



**FROM COMMUNITY LIGHTHOUSE TO VPP:  
Maximizing the value of resilience microgrids as  
grid assets**

**JULY 24, 2024  
UD-21-03 TECHNICAL CONFERENCE**

**After Hurricane Ida, CrescentCare FQHC lost power with the rest of the region.**



**Lost ~\$500,000 in vaccines & pharmaceuticals that needed refrigeration**

**Was unable to provide health services during the outage.**

# In March 2023, CrescentCare became a Community Lighthouse



**CrescentCare Federally Qualified Health Center**  
New Orleans (St. Roch)

**TOGETHER**  
LOUISIANA

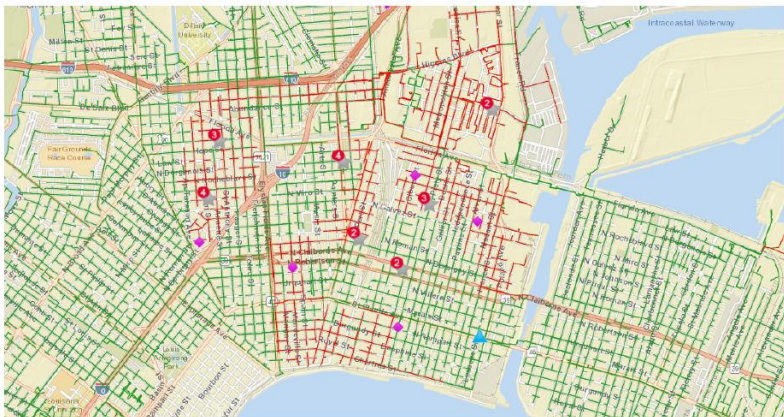
# On March 4, 2024, CrescentCare's neighborhood was hit by the "chainsaw outage"



## Nearly 8,000 without power in 7th Ward, Bywater after Entergy service pole cut with chainsaw

By KASEY BUBNASH | Staff writer

Mar 4, 2024

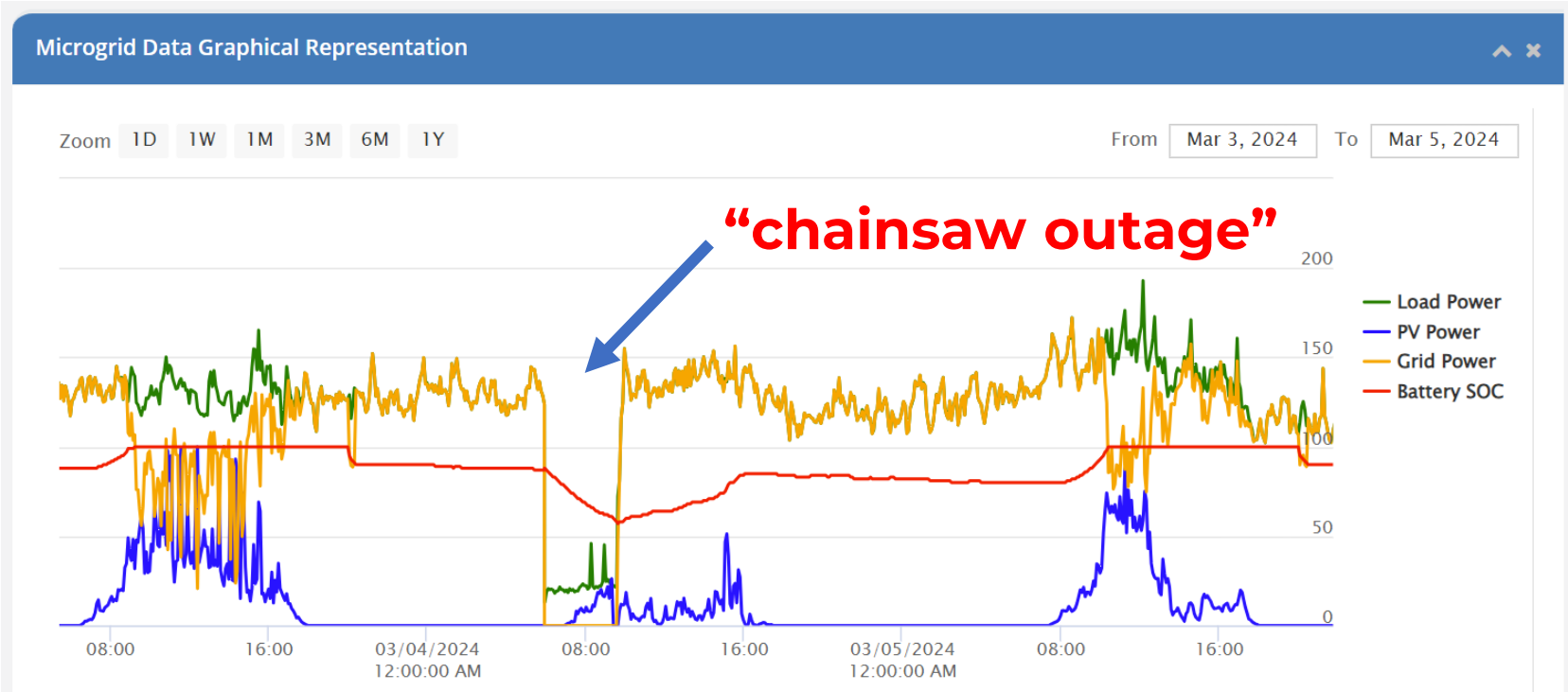


Nearly 8,000 Entergy customers were without power on Monday, March 3, 2024.

From Entergy



# CrescentCare's never lost power ...



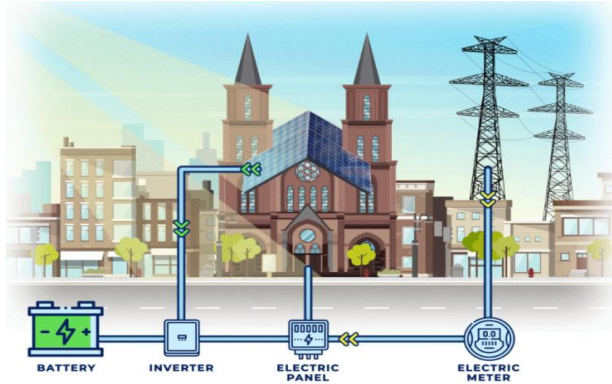


# On June 22<sup>nd</sup>, 2022 TNO launched the Community Lighthouse strategy

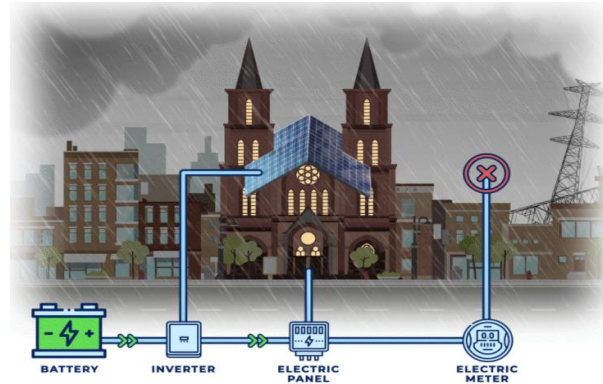


# THE VISION

Every neighborhood in New Orleans will have a solar + storage resilience hub



In normal times, the **solar** defrays electricity costs.



When the grid fails, the microgrid **restores power** so community institutions can respond.

## Won support from ...

**\$1 million from**



**\$3.8 million from  
Congressman Troy Carter**

**\$900,000 from Sandia DOE lab**

**\$2 million from**

**City of New Orleans**

**\$1.8 million from National Foundations**  
*including DirectRelief, Episcopal Relief &  
Development, Kellogg, Kresge, etc.*



# March 2023

## First 2 Community Lighthouses open up



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

— SINCE 1837 —  
**The Times-Picayune**

THE NEW ORLEANS ADVOCATE

NOLA.COM | SUNDAY, MARCH 26, 2023 \$2.50



STAFF PHOTOS BY SCOTT THRELKELD

Donald Clark, left, leads marchers in singing "This Little Light of Mine" for the unveiling Saturday of a solar-powered Community Lighthouse at Broadmoor Community Church in New Orleans.

## BEACON OF LIGHT

Two N.O. neighborhoods receive solar-powered storm shelters

BY ROSHAUN HIGGINS  
Staff writer

Broadmoor and Central City residents could hardly stop cheering Saturday at the unveiling of two new solar-powered neighborhood shelters to use during major failures of commercial electricity, part of a drive to open 86 such safe havens — one within a 15-minute walk of every address in New Orleans.

The latest resiliency hubs are at Broadmoor Community Church and Bethlehem Lutheran Church, courtesy of the Community Lighthouse project.

They have charging stations, can accommodate light medical equipment and may serve as sites for food distribution in prolonged emergencies. Plus, they give residents a place to rest and warm up or cool off, de-



The Rev. Gregory Manning notes that electricity for the fellowship hall has been supplied completely by solar power during the unveiling Saturday of a Community Lighthouse at Broadmoor Community Church in New Orleans.

pending on their needs and the time of year when commercial power fails in their neighborhoods. "We're proud to have this project be the single largest commu-

nity-funded project in the nation for solar-related projects," said U.S. Rep. Troy Carter, D-New Orleans. "In New Orleans we're used to being first in the places we don't want to be, so this is one we're proud to be the first in."

Community Lighthouse is an initiative of Together New Orleans, a coalition of 54 faith- and community-based organizations aiming to address issues ranging from access to healthy food to criminal justice reform. Organizers say they will have two more resiliency hubs up and running over the next three months, for a total of 16 by the peak of the 2023 hurricane season.

"As these hurricanes and other events each year put us in the dark, we will begin the process of making sure everyone

► See SHELTERS, page 2B

# September 2023

## Met with Pope Francis in the Vatican

— SINCE 1837 —

# The Times-Picayune

THE NEW ORLEANS ADVOCATE

NOLA.COM | FRIDAY, SEPTEMBER 15, 2023 \$2.00

## Pope Francis gives thumbs-up to movement

Together Louisiana leaders tout Community Lighthouse program

**BY DREW BROACH**  
Staff writer

Two leaders of the Together Louisiana movement for social change met with Pope Francis at the Vatican on Thursday. They used a 75-minute meeting to tout the nonprofit's Community Lighthouse program installing solar panels on churches and other community centers.

"He gave us a big thumbs-up," Sister Alicia Costa, superior of the Sisters of the Holy Family congregation in New Orleans, said after the meeting.

"Literally," laughed Together Louisiana organizer Broderick Bagert.

Costa and Bagert joined 13 other people from affiliated U.S. organizations in a private meeting with Francis, to share examples of how they are equipping families and communities to influence public decisions. It was their second such meeting with the pontiff, after one last year.

Representatives of the other organizations, also members of the West Southwest Industrial

► See **POPE**, page 2B



*Photo from West Southwest Industrial Areas Foundation*

Pope Francis smiles with Together New Orleans leaders Broderick Bagert and Sister Alicia Costa at their meeting in Vatican City on Thursday, Sept. 14, 2023.



# November 2023

## Secretary Granholm attends Community Lighthouse ribbon cutting



STAFF PHOTO BY CHRIS GRANGER

U.S. Secretary of Energy Jennifer Granholm, center, stands with community activists and leaders Thursday as they cut the ribbon for the new Community Lighthouse at New Wine Christian Fellowship in LaPlace. The roof of the building is covered in solar panels and there are batteries for storing energy, which will help the community in times of power outages or severe storms.

### The Times-Picayune

THE NEW ORLEANS ADVOCATE

NOLA.COM

FRIDAY, NOVEMBER 17, 2023

\$2.00

## ‘This is an inspiration’



STAFF PHOTOS BY CHRIS GRANGER

U.S. Secretary of Energy Jennifer Granholm, left, stands with Neil Bernard, pastor of New Wine Christian Fellowship, Jaclyn Hotard, president of St. John the Baptist Parish, and others on Thursday as they look at the solar system and battery recently installed at New Wine Christian Fellowship in LaPlace. The roof of the building is covered in solar panels and there are batteries for storing energy, which will help the community in times of power outages or severe storms.

### Plans for solar-powered hubs throughout Louisiana take big step forward

BY MIKE SMITH  
Staff writer

A sprawling church in LaPlace that provided refuge for residents flooded out of their homes during Hurricane Ida was the site of a more joyous occasion on Thursday, inaugurating a project that could prove to be a national example for electricity resilience.



aims to provide enough solar-equipped locations to be within a 15-minute walk for any city resident, or a 15-minute drive in rural areas. Six locations have already been completed in New Orleans, and New Wine is the first outside of the city.

A \$249 million federal grant recently awarded to the state for electricity resilience and innovation, which requires



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





community  
lighthouse

**Bethlehem Lutheran Church**  
New Orleans (Central City)

**TOGETHER**  
LOUISIANA





**Broadmoor Community Church**  
New Orleans

**TOGETHER**  
LOUISIANA





community  
lighthouse

**CrescentCare Federally Qualified Health Center**  
New Orleans (St. Roch)

**TOGETHER**  
LOUISIANA





community  
lighthouse

**Community Church Unitarian Universalist**  
New Orleans (West End)

**TOGETHER**  
LOUISIANA





community  
lighthouse

**Trinity Community Center**  
New Orleans (Hollygrove)

**TOGETHER**  
LOUISIANA





community  
lighthouse

**Household of Faith Church**  
New Orleans (West Lake Forest)

**TOGETHER**  
LOUISIANA





**167.4 kWdc solar array**

**440 kWh battery storage**

**250,000 lb reduction in CO2 per year**



**New Wine Christian Fellowship**  
LaPlace

**TOGETHER**  
LOUISIANA





community  
lighthouse

**Corpus Christi Catholic Church**  
New Orleans

**TOGETHER**  
LOUISIANA





community  
lighthouse

**Cornerstone United Methodist Church**  
New Orleans

**TOGETHER**  
LOUISIANA





**First Grace United Methodist Church**  
New Orleans

**'OGETHER  
LOUISIANA**



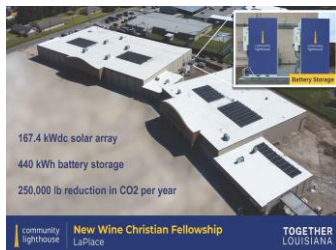
# NEW ORLEANS COMMUNITY LIGHTHOUSES

As of July 24, 2024

- IN OPERATION
- UNDER CONSTRUCTION







## CURRENT STATUS



**10** hubs complete



**812 kW DC PV**  
(1,819 panels)



**1,346 kWh BESS**



**- 1,046 tons CO2/year**

# Community Lighthouse VPP

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- **Expand Lighthouse Network**
- **Connect & Coordinate Operations**
- **Identify Ongoing Policy Mechanisms**

# IMMEDIATE BENEFITS

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**The pilot will create immediate and ongoing benefits:**

- **Resilience:** providing essential services when the lights go out
- **RPS Fulfilment:** clean energy to support RCPS
- **Demand Response:** complementing Energy Smart initiative



# VIRTUAL POWER PLANT (VPP)

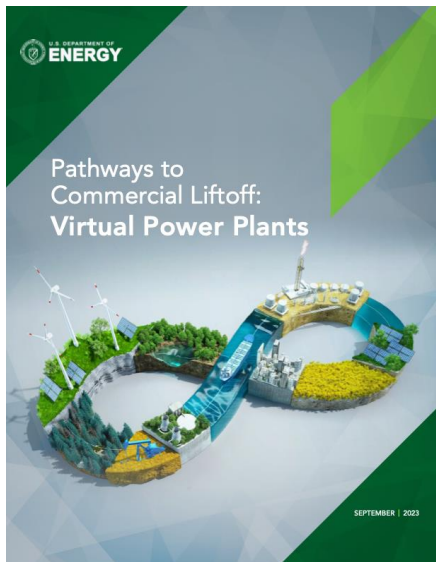
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- **Aggregation of distributed resources and establishment of technical infrastructure is the critical next step for grid transformation, leading to:**
  1. Non-Wires Alternatives and Resource Planning
  2. Locational Value and Grid Operations
  3. Sophisticated Load Flexibility
  4. Wholesale Market Participation
  5. Electrification of buildings and vehicles



# VPP Landscape Today

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- **VPPs are operational today** (30-60GW)
- **Driven by:**
  - **Peak demand growth**
  - **Network effects of DER proliferation**
    - – **there is a network effect**
- **Example:** Colorado recently required solicitations for VPPs





# IDEAS FOR RESILIENCE METRICS

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**We need resilience metrics that track distributed energy resources and microgrids that provide electricity in island-mode when the grid fails.**

## **TNO PROPOSES:**

- 1) Microgrid resilience hubs per capita – Includes islandable solar + storage resilience hubs that will island and be publicly available during outages**
- 2) Microgrid resilience hubs per capita in vulnerable census tracts**
- 3) Total solar + storage microgrid capacity**

