

# Community Solar Highlights

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Bruce Vitosh, *Norris Public Power District*

Learon Dalby, *Today's Power*

**Moderator:** Molly Brown, *GenPro Energy Solutions*



Nebraska  
Wind & Solar  
CONFERENCE & EXHIBITION



# GRNE SOLAR

A emet Company

# About Us

- Established in 2012
- Full-Service Team
- 8-Midwest Based Offices
- Turnkey Solar Energy Solutions
- NABCEP Certified
- Over 1,200+ Projects Completed



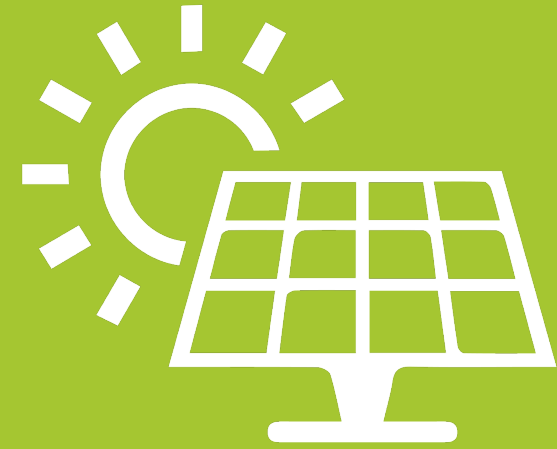


# Why Community Solar?

- Allows anyone who is unable to install solar panels on their roofs to switch to solar energy
- Zero upfront costs for subscribers
- Has the ability to make a large impact
- Increases grid stability







# Community Solar Projects



# Ainsworth

Located at the south end of East City Park, this solar project will generate enough electricity to service 75- 100 homes with in the surrounding communities.

- **Modules:** 1,716 Talesun 400W
- **Inverters:** 4 Chint Power Systems
- **System AC Rating:** 500 kW

**\*Currently in service**



Energized in October 2021





# York

This solar project is the largest of our 3 projects with NPPD coming in at 4.29 MW. It is estimated to generate over 7000 MWh in the first year.

- **Modules:** 9,648 Talesun 445W
- **Inverters:** 26 Chint Power Systems
- **System AC Rating:** 3.20 MW

\*Currently in service



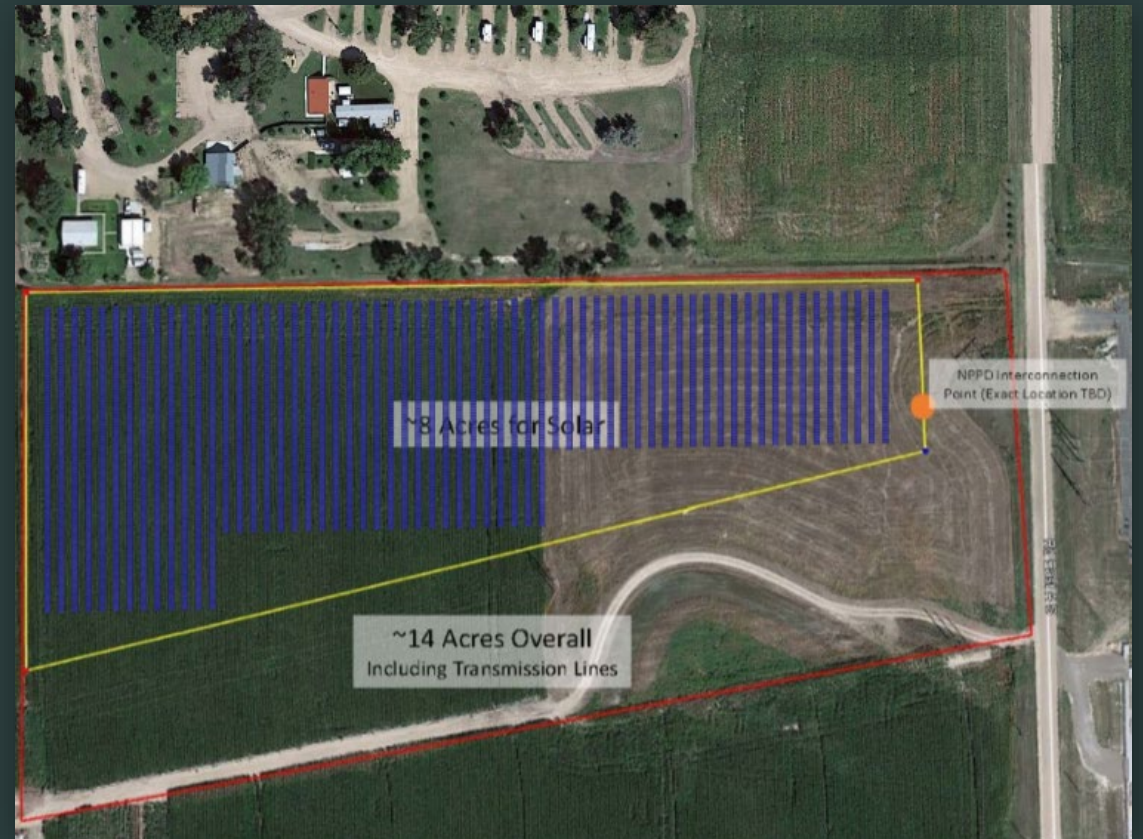


# Ogallala

This solar project spans across 8 acres of previously unused land.

- **Modules:** 4,525 Talesun 445W
- **Inverters:** 12 Chint Power Systems
- **System AC Rating:** 1.5 MW

**Projected in service date – end of year**

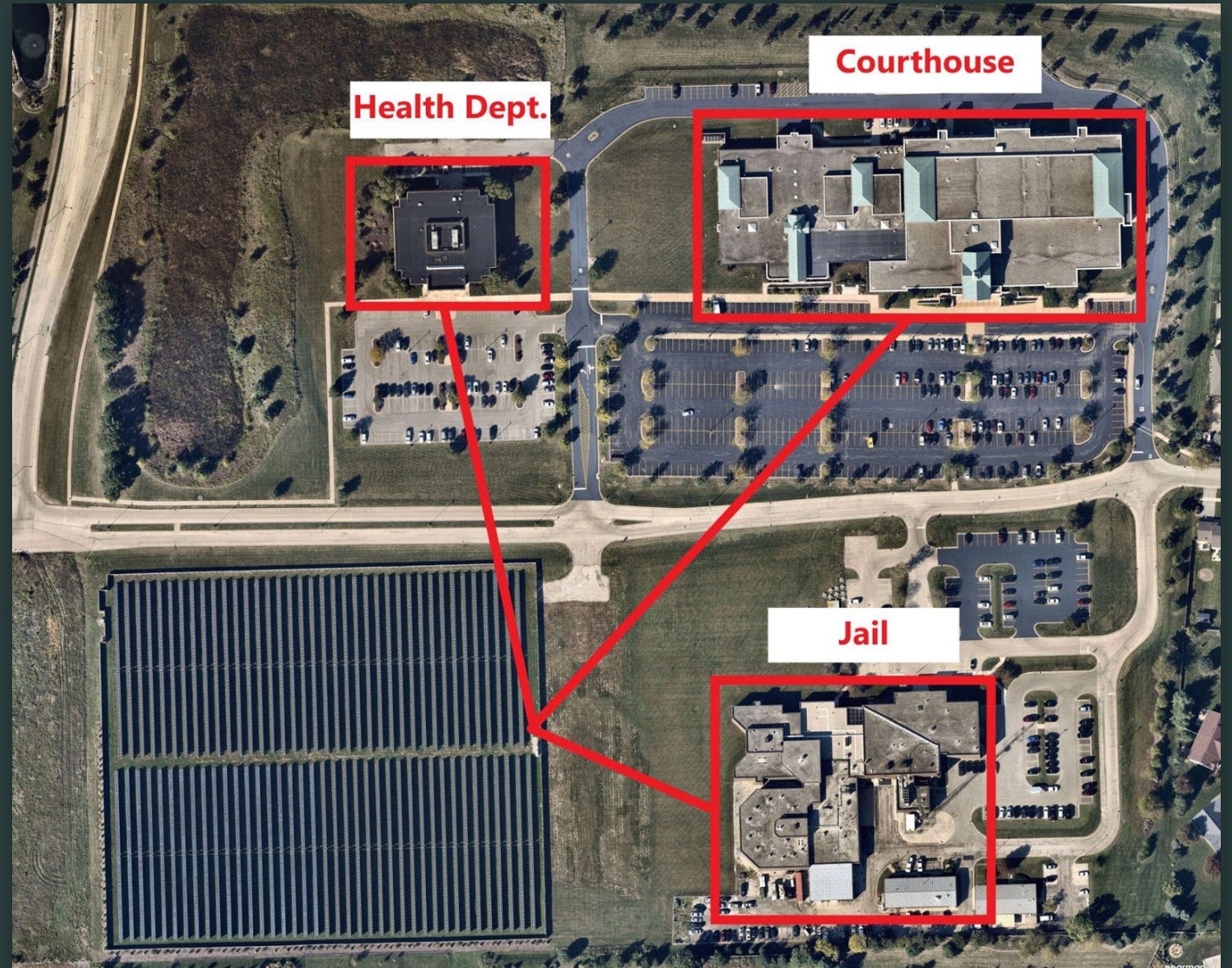




# Kendall County - Community Solar Illinois

This solar project services three separate facilities on the Kendall County government campus.

- Illinois allows business and private entities a net-metering limit up to 5 MW AC
- System Specifications :  
2.0 MW - Single-Axis Tracker



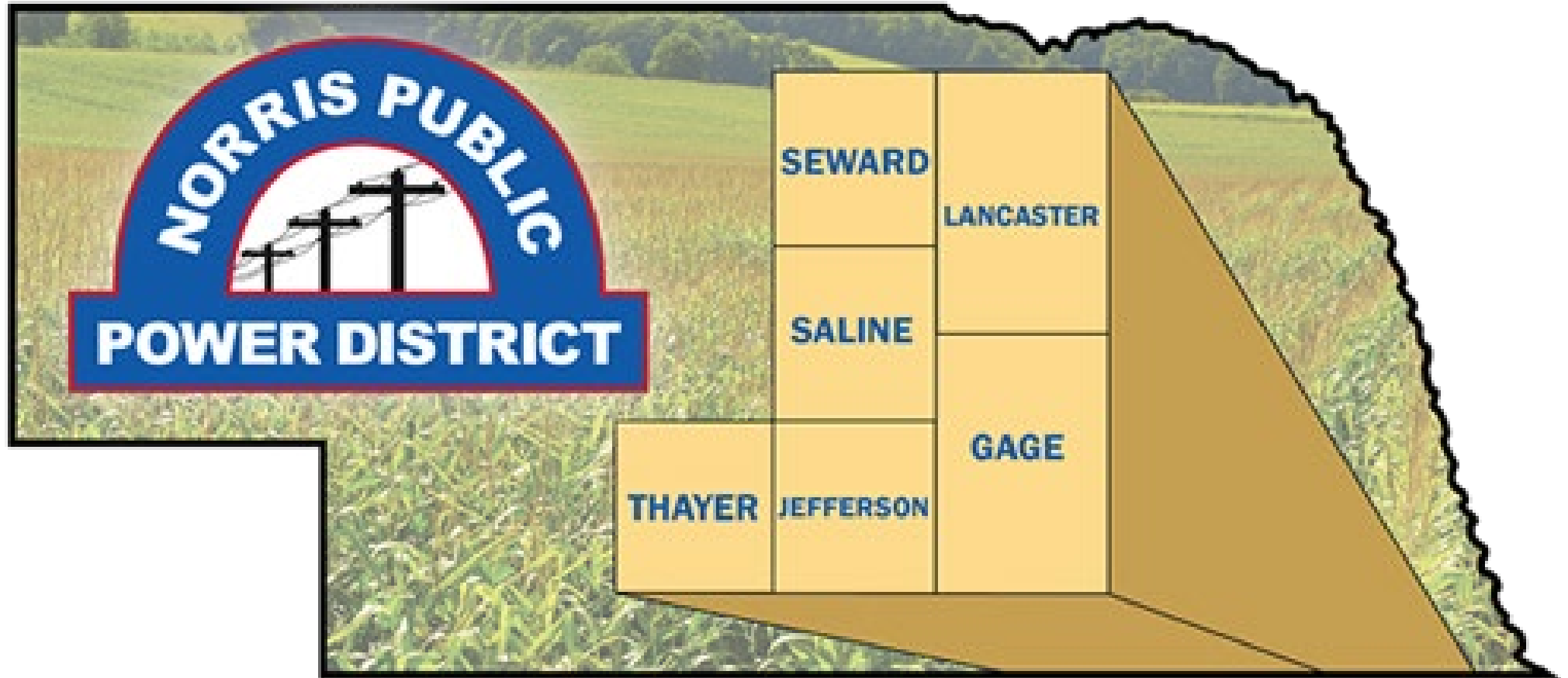


# Connect With Us



Follow us across social media [@GRNESolar](#)





**Bruce Vitosh**  
**General Manager & CEO**

# Norris Overview

- 12 Member Board of Directors
- 26,000 Customers
  - 53 Communities
- 87 Employees - 5 Locations
- Power Supply
  - NPPD – 98%
  - LES – 2%
- \$89 Million Annual Revenue
- 6,250 Miles of Line



# Norris Solar Analysis

- NPPD Wholesale Power Agreement
  - 10% of Peak Load - Local Renewable Generation
- In 2016, a 3 MW Solar Project Considered by Norris
- In 2018, Local Renewable Energy Resources Considered in Connection with a Large Industrial Customer Location
  - Evaluated Solar and Wind
- Neither were Economically Viable



# Finding a Viable Solution

- Kansas Cooperative Sun Power Program Model
  - November 2020
  - 16 Participating Electric Cooperatives
  - Over 22 MW – Limit 1 MW at Each Site
- Economies of Scale
  - Small Group of Public Power Districts
  - Others Public Power District Invited to Join

# Nebraska Solar Power Consortium

- Name Plate Capacity: 1.4 MW DC – 1.0 MW AC
- PPA Pricing: Price Breaks at 10, 20 and 30 MW
  - Fixed Price – No Escalators
- PPA Term: 25 Years with Two 5-year Extensions
  - Same for all Participants
- Each Public Power District will Purchase or Lease Land

# Nebraska Solar Power Consortium

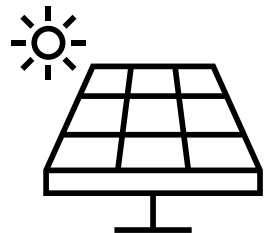
- Connected to Distribution System
- Consultant and Attorney Costs Shared Equally
  - Consultant - GDS Associates
  - Legal Counsel - Blankenau, Wilmoth, Jarecke LLP (BWJ)
- Renewable Energy Credits (REC) Owned by the Public Power District

# Nebraska Solar Power Consortium

- Rural Public Power Participants
  - Norris, Polk County, Howard Greeley
- Received Quotes from Multiple Solar Developers
  - GDS Associates Hired to Evaluate Quotes
- Today's Power, Inc. Chosen as Developer
  - Competitive Bidding Process
- BWJ Provided Legal Counsel
  - Term Sheet, PPA, Property Owner Lease Agreement and Site Access Agreement

# Selecting a Site

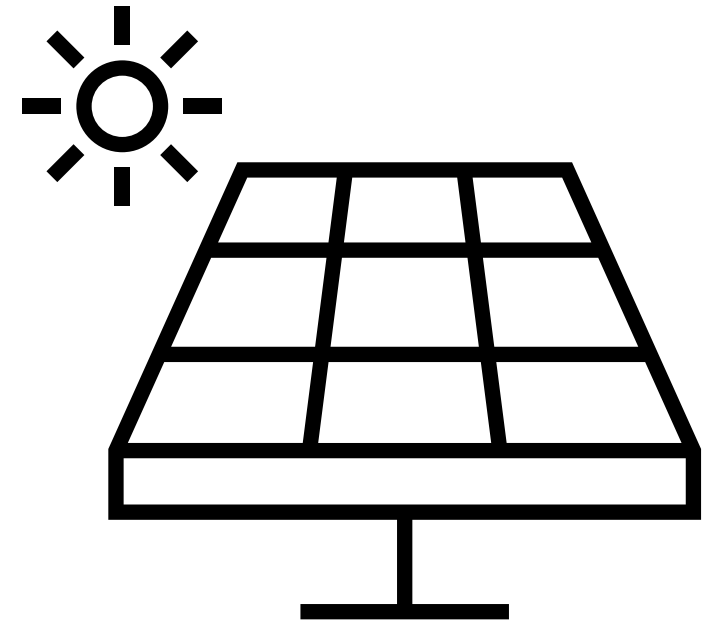
- Proximity to a Norris Distribution Substation
- Norris 3-Phase Distribution Circuit
- NPPD Circuit Containing at Least 1.5 MW of Load During Solar Generation
- Each Site 1 MW or Less per NPPD 115kV / 34.5kV Injection Point
- 7 to 10 Acres
- Flat Topography – South Facing Preferred and No Shading
- Must Meet all Local Zoning Requirements
- Willing Landowner





# Six Norris Solar Sites

- 2 - Gage County
- 1 - Lancaster County (Norris Owned)
- 1 - Saline County
- 1 - Seward County
- 1 - Thayer County
- Lease Payment
  - Indexed to Farmland Cash Rental Rates on UNL Agricultural Economics Website



# Solar Site Details

- Commercial Solar Panels:
  - Output Between 350 and 400 Watts
  - 2,500 to 2,900 Modules for a 1 MW AC Solar Site
  - Modules are 5 by 7 Feet and Placed in Arrays
  - Ground Mounted Panels with Single-Axis Tracking
  - Panels are Mounted to a Racking System that Rotates to Track the Sun
- Native Grasses and Pollinators Planted after Installation

# NPPD K450



**Nebraska Public Power District**

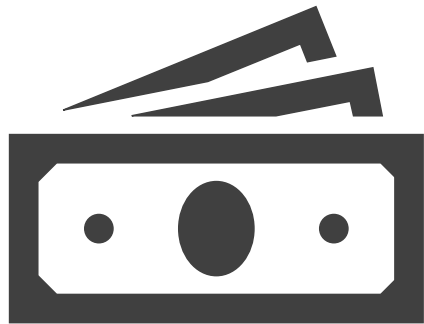
*Always there when you need us*

- Transmission Study
- Load to Generation Ratio
- Approval Process

# Customer Benefits

- Reduce Carbon Footprint
- Increases Local Renewable Generation
- Customers can Participate in Renewable Energy without Investing in Their Own Systems
- Financial Stability:
  - 25-Year Purchase Agreement with a Low Fixed Rate
  - Reduce Peak Demand from Power Provider

# Congress Budget Reconciliation Bill



## Direct Pay Credits to Public Power Districts

- New Energy Technologies
- Carbon Capture, Nuclear, Storage, Renewables, Etc.





# Today's Power

Your Energy Partner



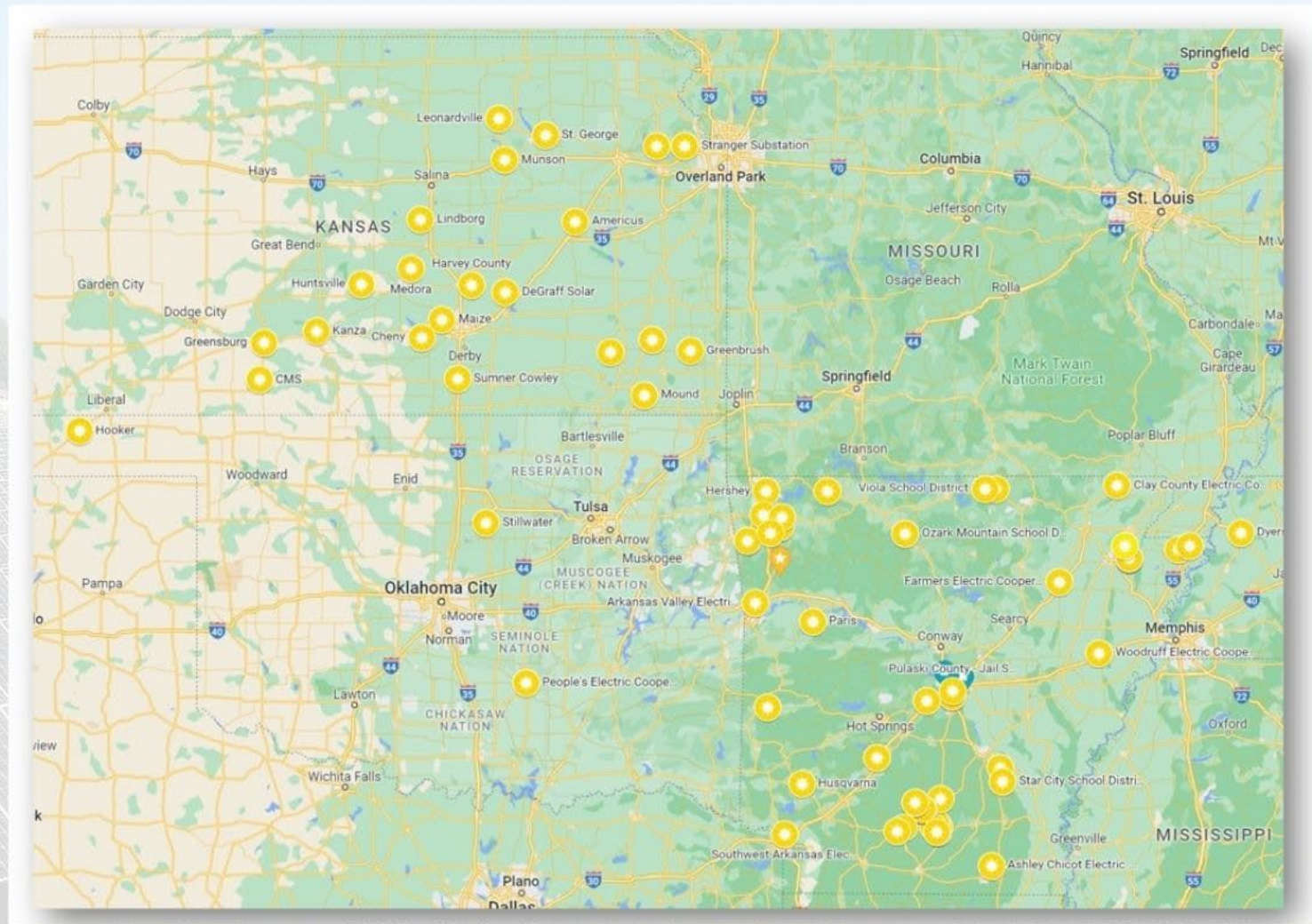
Cooperative Owned

Community Focused





# SOLAR PROJECTS



## CURRENT



71 SITES



85 MEGAWATTS

## PROJECTED



86 SITES

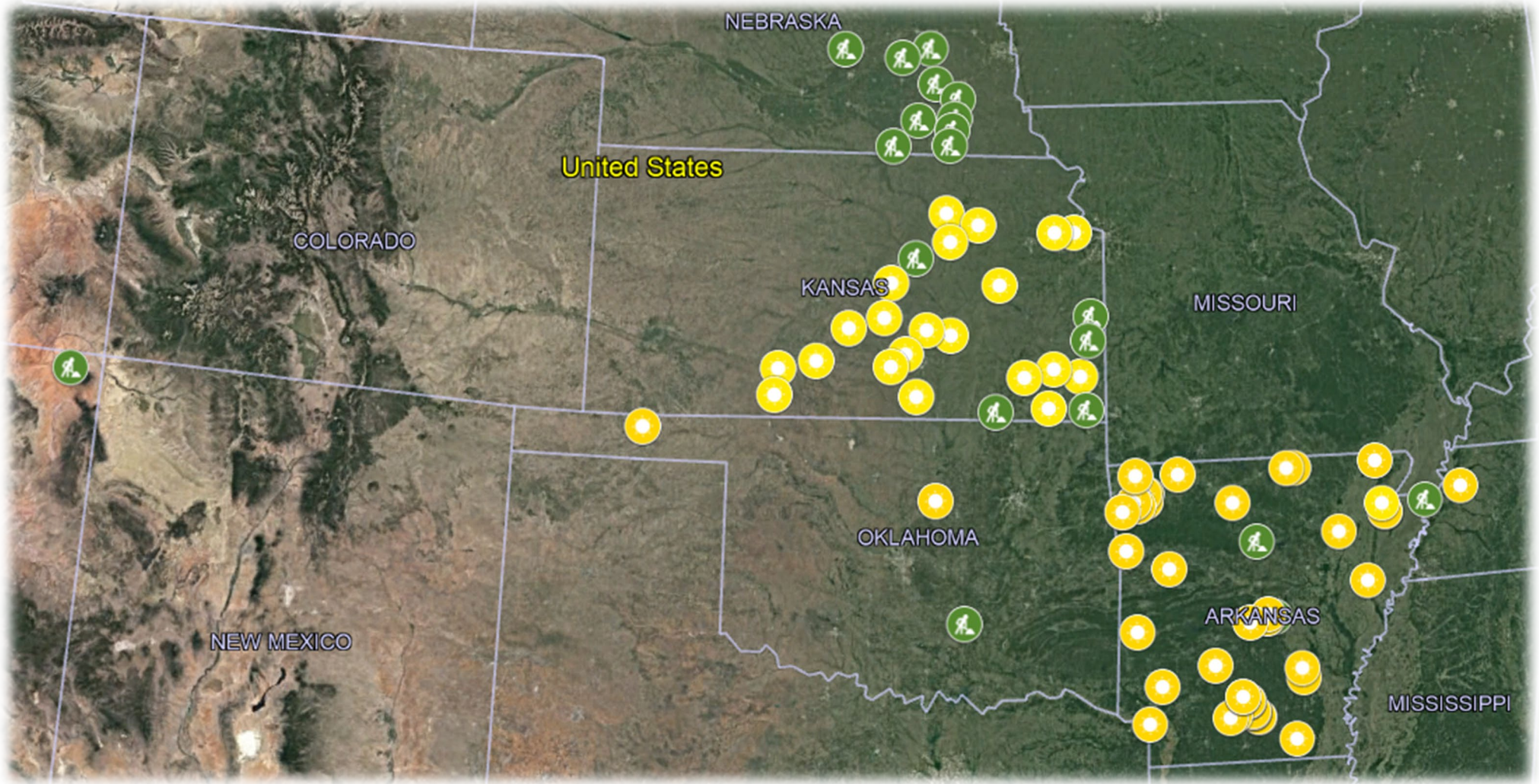


512 MEGAWATTS



# TPI CURRENT PROJECT MAP

## COMPLETED & UNDER CONSTRUCTION



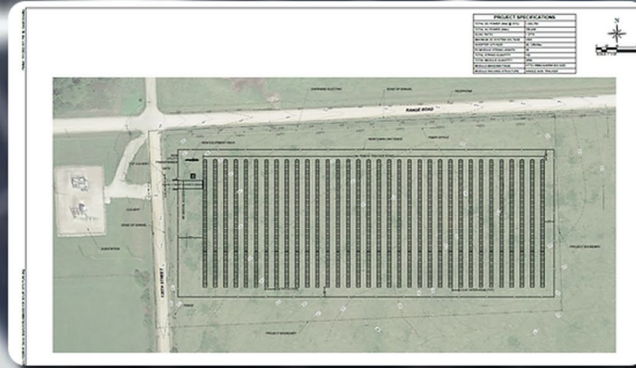
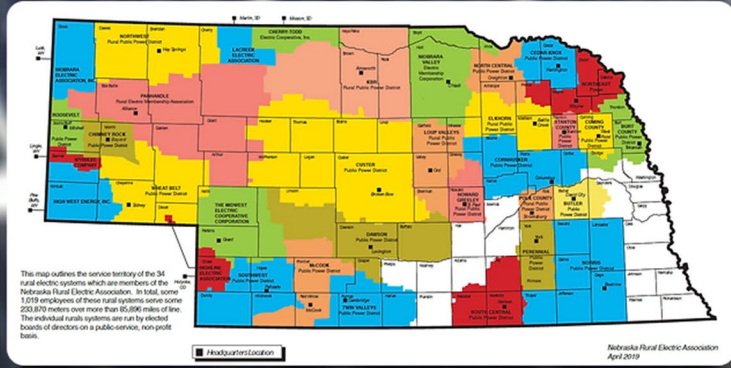


# Nebraska Renewable Energy Initiative

The Nebraska Renewable Energy Initiative is a partnership between Today's Power and 3 Nebraska Public Power Districts. The current scope of the project includes 8 sites sized at 1MW each. The benefits of this partnership will benefit members, municipalities, and communities alike.

## PARTICIPATING COOPERATIVES

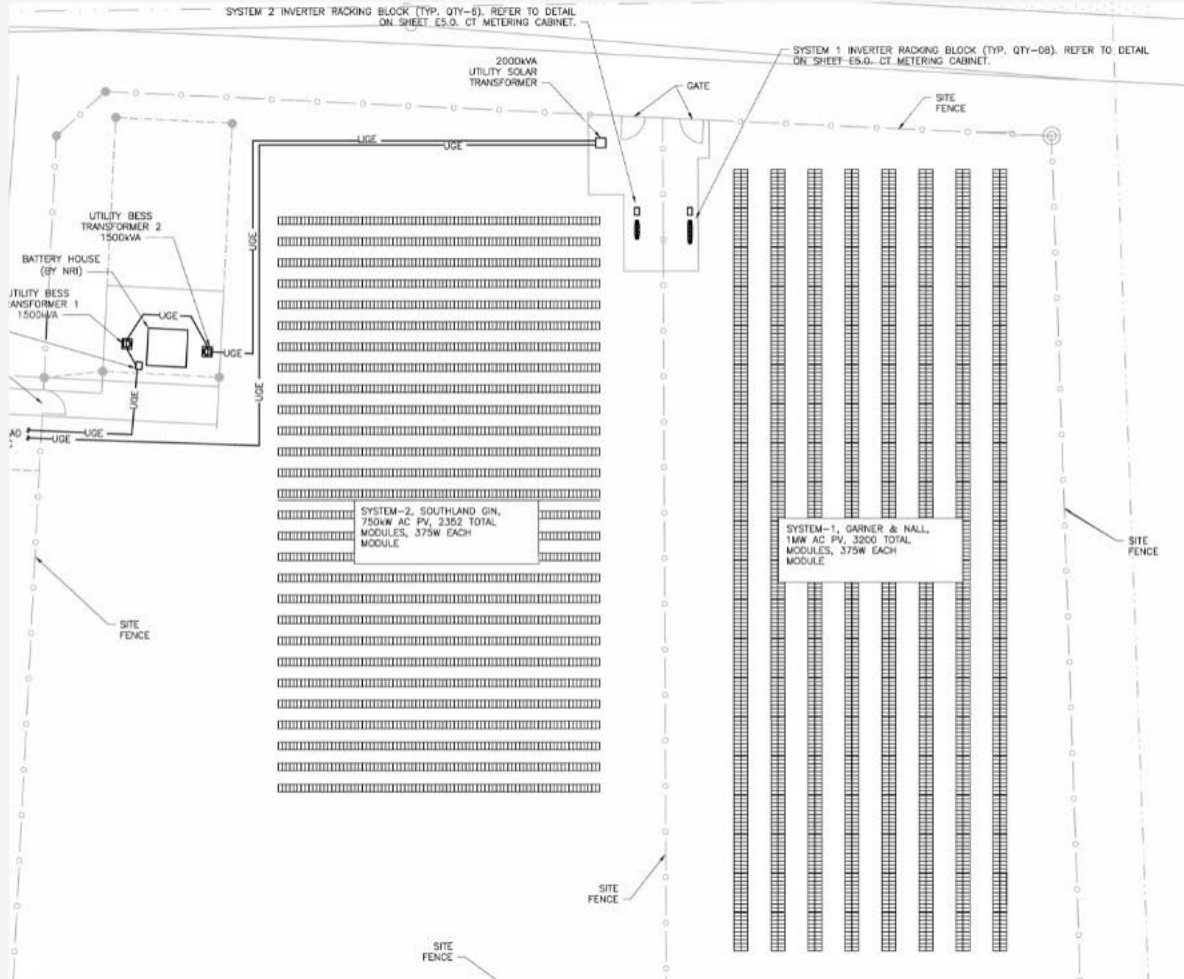
- Howard Greeley Rural Public Power District
- Norris Public Power District
- Polk County Rural Public Power District





# OUR PROCESS

FROM DESIGN TO FLIP THE SWITCH



PRELIMINARY DESIGN



GEOTECH



# GROUNDBREAKING



# CONSTRUCTION



# COMMISSIONING



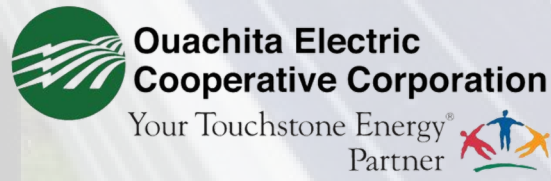
# FLIP THE SWITCH



# 1.2 MW each

91 million kWh over 25 years

Offsetting carbon footprint by  
64,341 metric tons.



## GENERAL DYNAMICS





 **Today's  
Power**  
Your Energy Partner

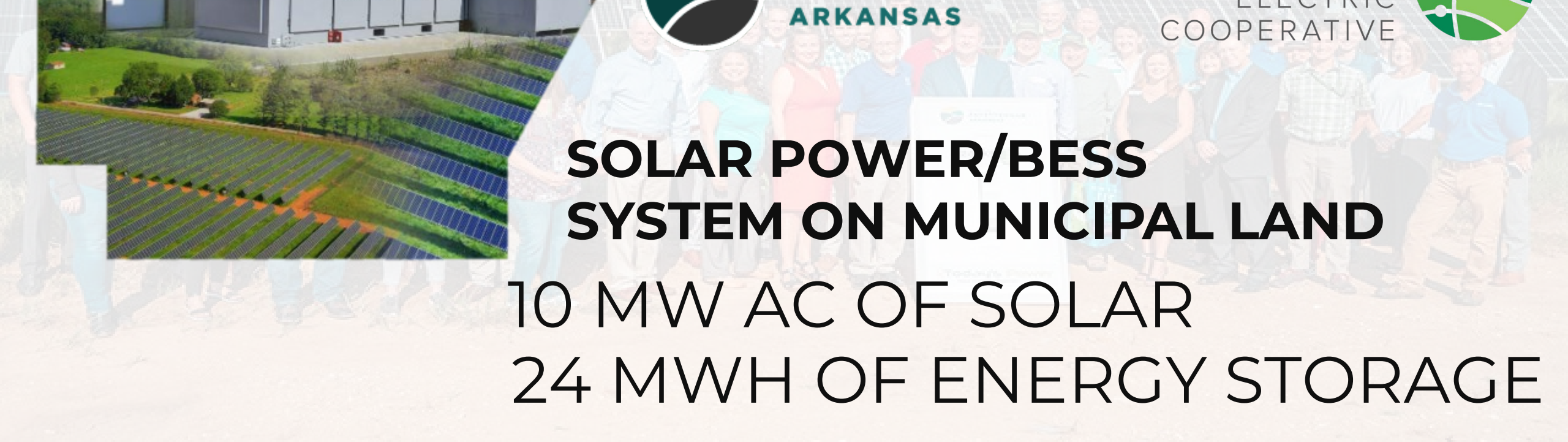


CITY OF  
**FAYETTEVILLE**  
ARKANSAS

**ozarks**   
ELECTRIC  
COOPERATIVE

**SOLAR POWER/BESS  
SYSTEM ON MUNICIPAL LAND**

10 MW AC OF SOLAR  
24 MWH OF ENERGY STORAGE



# KANSAS SUN POWER PROGRAM

HARVESTING CLEAN ENERGY

**20 MW**  
**800 MILES**  
**12 CO-OPS**

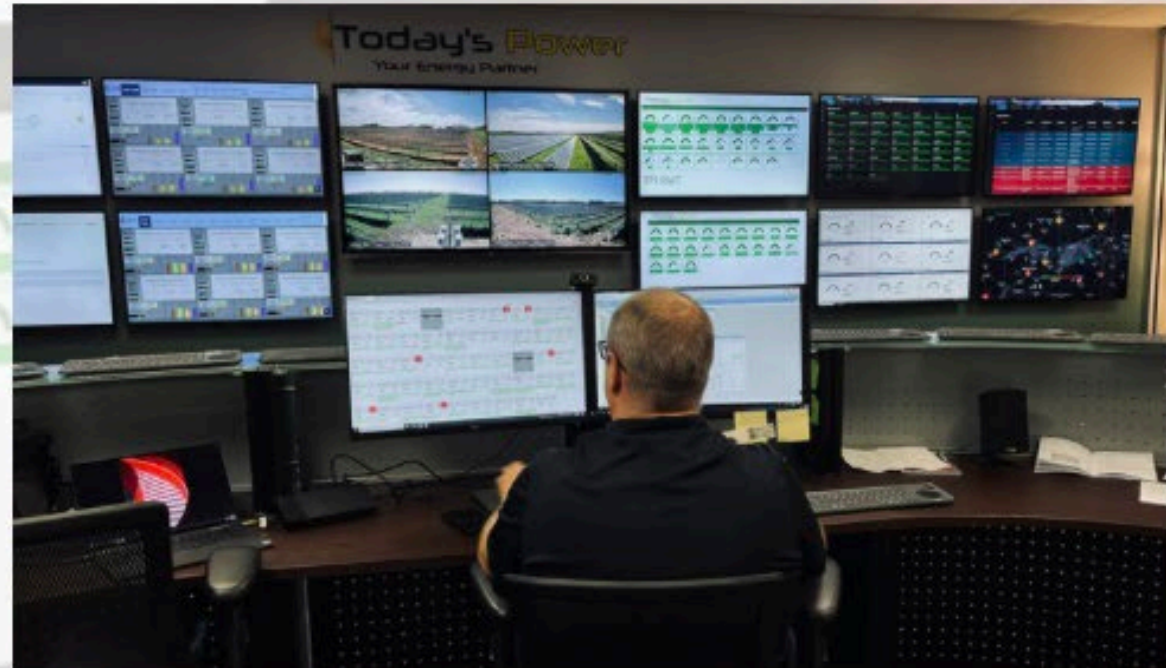
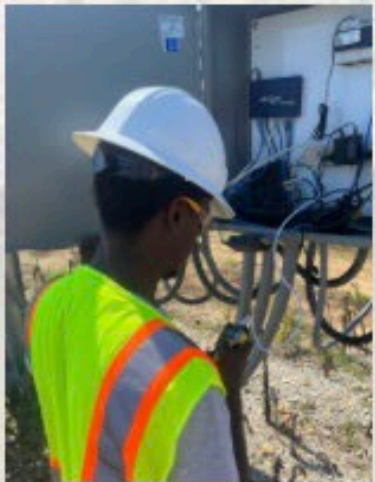
MORE TO COME





# OPERATIONS & MAINTENANCE

- Full Site Assessment/Monitoring
- Technician Deployment
- Vegetation Management



# connect with us

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