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+ E-BOOK

Why Storage Is Becoming Essential: Capturing the Maximum Value of Your Onsite Energy

5-MINUTE READ

Contents

The energy market is at an inflection point. As utility rates climb, solar net metering policies shift, and the power grid continues to destabilize, clean energy has emerged as an economical and sustainable investment. But for commercial, industrial, and municipal decision-makers, the question is how to get the most out of that investment. Increasingly, the answer is battery energy storage.

A battery energy storage system (BESS) is a scalable technology that captures and stores electricity for later use. These systems can draw power from solar arrays, the utility grid, or both, allowing site operators to deploy stored energy strategically — whether during peak-demand windows, grid outages, or periods of high electricity rates. Battery systems are commonly installed alongside commercial solar arrays, forming an integrated solar-plus-storage solution that maximizes the value of every kilowatt-hour generated.

Here's more about why battery energy storage is no longer optional.

Net Metering Rates Are Declining Across the U.S.

For years, net metering was the economic backbone of commercial solar. Under traditional net metering, excess solar energy exported to the grid earned full retail-rate credits, making solar financially attractive even without storage. That calculus is changing dramatically.

The U.S. is experiencing a widespread shift from traditional 1:1 retail-rate net metering to "net billing" or avoided-cost compensation structures. While 34 states plus Washington, D.C. still maintain some form of net metering as of 2026, the trend is clear: Net billing — which compensates solar exports at wholesale or avoided-cost rates — is the dominant policy direction, with export credits now only a fraction of what retail rates used to be.

California's NEM 3.0 serves as the clearest example of where policy is heading. Export rates were slashed from an average $0.30 per kilowatt-hour (kWh) to just $0.08 per kWH, a 73% reduction. The market response has been swift and telling: California's battery attachment rate surged to 60%, signaling that solar-plus-storage has effectively become the baseline offering in reformed markets.

Organizations that practice "solar self-consumption" stand to retain the value of their onsite generation despite changes in net metering policies. Rather than exporting to the grid at deeply discounted rates, a BESS allows sites to store surplus energy and deploy it when it delivers the most value — such as during peak demand periods or in the evening hours when solar generation drops off. In a world of declining export credits, keeping more of your solar energy on site is essential for maintaining the financial returns that made solar attractive in the first place.

Energy Price Volatility and Grid Instability Persist

Net metering reform isn't the only economic pressure commercial and industrial sites are facing. The national average commercial electricity rate rose over 5% year-over-year in the first half of 2026, with prices expected to continue outpacing inflation through the decade. For energy-intensive operations, that sustained upward pressure compounds quickly.

A BESS enables several cost-saving strategies that can shield organizations against price volatility. These include:

> **Energy arbitrage:** storing cheap off-peak electricity and using it during expensive peak rate periods

> **Peak shaving:** reducing consumption spikes that trigger costly demand charges on utility bills

> **Solar shifting:** banking midday solar surplus and dispatching it during high-cost evening hours

> **Demand response:** receiving compensation from the utility for reducing grid load on request

Beyond cost management, BESS adds a critical layer of resilience. Grid outages are becoming more frequent and longer-lasting due to extreme weather events, aging infrastructure, and skyrocketing electricity demand. For healthcare, manufacturing, distribution, or any other 24/7 operation, an unplanned outage is a serious operational and financial risk. A properly configured system can provide backup power to keep critical systems online when the grid fails, adding a layer of security that solar panels alone cannot provide.

BESS Projects Are Still Eligible for Federal Tax Credits

Federal policy has recently introduced an important distinction that makes storage an even more compelling investment. While the One Big Beautiful Bill Act eliminated the Investment Tax Credit (ITC) for solar projects as of July 4, 2026, storage projects retain ITC eligibility through 2033.

That means sites installing a BESS today can receive a dollar-for-dollar federal tax reduction of up to 30% of the total system cost. Combined with the ongoing energy cost savings from peak shaving, arbitrage, and self-consumption strategies, this tax credit meaningfully accelerates ROI and shortens payback periods. For decision-makers weighing capital allocation, storage will continue to deliver attractive project economics well into the next decade, with federal backing to support the investment.

Storage Curtails Demand Charges From Onsite EV Charging

For organizations that have deployed or are planning to deploy onsite EV charging, storage becomes an even more important cost-reduction tool. If EV load isn't managed effectively, many cars plugging in at the same time can spike your energy usage and trigger costly peak demand charges that inflate your monthly utility bill.

An onsite BESS can help smooth those spikes by providing stored energy during peak EV charging windows, avoiding the consumption upticks that drive demand charges.

This approach is even more effective when combined with robust charge management and energy management. PowerFlex's energy acceleration platform PowerFlex X™ brings together these systems and more to co-optimize EV chargers, batteries, and solar arrays in unison, minimizing costs and maximizing efficiency.

As more sites add EVs to their energy load profiles, integrating storage from the outset becomes critical to future-proofing onsite energy infrastructure.

With evolving state and federal policies, rising energy prices, and the growing complexity of onsite energy management, battery energy storage is now a strategic necessity for organizations seeking to protect the value of their clean energy investments.

Talk to a PowerFlex expert today to learn more about battery energy storage systems and how PowerFlex's comprehensive cleantech solutions can help your organization reach its financial and operational goals.

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About PowerFlex

PowerFlex is a clean technology solutions company making the transformation to carbon-free electrification and transportation possible. Our energy acceleration platform PowerFlex X™ monitors, controls, and co-optimizes onsite assets like EV chargers, solar, energy storage, and microgrids — reducing overall energy costs through patented algorithms that maximize distributed energy resources.

PowerFlex is the second-largest installer of commercial solar in the United States, with over 500 megawatts (MW) of total solar capacity plus 50+ megawatt-hours (MWh) of battery energy storage. Combined, our solar and energy storage projects offset 460,000 metric tons of CO_2 each year. We also manage more than 70,000+ EV chargers nationwide, making us the second-largest EV charging provider in the U.S. in terms of Level 2 port management.

PowerFlex is backed by EDF power solutions and Manulife Investments.

Visit powerflex.com for more information, and connect with us on LinkedIn and YouTube.

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