

LES Battery Storage Project

Brief History

Scott Benson | Director, Strategy & Innovation

7/17/2026

LES Battery Storage Project

Original Request for Proposals

Specification	Base Proposal	Alternate Proposal
Site	Existing 2 nd & N substation.....	
SPP Interconnection	Behind-the-meter.....	
Contract Structure	10-year PPA (\$/kW _{AC} -month).....	
Technology	Lithium-Ion	Non-Lithium
Size	1 – 3 MW / 2 – 4 hours	At least 250 kW / 2 hours

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Proposals	46	5

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Original Request for Proposals

Alternate proposal selected as lowest per-unit cost option (net \$/MWh):
3-MW / 4-hour zinc battery.

Many inherent advantages over Lithium-Ion proposals, but lower round trip efficiency and higher self-discharge rate will be operational considerations.

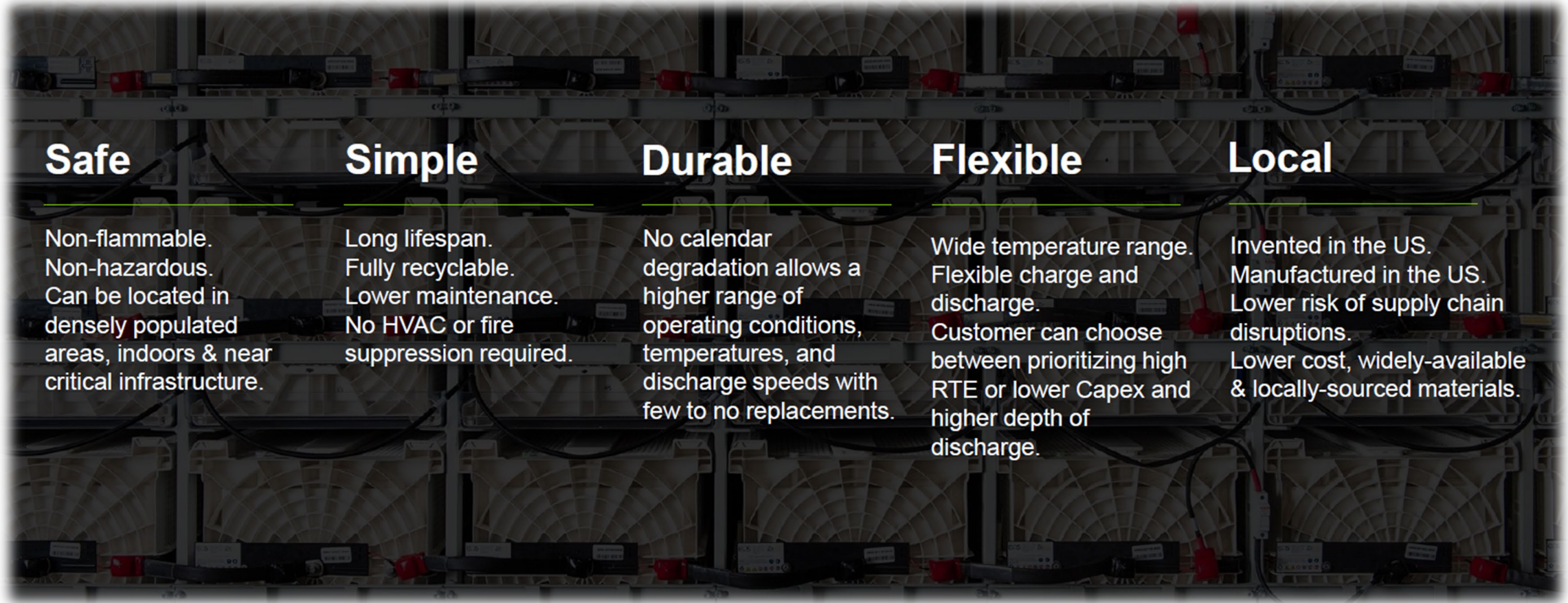
PPA arrangement plus relatively small size of project allowed LES to be much more aggressive than normal, pursuing a newer technology with a smaller developer.

At the time of the RFP launch:

- Only one such battery system was in commercial operation world-wide.
- Capacity and energy ratings of LES' project would have exceeded all previous and in-progress installations of such battery systems...combined.

Eos Zinc Battery

Additional Advantages Beyond Being LES' Lowest Evaluated Cost Proposal



Safe	Simple	Durable	Flexible	Local
Non-flammable. Non-hazardous. Can be located in densely populated areas, indoors & near critical infrastructure.	Long lifespan. Fully recyclable. Lower maintenance. No HVAC or fire suppression required.	No calendar degradation allows a higher range of operating conditions, temperatures, and discharge speeds with few to no replacements.	Wide temperature range. Flexible charge and discharge. Customer can choose between prioritizing high RTE or lower Capex and higher depth of discharge.	Invented in the US. Manufactured in the US. Lower risk of supply chain disruptions. Lower cost, widely-available & locally-sourced materials.

Source: [Eos Energy Enterprises, Inc. – Company Overview](#), Eos Energy Enterprises, June 2022

LES Battery Storage Project

Projected Benefits

- 1 Support system reliability by deferring load during peak periods.
- 2 Load-related energy arbitrage; charge (buy) at low market prices and discharge (sell) at higher prices.
- 3 Load-related ancillary services; assist the market with reliably balancing load and generation.
- 4 Further development of energy storage knowledge and experience within LES.
- 5 Strengthen the LES community microgrid.

Photo courtesy of Wattmore and Pro Bid Energy.

LES Community Microgrid

Federal Bldg

Arena

Pharmacy

District Energy for Arena

Radio Tower

Grocery Store

District Energy for City/County Bldgs

City/County Bldg

Lincoln Police Dept/County Sheriff

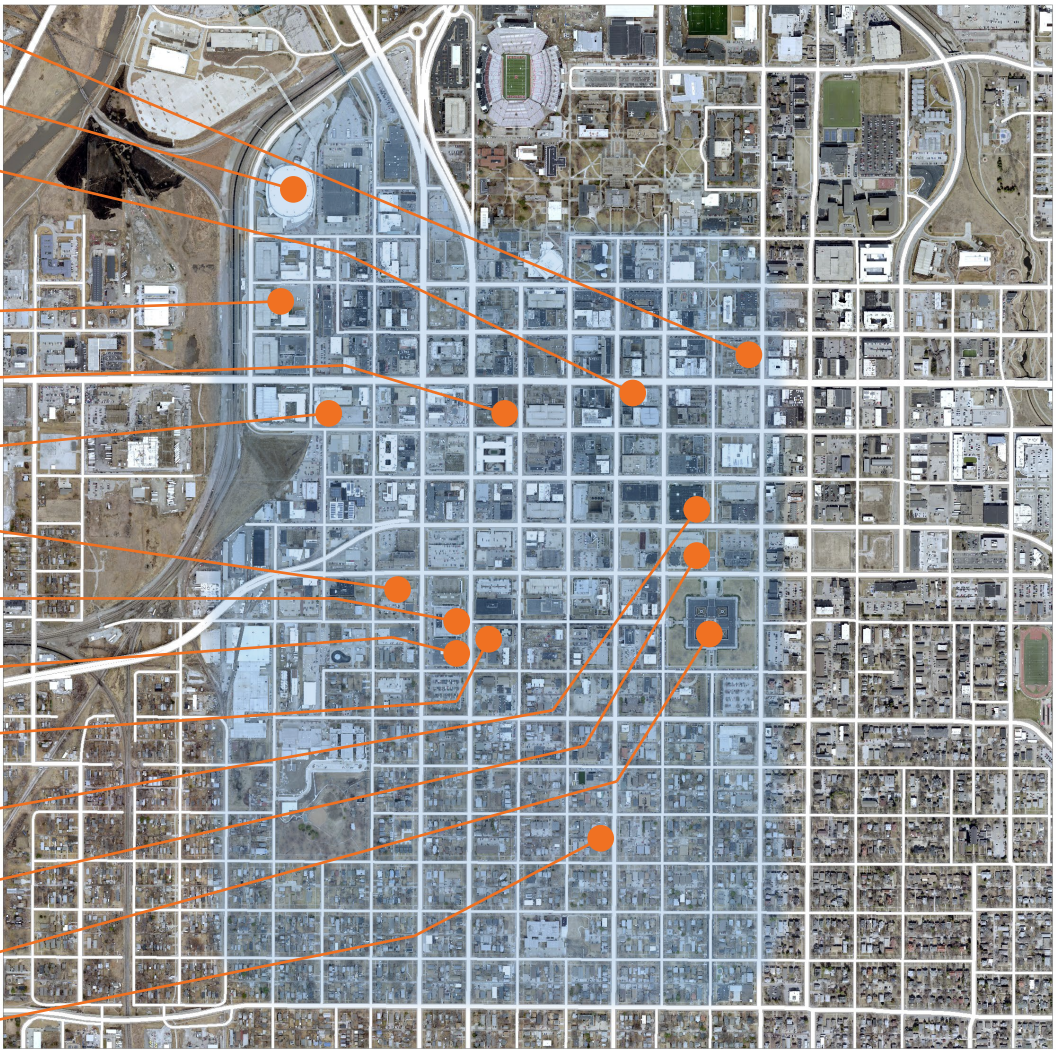
Gas Station

State Office Bldg

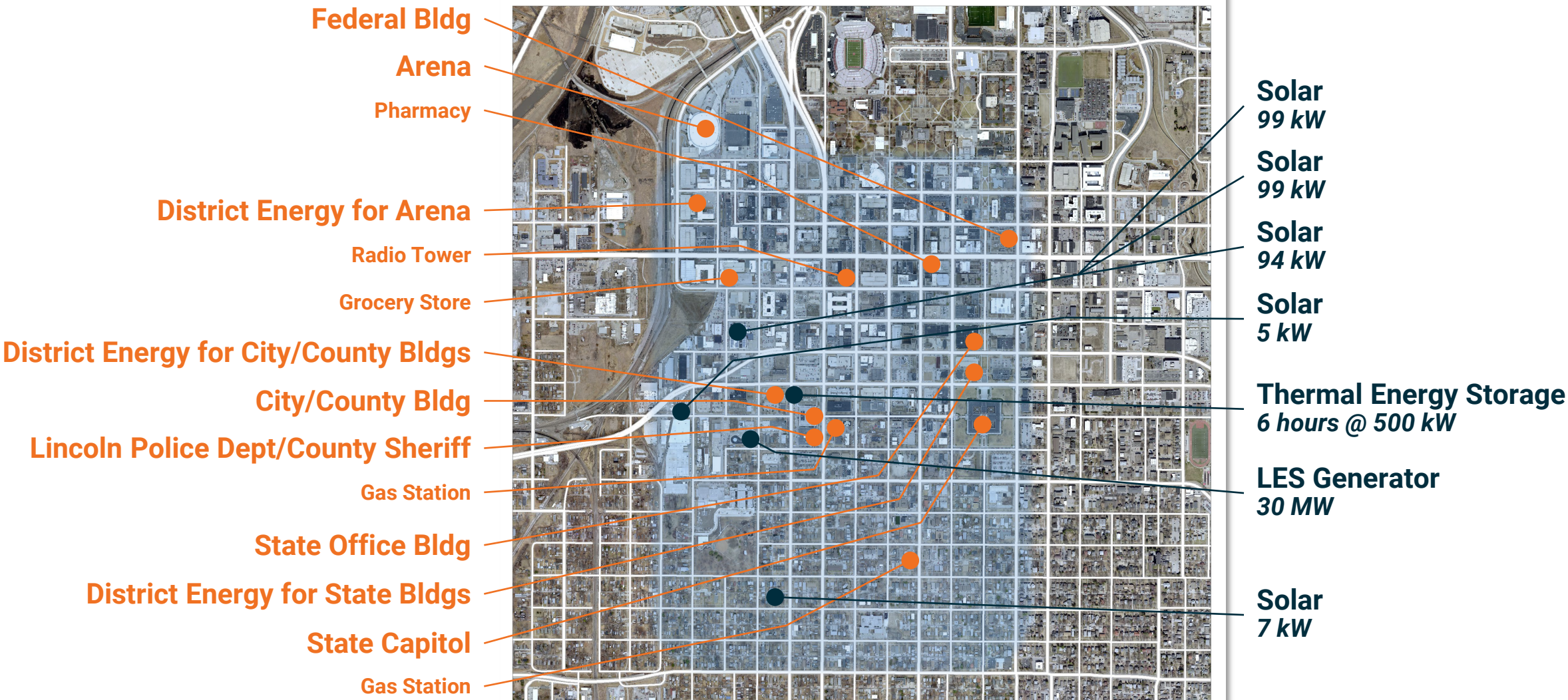
District Energy for State Bldgs

State Capitol

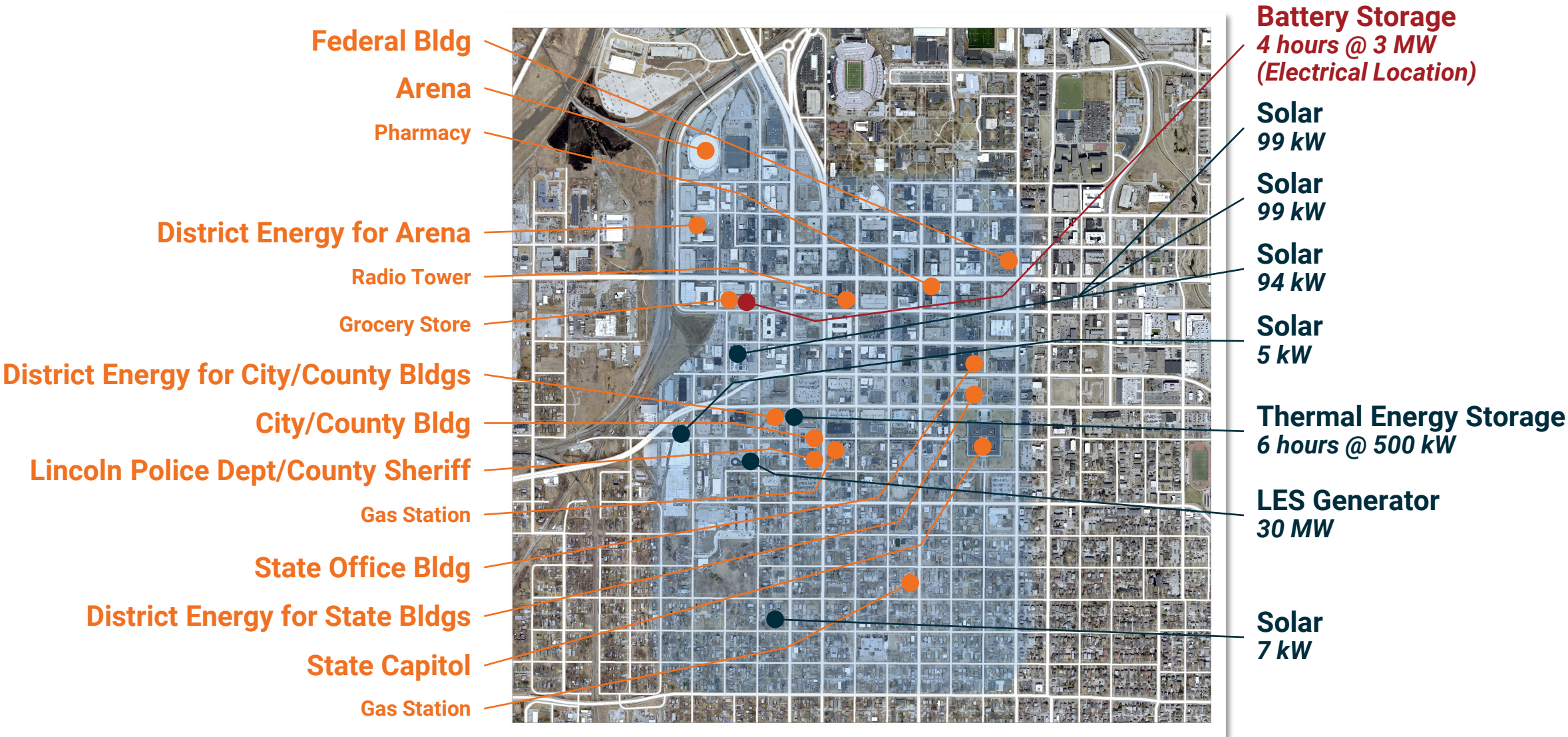
Gas Station



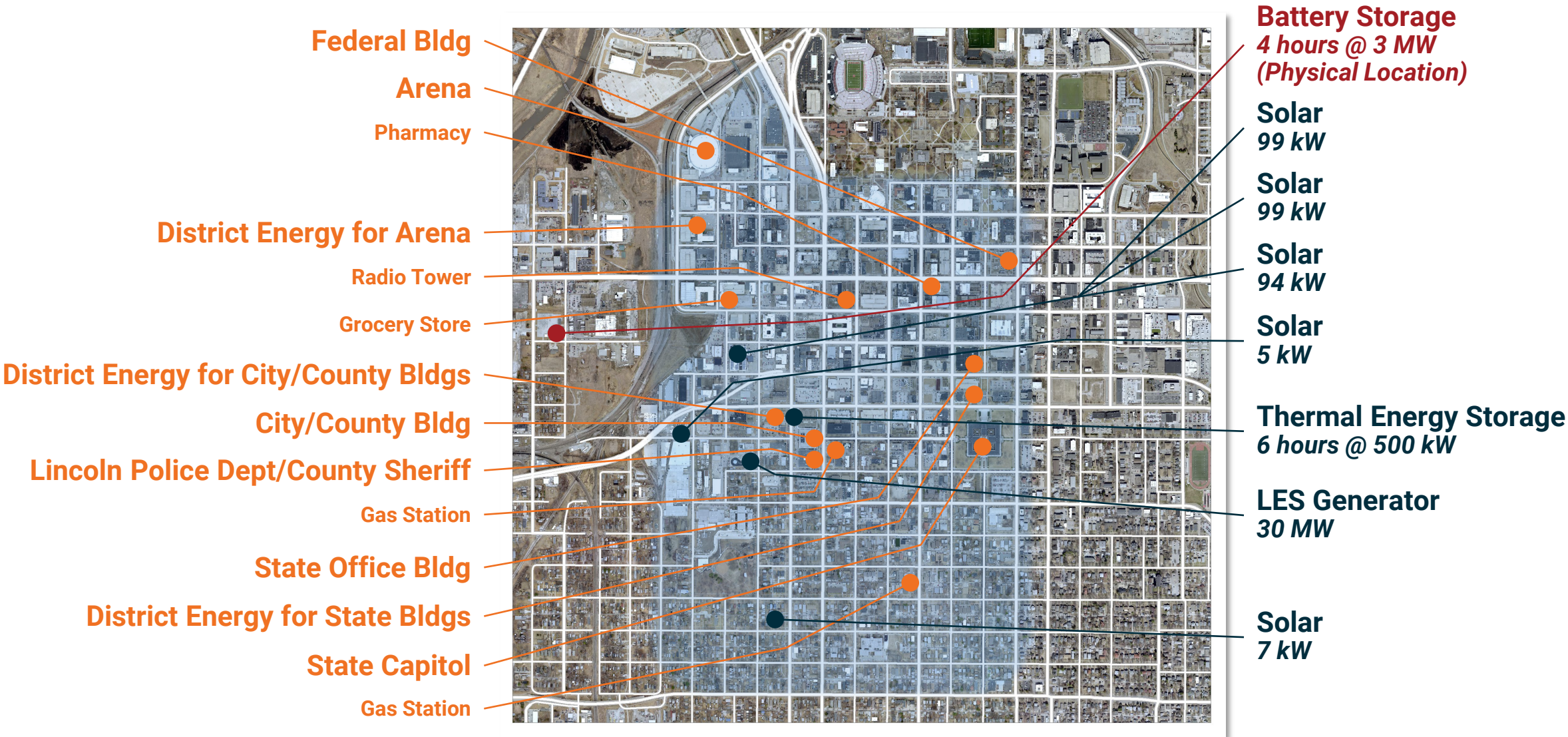
LES Community Microgrid



LES Community Microgrid



LES Community Microgrid



LES Community Microgrid

In the News...

[A Ready-Made Microgrid at Zero Cost? Yep. A Nebraska Utility Did It](#), Microgrid Knowledge, January 19, 2021

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EDITOR'S CHOICE

A Ready-Made Microgrid at Zero Cost? Yep. A Nebraska Utility Did It

Attention utilities. Here's a microgrid to consider. It required no new equipment, nor a microgrid controller. And the price tag can't be beat. Here's how Lincoln Electric System (LES) did it.

Ethan Howland
Jan. 19, 2021



[Lincoln Electric System Places Microgrid into Service at Virtually No Cost](#), American Public Power Association, January 22, 2021

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Lincoln Electric System places microgrid into service at virtually no cost

January 22, 2021 Peter Maloney

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COMMUNITY MICROGRIDS

Lincoln Electric System Adding Battery Storage to Community Microgrid

The Eos battery storage system to be installed will offer backup power support to the community microgrid that also provides grid services and electricity if an outage happens in the downtown Lincoln area.

Rod Walton, Microgrid Knowledge Managing Editor
Oct. 24, 2024

LATEST IN COMMUNITY MICROGRIDS

- Testing a Flow Battery for a California Health Center Serving a High-Fire-Risk Community
- Low-Income Communities are the First to Lose Power. How RMI is Helping Deploy Resilience...
- AME Church Sixth District Announces Georgia Microgrid Initiative
- In 9 California Outage-Prone Communities, 9 Clean Microgrids Planned Under PG&E Program
- Davis CA Welcomes new PairTree Solar Microgrid to Charge EVs at City Park

THE MICROGRID PERSPECTIVE

[Lincoln Electric System Adding Battery Storage to Community Microgrid](#), Microgrid Knowledge, October 24, 2024

Advanced Grid Research OFFICE OF ELECTRICITY DELIVERY U.S. DEPARTMENT OF ENERGY

Voices of Experience

MICROGRIDS FOR RESILIENCY

NREL Smart Electric Power Alliance

NREL/BK-7A40-75909 NOVEMBER 2020

[Voices of Experience: Microgrids for Resiliency](#), U.S. Department of Energy, November 2020, Page 14

Questions