobile Solar + Battery Fleet for Disaster Response

Issuing Organization: Footprint Project

Funding Source: NC Department of Environmental Quality (DEQ) / U.S. Department of Energy (DOE) – Pass-Through Funds

RFP Issue Date: Friday, February 13, 2026

Proposal Due Date: Friday, March 13, 2026

Contact: rfp@footprintproject.org

1. Project Overview

Footprint Project is soliciting quotes from qualified vendors to design and manufacture three (3) specific mobile microgrid assets ("Bees") that together will be used to provide regional resiliency support in Western North Carolina.

These assets will be staged in North Carolina and deployed to support disaster response, emergency operations, and community resilience activities during power outages and other climate-related disruptions.

This procurement is funded through a State of North Carolina Department of Environmental Quality (DEQ) / U.S. Department of Energy (DOE) pass-through award and is subject to all applicable state and federal procurement requirements.

The three required products to be manufactured under this RFQ are:

- One (1) Power Bee
- One (1) Water Bee
- One (1) Cooler Bee

Specifications for these Bees can be found in Section 4 Scope of Work.

Each Bee must be a self-contained, mobile asset built on a standardized enclosed trailer platform, as described further below. Respondents may bid on one, multiple, or all Bee types, the Hive and/or associated services. Multiple awards may be made.

footprintproject.org

PO Box #19389, New Orleans, LA 70179

Beehive Microgrid™ Request for Proposals

Transportable Microgrid Hub for Disaster Response

Issuing Organization: Footprint Project

Funding Source: NC Department of Environmental Quality (DEQ) / U.S. Department of Energy (DOE) Funds

RFP Issue Date: Wednesday, April 8th, 2026

Proposal Due Date: Tuesday, May 5th, 2026

Contact: rfp@footprintproject.org

1. Project Overview

Footprint Project is soliciting proposals from qualified vendors to design and manufacture one (1) mobile, deployable self-sustaining command center ("Hive") that will be used to provide regional resiliency support in Western North Carolina. The Hive will support a fleet of mobile disaster response assets ("Bees") that address energy, water, and cooling needs. Together these assets are considered the "Beehive", as described in Section 3.

The major functions or components of the Hive are:

- A microgrid for central operations consisting of:
 - A large photovoltaic array
 - A large BESS
 - Associated power electronics
- Storage and transportation of a forklift and other shipping and material handling equipment
- A shaded, covered work area
- Enclosed, lockable storage space

This asset will be staged in North Carolina and deployed to support disaster response, emergency operations, and community resilience activities during power outages and other



Demo @ Manna
Food Bank,
Asheville, NC



34

- LAND SKY
- DEQ
- NC SUSTAINABLE
- Appalachian Voices
- Invest APPALACHA
- Learn More & Donate Now
- footprintproject.org
- @footprintprjct

pollinating power, one bee at a time

beehive microgrid BY FOOTPRINT PROJECT

ICECO

Demo @ Manna Food Bank, Asheville, NC

6/12/26

For NC Beehive sites, FP and partners developed a rubric based on:

- **DEPTH impact score**
If power at this site goes down, how deeply does that impact the community it serves?
Scale of 1-5
- **BREADTH impact score**
Impact of the site for the community within their region
(Breadth, degree of redundancy)
Scale of 1-5

Other tools were used for guidance:

- FEMA's National Risk Index Score (NRIS):
- CDC's Social Vulnerability Index (SVI)

Selection n Rubric

**Partner Resilient
Sites for
Permanent
Installations**

Thank
you!



GROUNDWORK GENTILLY

The Beehive Resiliency Project

Mobile Solar + Battery Storage for Community Resilience
6601 Franklin Avenue, New Orleans, LA

Solar Alternatives | Design • Engineering • Construction • O&M



Project Overview

A partnership with Groundwork NOLA and UNO to deliver a resilient, community-facing power hub — rooftop solar and battery storage that keeps critical services running during prolonged outages, with hands-on educational value during installation.

10

kW DC

PV System
Expandable to 38kW

54

kWh

Battery Storage
(BESS)

10

outlets

120V Critical-Power
Panel

5

years

Workmanship
Warranty

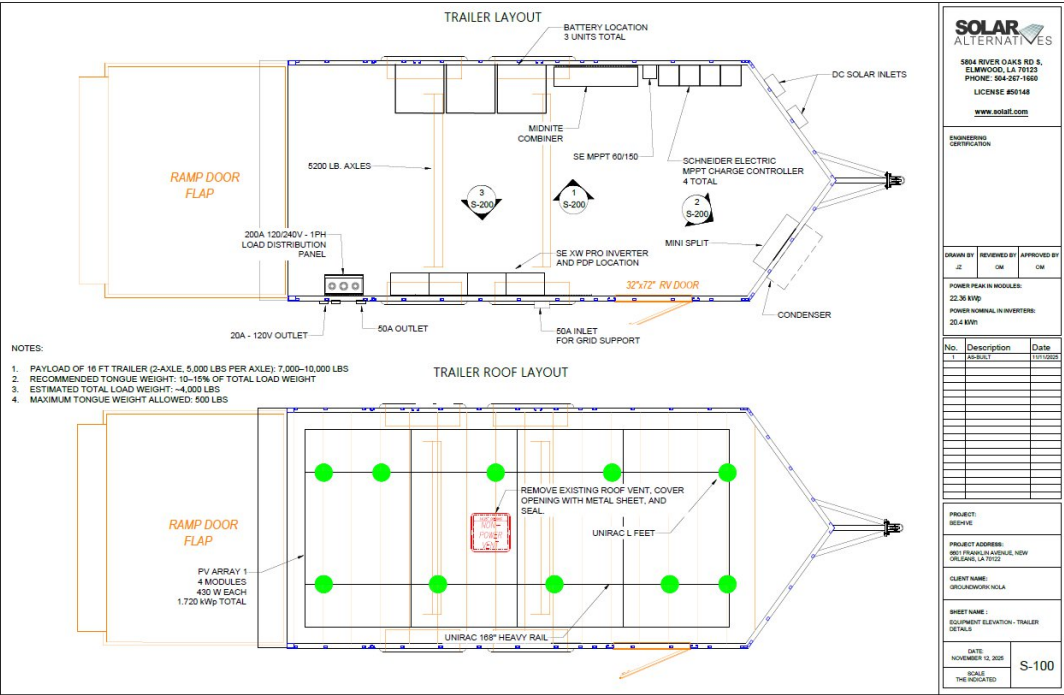
Scope of Responsibility

- Design consulting, engineering & permitting
- Procurement & construction
- 5 years operations & maintenance
- Joint operations monitoring with Groundwork

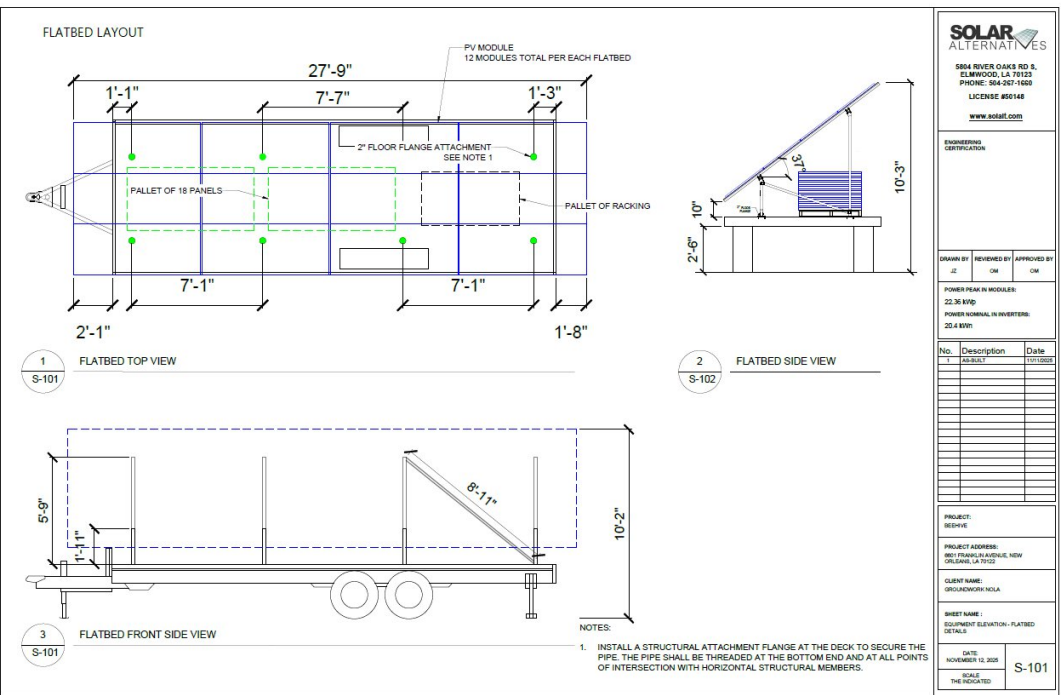


Design & Construction Plan

Engineered mobile storage unit and mobile solar PV array



Beehive Mobile Storage and Power Unit



Beehive Mobile Solar Charging Unit

Power in the Field

Mobile flatbed PV array and Mobile battery bank staged and commissioned

MPPT60 1

Online

Operating Mode	Operating
Charger Status	Bulk
Charge Mode Status	Primary
DC Input Association (PV)	Solar Array 1
PV Power	293 W
PV Voltage	79.11 V
Battery Association	House Battery Bank 1
DC Output Power	289 W
DC Output Voltage	52.71 V

XW MPPT80 2

Online

Operating Mode	Operating
Charger Status	Bulk
Charge Mode Status	Secondary
DC Input Association (PV)	Solar Array 1
PV Power	0 W
PV Voltage	6.76 V
Battery Association	House Battery Bank 1
DC Output Power	13 W
DC Output Voltage	52.58 V

XW MPPT80 3

Online

Operating Mode	Operating
Charger Status	Bulk
Charge Mode Status	Secondary
DC Input Association (PV)	Solar Array 1
PV Power	0 W
PV Voltage	8.09 V
Battery Association	House Battery Bank 1
DC Output Power	31 W
DC Output Voltage	52.65 V

Solar Alternatives monitoring and remote diagnostics



Fortress Power eVault Max battery bank (BESS) installed inside the trailer

3 batteries • 1 flatbed • 1 cargo trailer configuration

Power When It's Needed Most

The “Bees” critical-power panel provides ready outlet access for post-disaster services



Building the array

Ongoing Commitment

- Regular operations monitoring, jointly by Groundwork & Solar Alternatives
- Routine panel cleaning & maintenance by Groundwork — batteries require little upkeep, no moving parts
- 10–25 year manufacturer warranties on system components
- 5-year Solar Alternatives workmanship warranty, covering labor & minor component replacement



Solar Resilience Programming

Clean energy, stormwater resilience, and workforce training for New Orleans neighborhoods.



Mobile solar + storage for outages



Mobile solar + battery systems can deploy clean backup power where the grid is down: charging phones, powering Wi-Fi, running small equipment, or supporting volunteers.

The Beehive Microgrid model pairs a stationary “Hive” with mobile “Bee” units that move across the city during outages.

Blue-sky use builds familiarity; gray-sky use supports response.

Solar resilience is stronger when paired with land + water



Shade structures, trees, native plantings, bioswales, and solar benches work together to reduce heat, manage water, and keep public spaces active.

This approach turns underused spaces into neighborhood assets that serve both climate adaptation and community life.

One site can support cooling, stormwater, learning, and emergency power.

Why solar resilience matters



New Orleans faces overlapping climate risks: power outages, heat, flooding, and limited access to neighborhood resources during emergencies.

Groundwork connects resilient power with everyday public infrastructure: shaded gathering spaces, charging, lighting, stormwater features, and youth training.

The result is visible, local resilience people can use before, during, and after a disaster.

Resilience hubs: useful every day, critical in emergencies



Everyday value: shade, fans, seating, lighting, phone charging, community programming, and outdoor learning.

Emergency value: a known neighborhood location with power, visibility, communications support, and a trusted local steward.

Design for routine use so residents know where to go when the lights go out.

Program at a glance

1

Resilient power

Solar arrays, batteries, and charging access.

2

Community hubs

Benches, canopies, lighting, and cooling shade.

3

Green infrastructure

Rain gardens, bioswales, trees, and stormwater features.

4

Workforce pathway

Hands-on training in solar, carpentry, and maintenance.



The program pairs buildable infrastructure with public education and emergency preparedness.

Workforce development is the delivery system



Participants gain practical experience in:

- Solar installation basics
- Carpentry and site construction
- Electrical safety awareness
- Maintenance and troubleshooting
- Public engagement and stewardship

A resilience asset becomes a training site; a training site becomes community infrastructure.

What the program delivers



Emergency readiness

Distributed solar + storage creates local points of power when outages affect homes and blocks.



Green jobs pathway

Construction, solar, maintenance, and stewardship skills connect resilience investments to local opportunity.



Neighborhood assets

Public spaces become safer, cooler, better lit, and more useful in daily life.

Resilience is not a single device; it is a local system of power, place, people, and preparedness.

Solar-powered ECO benches and Min Hubs



Designed as everyday public amenities, solar benches and canopies provide charging, lighting, shade, and an accessible gathering point.

They also demonstrate how clean energy and green infrastructure can work together: power, stormwater capture, and climate education in one place.

**Built with local hands.
Maintained with local
capacity.**

Next steps



Expand the network of solar resilience assets in flood- and heat-vulnerable neighborhoods.

Support training cohorts that build, install, monitor, and maintain systems.

Fund batteries, panels, weather stations, shade structures, and site improvements.

Activate sites through outreach, drills, community events, and emergency-response partnerships.

Let's build a resilient, community-powered New Orleans.