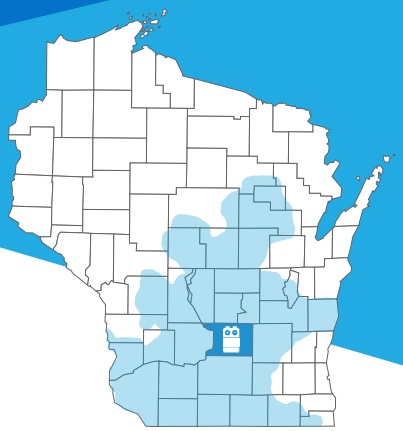

Alliant Energy/Wisconsin Power and Light

Columbia Energy Storage Project

A first-of-a-kind in the US, the Columbia Energy Storage project is a revolutionary, long-duration energy storage system. Once operational, it will use carbon dioxide (CO_2) in a closed-loop cycle to store and dispatch reliable energy adjacent to our existing coal generation facility. No lithium sources or foreign supply chains are required to construct this zero-emission battery storage system – providing the potential for 100% US-based materials.

Fast facts

Location: Town of Pacific, Columbia Co., Wis. | **Size:** 20 MW / 200 MWh | **Homes powered:** about 20,000

The Columbia Energy Storage Project will use an innovative design by Energy Dome to boost grid stability and deliver enough electricity to power approximately 20,000 Wisconsin homes for 10 hours on a single charge. When that energy is needed, the system converts the liquid CO_2 back to a gas which powers a turbine to create electricity.

Expanding energy storage infrastructure is key to accelerating our all-of-the above energy transition. Working rapidly to balance energy demands, this project will provide firm, dispatchable baseload power to meet rising demand from all customers, including AI, data centers and manufacturing. This new technology can reduce the need for traditional power grid updates while increasing grid resiliency in the event of an outage or severe weather.

Alliant Energy's all-of-the-above strategy

The addition of energy storage capacity is part of the Energy Blueprint, Alliant Energy's long-term roadmap to expanding generation capacity with an all-of-the-above energy mix including coal, natural gas, nuclear and other sources.

Combining new and innovative energy sources while maximizing traditional energy sources, supports economic growth, ensures reliability and keeps customer bills as low as possible.

Alliant Energy®
Powering Beyond

Wisconsin benefits

Development of the Columbia Energy Storage Project is led by Alliant Energy in partnership with the investor-owned utility companies in Wisconsin. Collectively, customers across the entire state of Wisconsin will gain benefits from this project.

In addition to supporting a more resilient energy future, the Columbia Energy Storage Project will create new construction jobs as well as ongoing operations and maintenance positions once the storage system is placed into service.

This investment extends Alliant Energy's historic presence in the community. In the future, this technology could further advancements of baseload resources, including nuclear, coal and natural gas.

Project information

The town of Pacific is an ideal location for an energy storage system due to the availability of existing electric grid infrastructure. The project, part of a multiphase site redevelopment effort, will increase energy reliability and resilience while delivering incredible value to customers.

This project will create American jobs in construction, manufacturing and operations. Over the next four years, Energy Dome, Alliant Energy's partner, expects deployment of the CO_2 battery at scale in the US would create 400-500 full-time manufacturing positions and 3,000-4,000 construction jobs during plant deployment.

It supports 24x7 US-based manufacturing industry energy needs and optimizes fossil fuel energy production at the Columbia Energy Center coal plant.

Milestones:

September 2023: DOE awards Energy Dome project grant of $30.7M
August 2024: Phase 1 of Project formally initiated
September 2024: Signed supply contract – a landmark advancement with Energy Dome
January 2025: First DOE reimbursement payment received
June 2025: Public Service Commission of Wisconsin (PSC) approved project
October 2025: Engineer of Record contract signed
November 2025: Expected completion of Phase I (DOE allocation of $7.2M)
Q2 2026: Construction gets underway
Q3 2027: Project expected to be placed into operation

What is energy storage?

Energy storage systems help balance electricity generation with customer demand, improving the efficiency of the electric grid. Similar to how batteries in a cell phone or laptop can be charged and discharged, the utility-scale storage systems being developed can deliver energy to power homes and businesses when it's needed.

These systems typically charge at times of the day when there is excess energy or energy demand is low. Then they discharge when customer use increases. Energy storage systems optimize the way electricity is delivered to customers and provide improved security in the event of an outage, fuel supply disruption or severe weather.

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WEC Energy Group
mGE Madison Gas and Electric
ENERGYDOME Our WORLD can't wait.