



Solar and Battery Storage to Support Community Preparedness and Disaster Response

January 15, 2025

www.cleanegroup.org

Webinar Logistics

We are using the newly updated version of GoToWebinar!

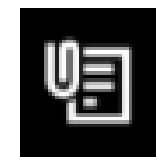
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All attendees are in “listen only” mode – your webcam and microphone are disabled.

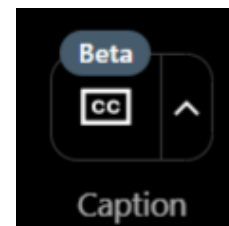
Submit questions and comments via the Questions panel



Speaker bios available in the “Materials” section



Automated captions are available



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.cleangroup.org/webinars



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.



Solar installation in Puerto Rico. Credit: Solar Responders



CleanEnergyGroup

TECHNICAL ASSISTANCE FUND

Providing Support to Build Local Resilience



Webinar Speakers

Solar and Battery Storage to Support Community Preparedness and Disaster Response



Marriele Mango

*Project Manager
Clean Energy Group
(Moderator)*



Joshua Cox

*CEO
Community Power South*



Will Heegaard

*Operations Director
Footprint Project*



Thank You



Marriele Mango

Project Director

Clean Energy Group

Marriele@cleanegroup.org

Upcoming Webinar

State of the U.S. Energy Storage Industry: 2024 in Review and a Look Ahead to 2025 (2/5)

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



www.cleangroup.org | info@cleangroup.org

AN INTRODUCTION TO



community
lighthouse

ESTAP WEBINAR

January 7, 2025



NEIGHBORHOOD RESILIENCE CENTERS
WITH SOLAR + STORAGE

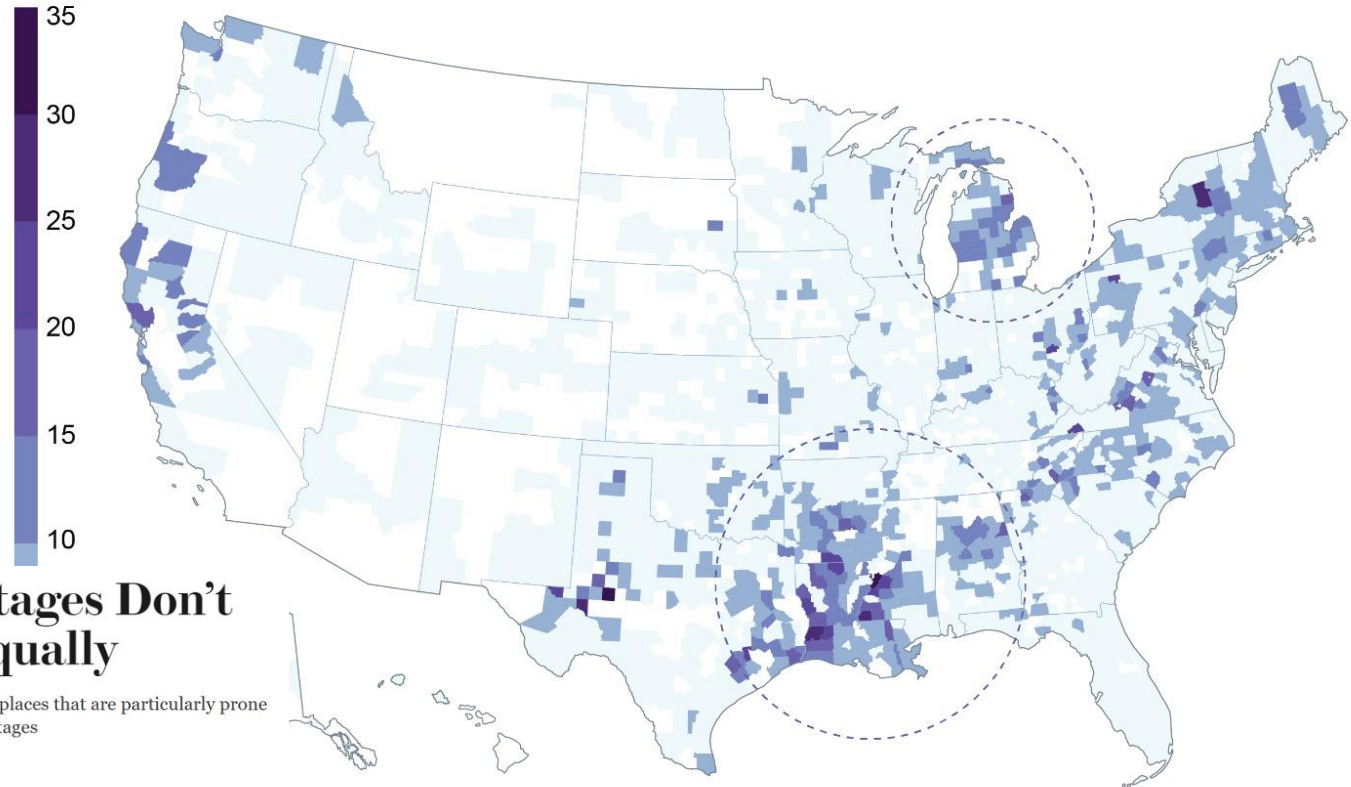
TOGETHER
LOUISIANA

TOGETHER
NEW ORLEANS

**Power outages have
become the leading cause
of disaster-related death in
Louisiana & the Gulf Coast.**

LA, TX, MS: ground zero for outage risk

Number of Power Outages Lasting More Than Eight Hours, by County (2018–2021)

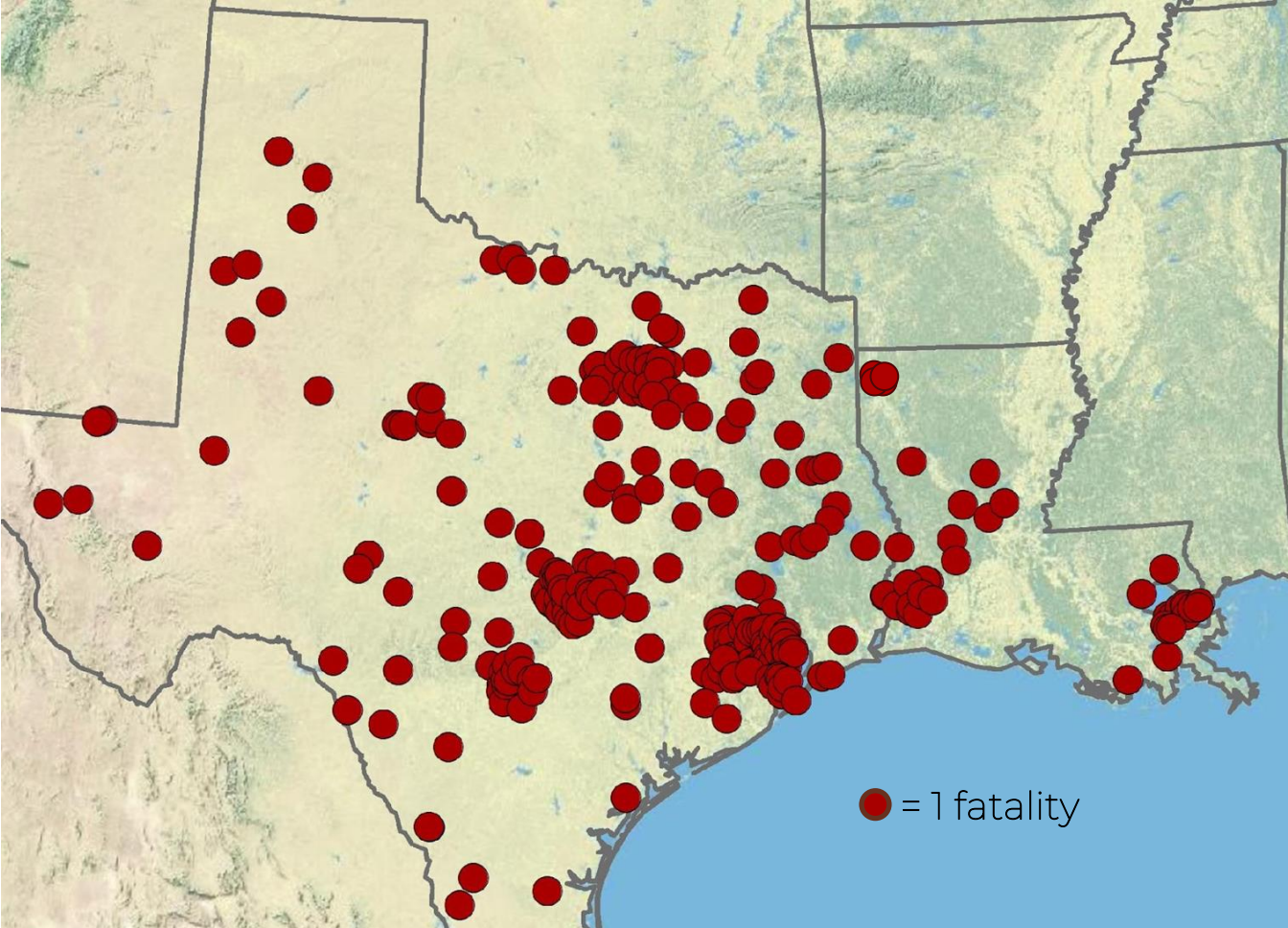


Source:

**SCIENTIFIC
AMERICAN®**

Increasing Power Outages Don't Hit Everyone Equally

Some of the most vulnerable communities in the U.S. live in places that are particularly prone to frequent, prolonged power outages



Power outages caused ...

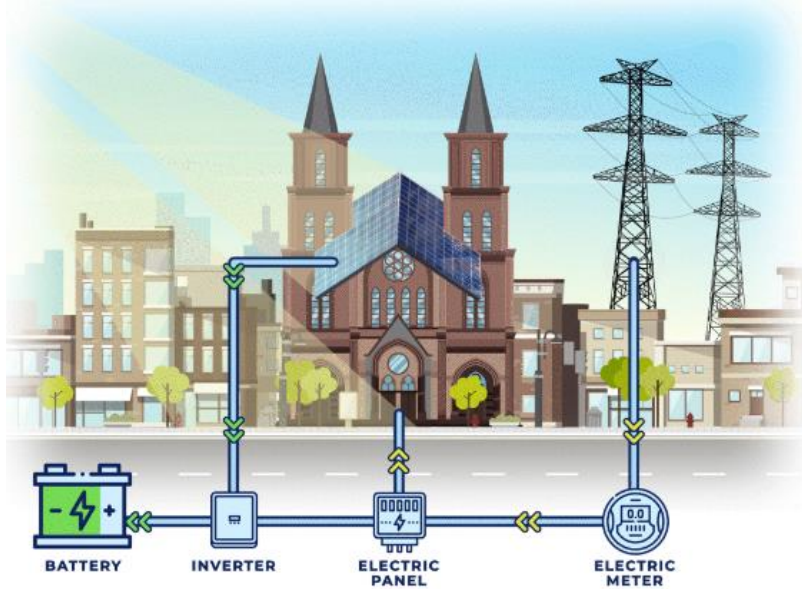
19 of the 31 deaths in Hurricane Laura (August 2020)

About 700 deaths in Texas in Winter Storm Uri (February 2021)

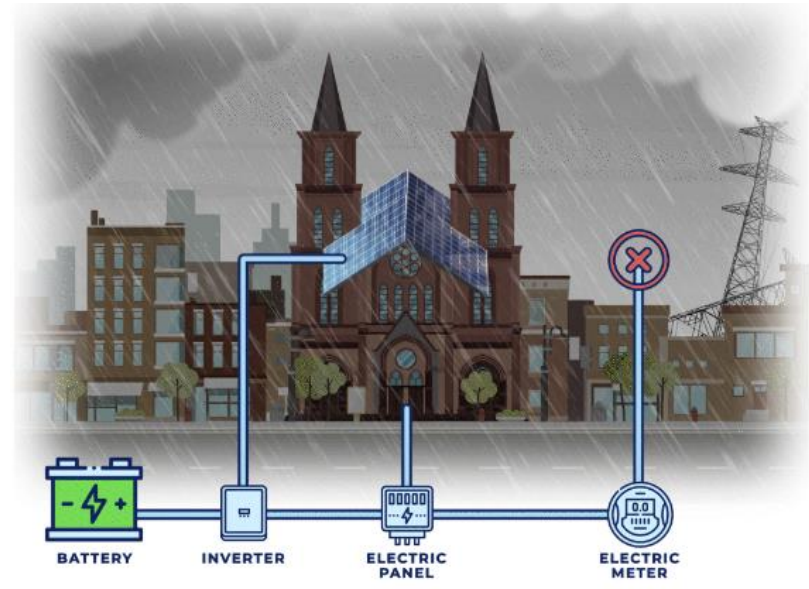
30 of the 36 deaths in Hurricane Ida (August 2021)

At least 2 deaths in North LA outage (June 2023)

HOW IT WORKS



In normal times, the solar array helps defray electricity costs.



If the grid goes down, battery storage helps restore power quickly at community lighthouses.

WHAT LIGHTHOUSE'S DO

Food &
water



Cooling &
heating centers



Charging
stations/
internet



Portable battery
exchange



+ regular blue-sky outreach

OUR VISION / RESILIENCE METRIC

No resident lives further than 15 minutes from a solar + storage resilience hub



GRASSROOTS LEADERSHIP. HIGH-UP SUPPORT.

Technical assistance from Energy Storage for Social Equity program (DOE & PNNL)

Raised \$12 million for pilot phase

Local Government - (\$3.5 M)		29%
Congressional allocation (via DOE) -	32%	(\$3.8 M)
Philanthropic - 13%		(\$1.6 M)
National labs (Sandia) -		7%
Financing - 18%		(\$0.8 M)

IRA is a game-changer for non-profits

Avg Elective Pay Rebate: 44%



Ribbon cutting at first Community Lighthouse with TNO leaders & New Orleans City leadership (*March 2023*)



Ribbon cutting at seventh Community Lighthouse with Together LA leaders & US Energy Secretary Jennifer Granholm
(November 2023)



community
lighthouse

Bethlehem Lutheran Church
New Orleans

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Broadmoor Community Church
New Orleans

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CrescentCare Health Center
New Orleans

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Community Church Unitarian Universalist
New Orleans (West End)

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Trinity Community Center
New Orleans (Hollygrove)

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Household of Faith Church
New Orleans (West Lake Forest)

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First Grace UMC
New Orleans

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Cornerstone UMC
New Orleans

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Corpus Christi-Epiphany Catholic Church
New Orleans

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community
lighthouse

City of Love Church
New Orleans

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community
lighthouse

Christian Unity Baptist Church
New Orleans

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167.4 kWdc solar array

440 kWh battery storage

250,000 lb reduction in CO2 per year



New Wine Christian Fellowship
LaPlace

TOGETHER
LOUISIANA

CURRENT NEW ORLEANS SITES



System Specs

🏠 15

Community Lighthouses

🔋 2,094

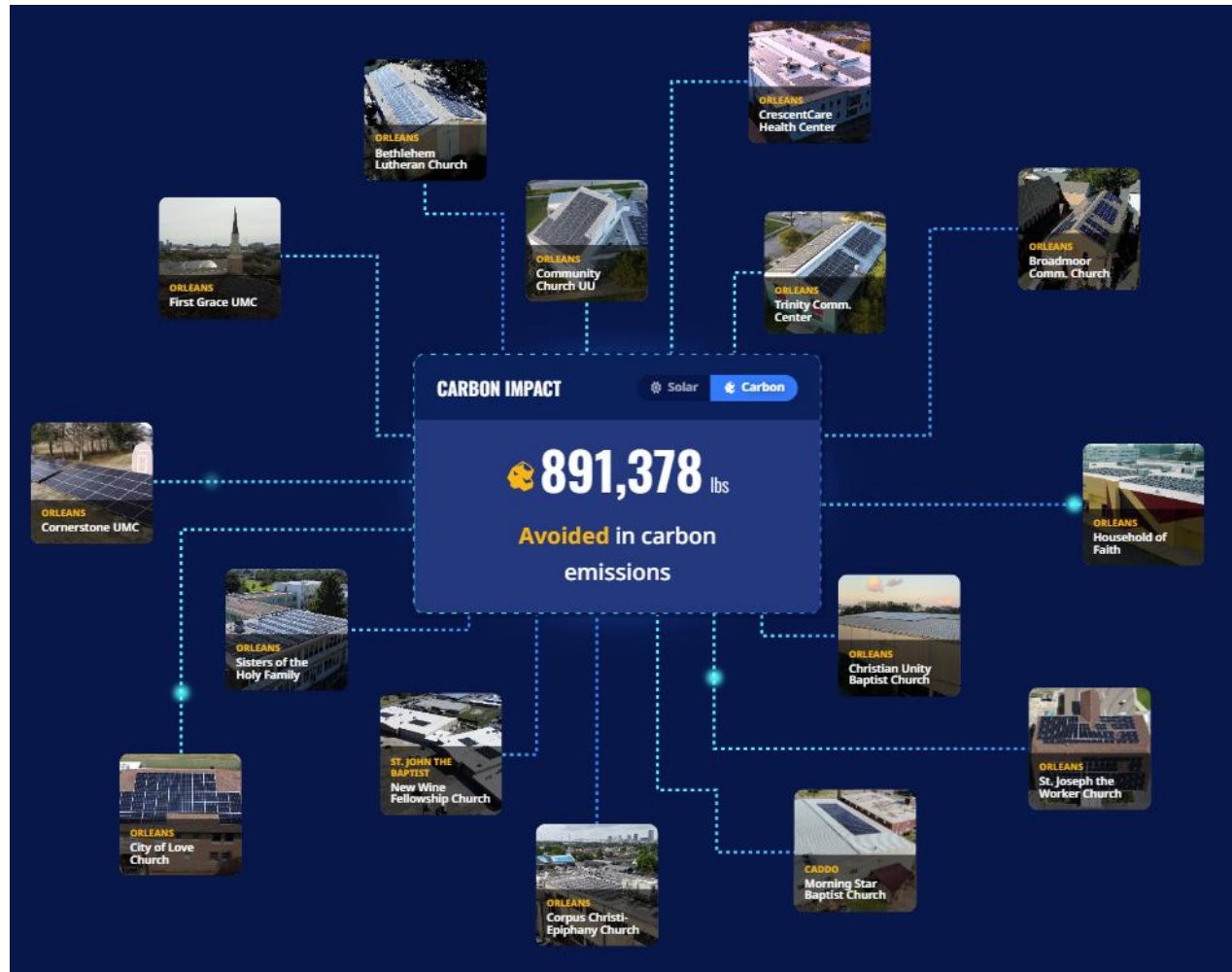
PV solar panels

⚙️ 1,002

kilowatts DC solar

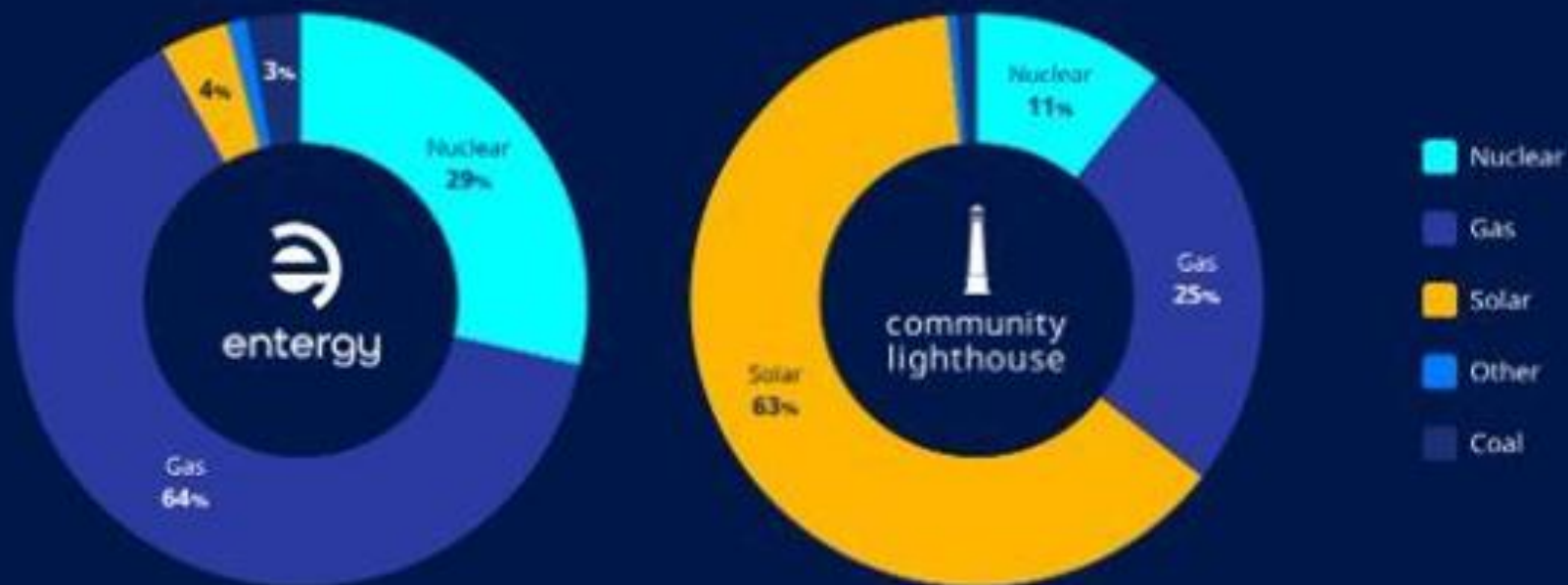
🔋 1,656

kilowatt-hours battery storage



☀️ Powered by the Sun

Community Lighthouses slash reliance on gas and coal. **16 times more** of their energy comes from solar.



Source: Entergy New Orleans IRP 2022 vs Community Lighthouse average

Partnership with IBEW



**Prevailing wages,
benefits, retirement**

**Apprenticeships on
every job**

**Pre-apprenticeship
on-the-job training**

Won changes to Community Solar rules, creating first viable community solar program in the Deep South

— SINCE 1837 —

The Times-Picayune

THE NEW ORLEANS ADVOCATE

NOLA.COM | MONDAY, AUGUST 5, 2024 \$2.00

Solar program aims to lower bills

9 N.O. developers are awaiting Entergy approval

BY JOSIE ABUGOV
Staff writer

A community solar program for New Orleans intended to lower electricity bills for low- and moderate-income residents has been stalled for years, but it is now showing signs of progress after changes that have spurred interest among a full slate of developers.

The program, the first of its kind

in the Deep South, garnered zero interest from developers from 2018 to 2023. But rate changes passed by the City Council last fall have shifted the outlook.

Such programs allow homeowners, renters, businesses and non-profits to tap into the advantages of solar, even if they can't afford to install panels on their property. Developers build an off-site solar array that feeds into the city grid.

Anyone can then subscribe to own a share of the project in exchange for credit on their energy bill. Community solar exists in 43 states, but not Louisiana.

More than half of those states have passed legislation that supports or requires it, and 17 have passed legislation specifically for low-income community solar, according to the Department of Entergy.

New Orleans may be next. A queue of nine developers has submitted applications to the city and are now awaiting Entergy approval.

All of the developers fall under the category requiring them to set aside at least 30% of subscriptions for low- and moderate-income customers. The program is meant to alleviate the high bills that have burdened New Orleanians in recent years, amid unprecedented heat waves and grid restoration after hurricanes.

Broderick Bagert, an organizer with the coalition Together New Orleans that backed the rule changes by the City Council, said that the program his advocacy group is developing will address bills for low-income households by at least 20%. A city staffer put the broader figure for the initiative at between 10 and 25%.

"We're feeling excited about it," Bagert said. "We're focused on having community solar succeed."

➔ See **SOLAR**, page 2B



Holy Family Sisters plan 22-acre community solar project in Louisiana



Broderick Bagert, a Together New Orleans organizer, listens to Sr. Alicia Costa, superior of the Sisters of the Holy Family, with the sisters' land designated for the solar field in the background. In the far background is St. Mary's Academy. (Kevin Fitzpatrick)



BY KEVIN FITZPATRICK

[View Author Profile](#)

New Orleans — June 12, 2024



East of the French Quarter or the Central Business District of New Orleans, drivers on the I-10 encounter a steep bridge crossing the Industrial Canal that connects Lake Pontchartrain to the Mississippi River. I-10 veers left at the bottom of the bridge, then a slight right leads to Chef Menteur ("Big Liar") Highway, a road best known for pill mills, staged accidents with semitrailers, human trafficking and sex work.

Started development
on 22-acre / 5MW
Community Solar farm
with Sisters of the Holy
Family

Won docket allocating \$32M to expand microgrids & form VPP

New Orleans approves 'virtual power plant' plan

Resilience program to support electricity supply via batteries

BY JOSIE ABUGOV
Staff writer

The New Orleans City Council greenlit a plan on Thursday to create a "virtual power plant" to support the city's electricity supply — and the resilience program is generating buzz from architects, community activists

and Tesla executives alike.

The council-approved plan, led by advocacy groups Together New Orleans and the Alliance for Affordable Energy, earmarks \$32 million in Entergy settlement funds for batteries that would be installed in locations across town, then networked into a system to feed power to the grid.

The plan is part of a growing movement to transform how people get their energy, aiming to make communities less reliant on traditional fossil fuel-powered plants in favor of environmen-

tally cleaner and more reliable options in the face of worsening storms and intensifying heat.

"The energy system we've relied on for the past century — it's not resilient," said Logan Burke, the executive director of the Alliance for Affordable Energy. "We know this because even very small storms are taking out our access to power and they lead to health impacts and economic loss."

The council also voted on Thursday in favor of a proposal to spend \$100 million hardening

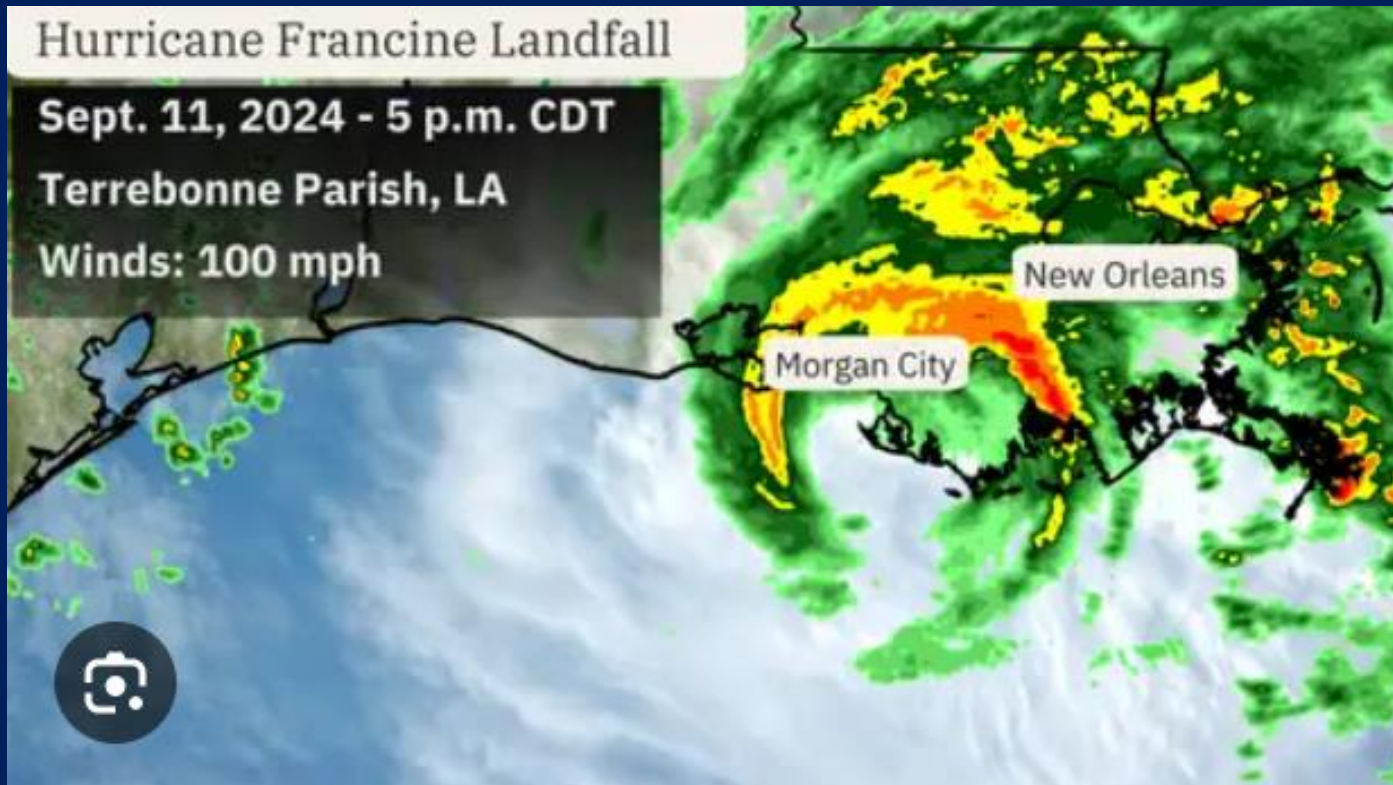
the city's poles, transmission and distribution lines. This will include more than 3,000 structures and upgrading 63 electric line miles, according to Entergy. Burke said the "answer should be both" when it comes to hardening the city's traditional energy system and pushing innovative approaches like distributed energy.

The micro-grid and virtual power plant proposal would build on Together New Orleans'

▶ See **PLAN**, page 2B



FRANCINE RESPONSE





Charging station



A group of people are seated at long white tables in a room with white brick walls and large windows. They are working on laptops. A whiteboard is visible in the background with some handwritten notes and a sign that says "Venmo @VenmoTNO TASHAPP". The text "TNO / TLA Operations Center" is overlaid in the center of the image.

TNO / TLA Operations Center

NEW ORLEANS RESPONSE



9 Lighthouses opened

Served ~ 2,300 people

Provided ~ 1,800 meals

Distributed ~ 4,000 bottles of water

Texted ~ 154,000 people

Conducted needs survey with 1,995 people

Distributed 16 deployable batteries (1 & 2.5 kWh)

Organized ~ 100 volunteers

LESSONS

- 1) Trust is a factor in the speed of DER deployment
- 2) Success depends on the power to change bad rules





Welcome table

Pope Francis gives thumbs-up to movement

Together Louisiana leaders tout Community Lighthouse program

BY DAN BRADY

Staff writer

The leaders of the Together Louisiana movement for social change met with Pope Francis at the Villanova Thursday.

They credit the pope's meeting

in Italy, the pope's Community Lighthouse program and his other family members and other community centers.

"He gave us a big thumbs-up," Sister Maria Cecilia, superior of the Sisters of the Holy Family congregation in New Orleans,

said after the meeting.

"Liberally," laughed Together Louisiana organizer Elizabeth Bagot.

Continued Bagot joined 12 other people from affiliated U.S. organizations in a private meeting with Francis, to share examples

of how they are organizing families and communities to influence public decisions. It was here that she met with the pope after one day.

Representatives of the other religious body, also members of the World Council of Churches

► See POPE, page 2B

POPE

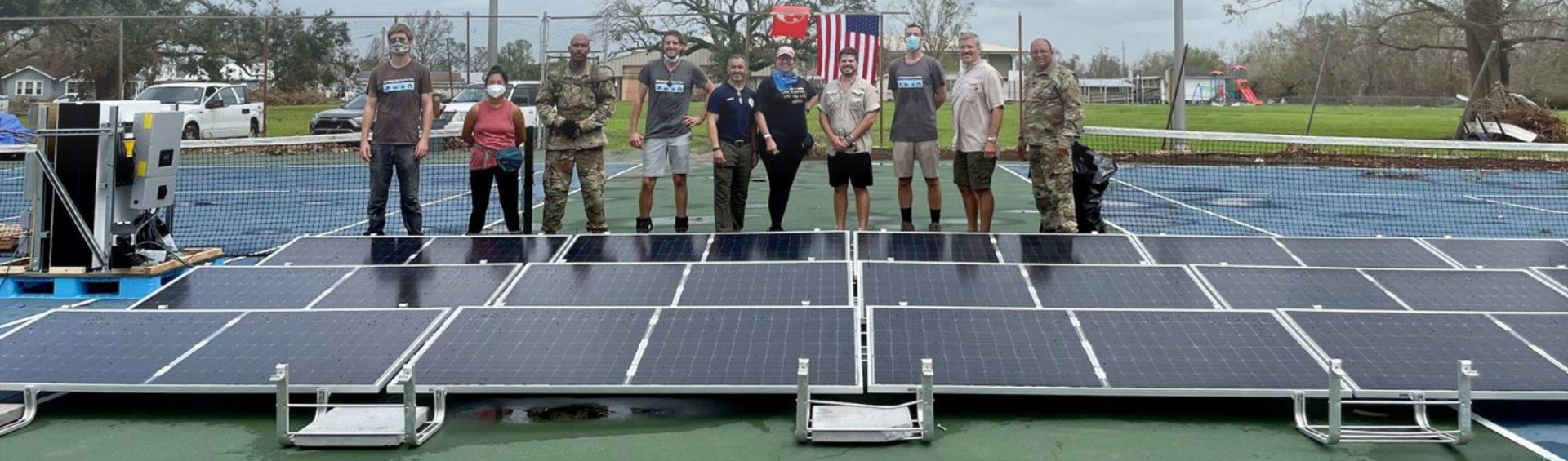
Continued from page 1B

Armen Foundation network, concentrated on infrastructure and housing. For Costa and Bagot, the focus was climate resilience in a region particularly vulnerable to rising seas, temperatures extremes, acute water shortages and increased power failures.

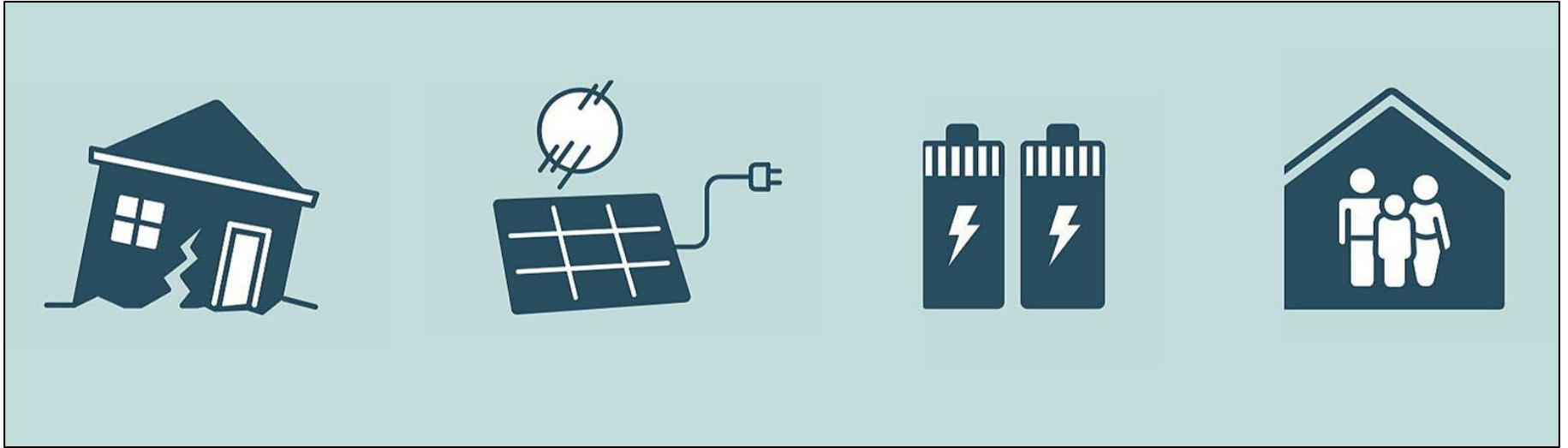
Together Louisiana included over 200 civic organizations and religious congregations of various denominations and claims to be one of the largest grassroots organizations in the state. It has developed community lighthouses in five Orleans parishes



footprintproject.org™



Our mission is to
build back greener after disasters



by mobilizing cleaner energy infrastructure
to communities in crisis.

Core Programs



DISASTER RESPONSE

We rapidly deploy mobile solar generators to power up responders and survivors.



BUILD POWER

We develop fleets of community mobile solar generators and train local partners to plug-in.



UPCYCLE ENERGY

We reuse second-life solar electric components to keep them out of landfills.

Impact to Date

25+ disaster missions

250+ kW of mobile solar

700+ kWh of mobile battery storage

**50,000+ people supported
with emergency,
sustainable energy access**



Hurricane Ida



Kentucky Tornadoes



Puerto Rico Earthquakes



Tennessee Tornadoes



COVID-19 Field Clinic



California Wildfires

**Rapid power +
infrastructure needs
assessments**

**Mobile solar delivery,
set-up and maintenance**

**Equipment stays as long
as sites need it**



Design-build-deploy
trainings

Resilience hub and
spoke activation
planning

Climate tech
equipment donations

Seed local workforce
development opportunities



EQUIPMENT

Volunteer Base Camp
HOUMA, LA
HURRICANE IDA



Delta Health Center ROLLING FORK, MS 2023 TORNADO



'Aha Punana Leo Preschool
HONOKOHAU VALLEY, MAUI



NA 'AIKANE O MAUI CULTURAL MONITORS



LAHAINA, MAUI

NAPILI NOHO RELIEF HUB, MAUI



HURRICANE HELENE



**Mobile Home Community Well Pump
with Poder Emma
Asheville, NC**

HURRICANE HELENE

Marshall, NC





HURRICANE HELENE
Pensacola, NC

HURRICANE FRANCINE



**Community Lighthouse
Battery Libraries
with Together New Orleans**



NEW ORLEANS TORNADO
BATTERY LIBRARY

Response Timeline

DISASTER STRIKES!!

1) **DEPLOY:** Rapidly deliver turnkey cleantech equipment to support local responders and resilience hubs.

2) **MAINTAIN:** Keep the mobile stuff working in the field for the people who need it.

3) **FUNNEL:** Open "free store" to provide in-kind cleantech donations to renewable recovery projects in the region.

4) **TRAIN:** Educate and organize local groups to self deploy cleantech equipment for future climate disasters.

Days to Weeks

Weeks to Months

Months to Years

Thank You!

Will Heegaard
Operations Director
will@footprintproject.org