BATTERY STORAGE USE CASES:

Supercharge Your Data Center with Convergent Energy and Power

CONVERGENT

THE CHALLENGE:

Path to Power and Beyond

U.S. data centers are projected to grow from **~4%** of total electricity consumption today to **8–12% by 2030**.

Power availability and interconnection timelines are now the primary determinants of data center site viability.

Today, interconnection queues increasingly determine how quickly data centers can reach commercial operation. In PJM, MISO, and parts of ERCOT, transmission-level load additions can face four- to eight-year timelines, with additional uncertainty tied to required network upgrades. In too many cases, full grid capacity is not immediately available at energization.

Data centers' scale, growth rate, and power-quality requirements mean co-located battery energy storage systems (BESS) are no longer optional—**they are foundational to continued expansion**.

Battery energy storage systems can be deployed faster than any other grid asset, providing peak-shaving, load-shifting, and demand-response capabilities that strengthen reliability now—not a decade from now.

For decision makers at data centers, battery energy storage represents the most effective way to accelerate your path to power, strengthen reliability, manage energy during peak demand periods, and minimize any negative impacts from mandatory or voluntary curtailment.

~46%

of new data centers require transmission upgrades to reach full capacity

THE SOLUTION:

On-Site Battery Storage

Battery storage can serve as a strategic bridge to “first power” by reducing peak grid draw, smoothing ramp rates, and limiting the immediate impact of large-load additions. By lowering net demand at critical intervals, battery storage can help align load growth with available grid capacity, potentially enabling phased energization while longer-term transmission upgrades are completed. This approach can support tenant onboarding without waiting for full transmission build-out.

In addition to resiliency support, battery storage reduces exposure to peak, demand, and capacity charges by shaping load profiles and managing coincident peaks.

Battery storage can also reduce generator runtime by handling fast-response events and short-duration disturbances, preserving backup assets for true outage scenarios. The result is improved operational flexibility, reduced reliance on thermal assets for transient events, and enhanced power quality, strengthening overall reliability while maintaining compliance with large-load or demand response programs.

Battery storage changes the equation by giving data center operators control over when and how they use grid power—without sacrificing five-nines commitments or tenant satisfaction.

Battery storage among data centers is growing in popularity because:

Convergent, which has 15 years of expertise developing energy storage and solar-plus-storage solutions, is working with data centers across the country to offer the right solution at the right time: a strategic approach optimized and customized to a data center’s development cycle and goals. Below are a few different examples of data centers we are developing on-site battery storage for, why they pursued a battery storage system, and how it can help them solve a particular challenge and/or maximize value.

CASE STUDIES FOR BATTERY STORAGE:

Data Centers Under NDA That We're Partnering With

1

The Problem

An existing data center on the West Coast leased space where the local utility is constrained and the substation is at max capacity. Because the utility is not able to offer the data center the capacity it needs, they have negotiated an arrangement that allows resources, including battery storage, to meet utility requirements.

The Solution

In this case, Convergent's 30 MW / 120 MWh on-site, behind-the-meter battery energy storage system will help the data center increase capacity allocation. The system will be owned and operated by Convergent and interconnected at 35 kV.

2

The Problem

An existing data center has a successful capacity agreement with the local utility but with rising energy costs, this data center is looking to leverage the ability of battery energy storage systems to generate revenue, reducing operating costs for the data center and making operations more sustainable.

The Solution

Here, Convergent is developing a 20 MW / 40 MWh on-site, behind-the-meter battery energy storage system designed to reduce the data center's peak load during the most in-demand hours on the grid ("peak shaving"), generating substantial cost savings. The system will be owned and operated by Convergent and interconnected at 34.5 kV.

3

The Problem

An existing data center is looking to navigate the constraints of their local electric grid and support their utility's future planning and forecasting. Battery storage allows all parties to better predict and manage load, giving the utility more certainty about load usage, mitigating future load constraints, and creating the ability to decrease load at the most constrained times on the grid ("peak shaving").

The Solution

Convergent is developing a 35 MW / 70 MWh on-site, behind-the-meter battery energy storage system designed to help an existing data center reduce strain on the local utility while generating value for the data center. The system will be owned and operated by Convergent and interconnected at 34.5 kV.

Convergent Energy and Power: Proven Battery Storage Expertise

Waiting too long to develop a co-located battery storage system can mean even longer interconnection timelines, higher costs, and reduced flexibility to meet compliance requirements. Data centers that act now will be positioned to lock in savings before battery prices rise as a result of FEOC, ensure operational readiness, and avoid getting caught in the next wave of grid congestion.

For 15 years, Convergent has gained deep expertise by working closely with industrial businesses to take the hassle out of on-site renewable solutions by building, owning, and operating systems on our customers' behalf.

Convergent has over 900,0000 hours operating energy storage systems that deliver peak shaving and grid reliability and have reduced our customers' utility bills by up to 40%. Further, we have $1bn invested in or committed to energy storage systems, with over 800 MW operating or under development.

If you're looking to supercharge your path to power with an on-site battery storage system and partner with a deeply experienced partner, schedule a free, no-obligation introductory call with our team today.

15 Years
of experience, one of the original energy storage developers.

(up to) 40%
reduction in industrial customers' utility bills.

800+ MW
in operation or under development.

900,000+
energy storage operating hours delivering peak shaving, and grid reliability.

100%
of utility-permitted projects completed.

Cost-effective
and flexible capital from ownership group **ECP**.

About Convergent

Convergent Energy and Power (Convergent) is a leading provider of energy storage solutions in North America. Convergent has over a decade of experience financing and managing all aspects of the energy storage development cycle to help customers reduce electricity costs and increase reliability. The company's commercial, industrial, and utility-scale assets can yield seven-figure savings while advancing the clean energy transition. Convergent's proprietary asset management platform, PEAK IQ® leverages machine learning and deep market knowledge to optimize asset performance and maximize value. Convergent has over $1bn invested in or committed to assets in operation or under development across North America. For more information, visit **convergentep.com** or follow us on **LinkedIn**.

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