

Case Studies

Energy Solutions in Practice

School District Facility Upgrades Reinvest Energy Savings Into Educational Programs

TX



Highlights:

- Upgraded 46 district facilities
- Will save the district over \$41 million in guaranteed energy savings over the next 20 years
- Funded through an energy savings performance contract (ESPC)

Lubbock Independent School District completed a district-wide facility modernization project to improve infrastructure and increase energy efficiency. Upgrades included comprehensive interior and exterior LED lighting retrofits and renovations to the aquatic center, including upgraded climate control systems and enhanced ventilation. By reducing day-to-day energy and maintenance costs, Lubbock ISD is unlocking savings to reinvest into providing better learning environments for students.

Long Duration Energy Storage Facility Meets Expected Load Growth

CA



Highlights:

- \$500 million local economic benefits
- 700+ construction jobs created
- 50-year lifespan

The Willow Rock Energy Storage Center in Kern County, CA is a 500 MW Advanced Compressed Air Energy Storage (A-CAES) facility that will deliver 4,000 MWh of energy storage – capable of delivering 8+ hours of energy delivery on a full charge. California requires large-scale, long duration energy storage to fully integrate increasing levels of renewable generation capacity and to serve expected load growth, which Willow Rock is positioned to serve.

Hospital's Geothermal Central Plant Conversion Maximizes Cost and Energy Savings

IN



Highlights:

- 80% reduction in natural gas consumption and gas usage costs
- Eliminates an estimated 131.38 MT of CO₂ emissions annually
- Funded by federal energy tax credits and utility rebates for energy-efficient design

Margaret Mary Health implemented a geothermal conversion for the existing central plant at their Outpatient and Cancer Center. The 45,300 ft² facility serves as a critical resource for the rural southeastern Indiana community, delivering essential oncology care and addressing healthcare gaps often faced in underserved areas. The conversion saved cost and money and paved the way for the building to become fully electrified.

LEED-Certified Homeless Shelter Prioritizes Sustainability and Dignity

WI



Highlights:

- Developed through a partnership between the City of Madison, Dane County, and non-profit operators
- Houses up to 250 residents
- Includes solar panels, a geothermal system, a rainwater collection system, permeable pavers, and a green roof

Madison, WI’s first permanent men’s shelter is on track for completion by early 2026. The facility achieved LEED certification by incorporating a geothermal system to enhance energy efficiency and a green roof to further improve insulation and stormwater management. Once finished, it will not only provide a critical resource for those in need but also serve as a model for future shelter projects across the region.

America’s First Neighborhood-Scale Microgrid Boosts Resiliency

IL



Highlights:

- 5,200 kW natural gas generators
- 750 kW solar photovoltaic
- 500 kW/2000 kWh battery energy storage

The Bronzeville Community Microgrid in Chicago is the country’s first neighborhood-scale microgrid, seamlessly integrating solar, battery energy storage, and Enchanted Rock’s low-emission natural gas generators. Developed by ComEd, the utility-grade installation provides environmentally friendly, cost-effective electrical resiliency to approximately 1,000 customers in this historic community, including residents, a fire department, the Chicago police headquarters, and local businesses.

Microgrid and Energy Storage Provide Security for Tribal Communities

CA



Highlights:

- 10-hour charge/discharge duration
- 10 MWh battery
- 24/7 supply of clean, reliable energy

Viejas Casino and Resort’s 10 MWh Vanadium Flow Battery (VFB), the largest of its type in the US, is part of a large solar and storage microgrid project funded by the California Energy Commission. By storing excess solar generation during the daytime and discharge into the evening price peak, the VFB provides 24/7 energy security for the Viejas Tribe of Kumeyaay Indians in California.

America's Largest Renewable Energy-Powered Transit Depot Ensures Reliability

MD



Highlights:

- 100% operating capacity in the event of extreme weather events or power outages
- 4,000 MT reduction in scope 1 and 2 CO2 emissions
- Delivered at no upfront cost through an Energy-as-a-Service agreement

Montgomery County, MD is transforming its Equipment Maintenance and Transit Operation Center into a self-sustaining bus depot to power a mixed fleet of 200+ buses with renewable energy. The project will incorporate green hydrogen production to support fuel cell electric buses and enhance the county's Bus Rapid Transit. A ready supply of sustainable, resilient, and cost-effective power for the new bus fleet network will ensure uninterrupted transit bus services under any power circumstances.

Customer-Side Battery Storage as Valuable Grid Assets

CA



Highlights:

- More than 1,600 participating battery storage systems
- Upfront incentives up to \$500/kWh and ongoing capacity payments of \$44/kW-year
- Designed for myriad bulk and distribution use cases

The Sacramento Municipal Utility District (SMUD)'s My Energy Optimizer Partner Plus is an innovative battery storage and residential Virtual Power Plant (VPP) program that transforms residential batteries into smart, dispatchable resources. These can provide backup power to customers during outages and reduce customer bills and electric loads during peak hours when electricity prices are highest.

SMUD provides financial incentives to customers to offset battery installation costs, spur contractor participation, and harness the ability of residential batteries to respond to grid needs during peak events. Uniquely among utility battery storage programs, participants in My Energy Optimizer Partner Plus agree to allow SMUD operators to control their battery on a year-round basis, providing maximum value potential from these customer-sited resources.