DOOSAN GridTech

PARKVIEW BESS

Capacity
1MW / 1MWh

Location
Kalamazoo, Michigan

PROJECT CASE STUDY

Michigan's First Utility-Owned Battery System

About the Client

Consumers Energy is Michigan's largest combined electric and natural gas utility and the principal subsidiary of CMS Energy. Serving 6.7 million residents across the state's Lower Peninsula, the company provides power to homes and businesses in 68 counties. Consumers Energy has committed to a Clean Energy Plan that targets eliminating coal generation by 2025 and achieving net-zero carbon emissions by 2040.

The Parkview BESS represents the utility's first utility-scale energy storage project, designed to strengthen distribution reliability, reduce peak demand, and support Michigan's transition to a cleaner and more resilient grid.

The Challenge: Laying the Foundation for Battery Storage in Michigan

Michigan's energy grid is evolving rapidly as Consumers Energy accelerates its renewable integration and grid modernization strategy. The company sought to:

- Demonstrate the reliability and economic benefits of energy storage on its distribution network.
- Test how batteries can reduce peak load and improve circuit efficiency at key substations.
- Collect operational data to inform future large-scale storage deployments statewide.
- Support its broader Clean Energy Plan, aiming to reduce carbon emissions and retire coal-fired generation.

The Parkview site, located at the Colony Farm Substation in Kalamazoo, was selected as an ideal testing ground due to its active load variability and accessibility to research partners at Michigan State University (MSU).

Client	Role	Commissioned	Market
Consumers Energy	EPC & System Integrator	2019	MISO

Doosan GridTech's Solution

Doosan GridTech designed, integrated, and commissioned the 1MW / 1MWH lithium-ion battery system, delivering the project as a turnkey installation under Consumers Energy's utility-owned model.

Core Solution Elements

- **System Design and Integration:**
  - Located at the Colony Farm Substation in Kalamazoo, Michigan.
  - 1MW / 1MWH capacity, capable of powering 1,000 homes for one hour.
  - Uses Samsung SDI lithium-ion batteries and Ingeteam power conversion systems.
- **Intelligent Control Platform:**
  - Operated by the Doosan GridTech Intelligent Controller® (DG-IC®), an open-standards-based control platform.
  - DG-IC® coordinates real and reactive power functions, manages multiple operational modes, and allows remote scheduling for optimal dispatch.
  - Enables peak shaving, circuit voltage control, and distribution reliability support.
- **Research Collaboration:**
  - Consumers Energy and MSU researchers use the site's operational data to evaluate storage performance and scalability across Michigan's grid.
  - The site also provides valuable lessons on safety, environmental performance, and lifecycle cost modeling.

Outcomes and Impact

The Parkview BESS serves as a milestone project for Michigan's utility sector and for Consumers Energy's clean energy transition.

- **Reliability Improvement:** Strengthens local grid performance by providing capacity support during high-load periods.
- **Peak Load Reduction:** Reduces train on substations and lowers electricity procurement costs during peak hours.
- **Operational Efficiency:** Enhances distribution circuit stability and voltage control in real time.
- **Research and Scalability:** Informs the design and placement of future storage sites across Michigan.
- **Sustainability Leadership:** Demonstrates Consumers Energy's commitment to clean, technology-driven energy solutions.

Why This Project Matters

The Parkview BESS established the foundation for Consumers Energy's statewide battery storage roadmap. It demonstrated the operational, economic, and research value of distribution-connected storage while setting the stage for future deployments supporting Michigan's clean energy transformation.

By combining Doosan GridTech's advanced control technology with Consumers Energy's forward-looking strategy, the Parkview project became a proof of concept for integrating intelligent, utility-owned storage into a modern grid.