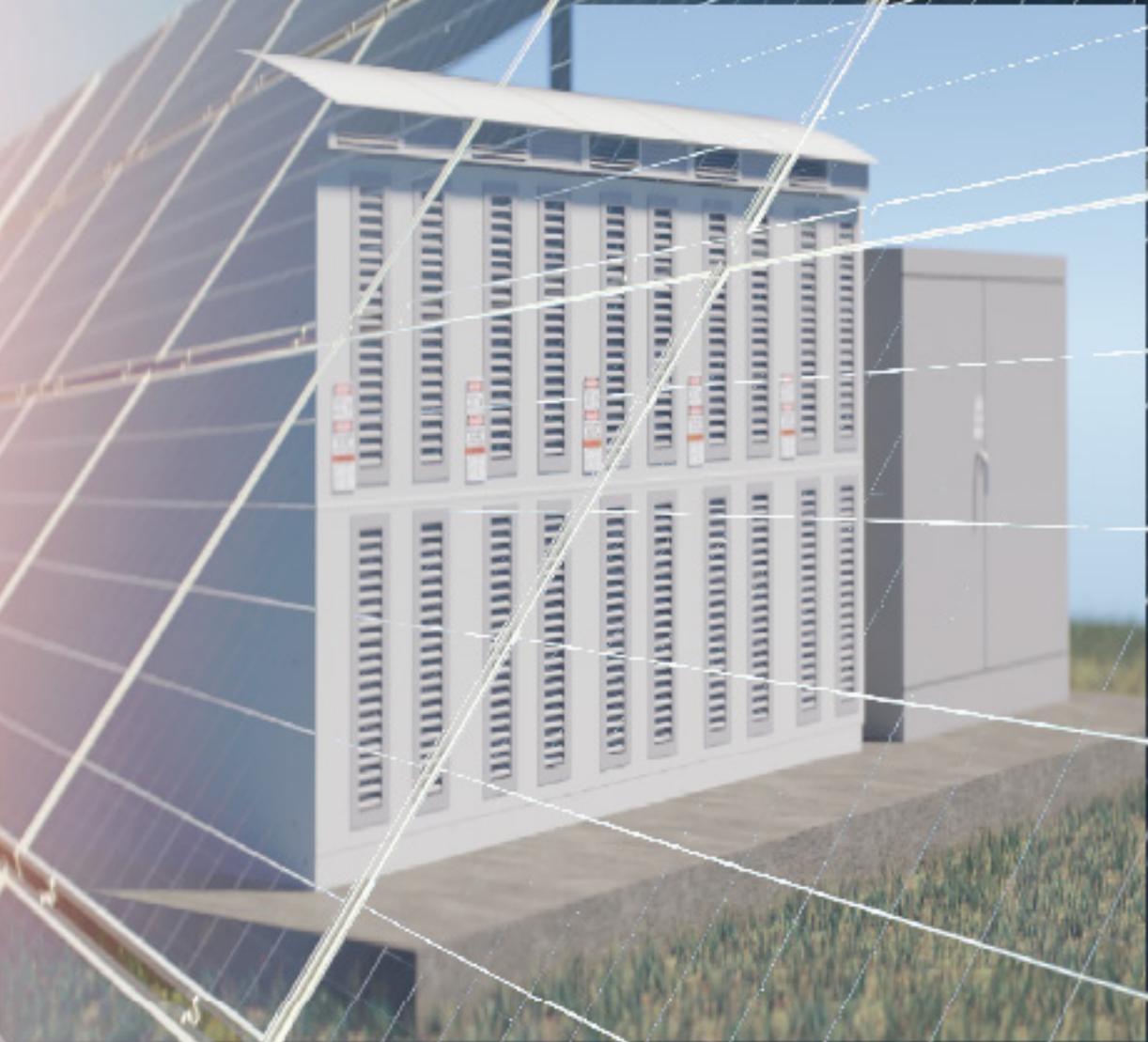
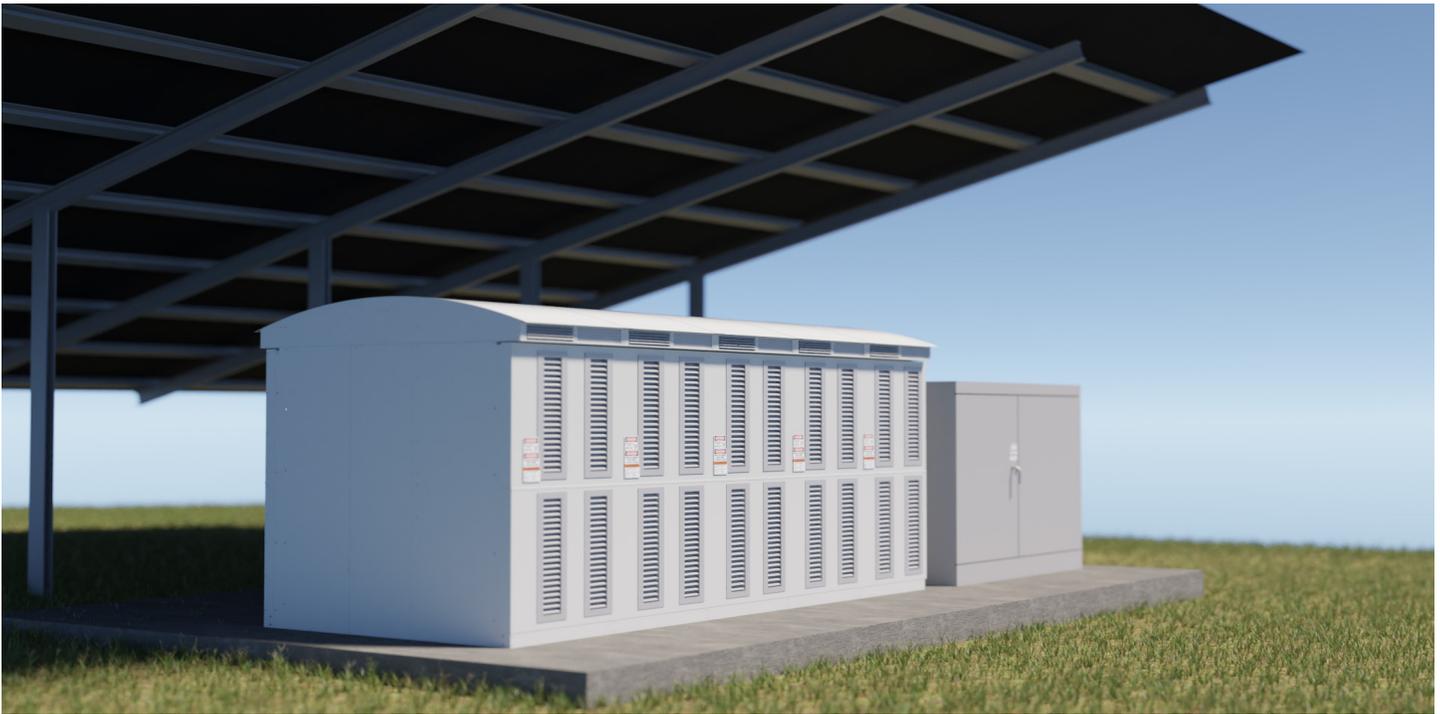


# Take Charge of Your Solar Energy Project With the Power of Battery Energy Storage

## Storage Power Solutions





## BATTERY ENERGY STORAGE - BRINGING SOLAR PV TO THE NEXT LEVEL OF PERFORMANCE

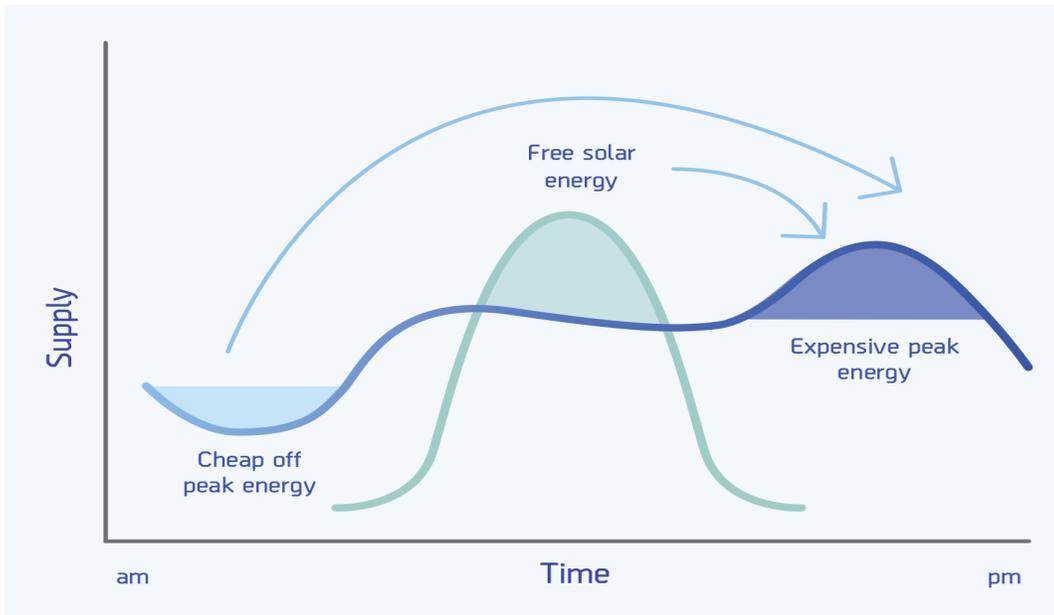
Solar power is a renewable source of energy generation that works by absorbing sunlight and converting it into electricity. Installing solar photovoltaic (PV) panels enables businesses to unlock value from existing assets like their roof, parking lot, or ground space and generate their own efficient energy supply instead of drawing more expensive energy from the grid.

The power that the solar PV panels generate can be used directly on-site, stored for later use to lower energy costs during peak times when electricity costs are high or, in some cases, fed back into the grid to create an additional revenue stream. Battery energy storage provides this flexibility by working with the solar to strategically optimize the time to charge - when there is excess production and prices are low. This stored energy is then used when the solar energy is insufficient to meet the facility demand and/or to reduce peak demand charges. This power is sustainable, reliable, and cost-effective – ideal for businesses that want to reduce both energy costs and carbon emissions.

The cost of battery storage has dropped over 80% over the last decade, radically changing how facilities can manage energy. On its own, storage can help facilities avoid using electricity during the most expensive times. Coupled with solar, storage allows us to design a system shaped to a facility's unique electrical load. Solar and storage together can help companies to meet their sustainability and resiliency goals, all while lowering their electrical spend. As well, installing storage on your facility can also increase your resiliency to power outages while reducing the cost of your electric bill.



# HOW BATTERY STORAGE WORKS TO STORE FREE SOLAR ENERGY FOR USE DURING PEAK PERIODS



*With battery storage, energy from a solar PV system can be stored and released at the most strategic times. This reduces costs, increases reliability, and increases greenhouse gas emission reductions.*

## BENEFITS OF INTEGRATING SOLAR WITH BATTERY STORAGE

**ENERGY SAVINGS** - Save even more money on your electric bill by using stored solar energy to reduce peak demand and energy charges when prices are higher. Gain budget stability through predictable electricity costs and accurate forecasting of operating expenses.

**ADDITIONAL REVENUE POTENTIAL** - Increase revenue generated from solar projects through utility demand response programs or sale of excess energy to the grid via net metering programs. In DC-coupled solar plus storage systems, storage may also be able to provide a host of grid-support or ancillary services.

**INCREASED SOLAR GENERATION** - The rapid response time of energy storage makes them effective tools for managing the variability of solar energy production systems and allowing the system to ride through periods of intermittent weather. Energy storage also allows the harvesting of more solar energy from the arrays that otherwise would be lost. In all, storage allows excess solar energy can be stored until demand is high.

**RELIABILITY** – Reduce your reliance on the grid and Increase the reliability of your energy supply by generating your own electricity on site and storing it in the battery energy storage system, ready to use during grid outages.

**RESILIENCY** - Energy storage can also serve as a backup power source to support loads or the local distribution system. Similarly, storage resources play a vital role in microgrids. These standalone energy systems can operate in parallel with or independently of the energy grid. The value of a microgrid is its ability to maintain service when the broader energy grid experiences interruptions, increasing their resiliency by managing own energy needs. In all of these systems, energy storage is a vital component.

# INTRODUCING STORAGE POWER SOLUTION'S CELL-TO-CABINET ENERGY STORAGE SYSTEM FOR YOUR SOLAR PROJECT



SPS' Cell-to-Cabinet (C-2-C™) technology surpasses the market, to bring a truly revolutionary Cell-to-Cabinet™ design that provides affordability & true revenue stacking, all with a 20-year performance guarantee. Providing superior safety & environmental performance, C-2-C™ also provides 100% system availability, ease of installation & built-in operational flexibility.

**So What's the difference?** SPS has used tried-and-true design principles of simplicity, integration and miniaturization from the IT and telecom sectors. The result is a system that significantly enhances revenue stacking and value capabilities.

**Why SPS?** Unlike most other energy storage companies, SPS is more than an integrator: SPS designs from the cell up and therefore maintains design control of the whole energy storage system, aggressively driving value for our customers. Our proprietary system architecture is based on over 100 years of proven experience, and deployment of over 1.5 GWh of lithium-based energy storage and over 4.5 GWh of Ni-Cd, Ni-MH and VRLA based critical infrastructure. SPS' management has deep experience in power electronics, battery energy storage, UPS and renewable energy.

**C-2-C™ is ideal for both AC-Coupled and DC-Coupled solar plus storage systems** and can be sized from 400 kW 2 hour systems to 100 MW+ systems with 20 hour storage.

Every C-2-C™ battery energy storage system is UL1741, UL1973, CSA/UL 9540/A and NFPA855 compliant; C-2-C™ is rated for NEMA 3R/IP55, up to 2,000m altitude and Seismic Zone 1. The system comes with 20 years performance guaranteed and features 100% uptime. Operational tolerances range between; -20°C to 60°C operation with de-rating. Operation with Hibernation Mode enables 3-6 months of seasonal energy storage with max.10 – 15% self-discharge.

# CELL-TO-CABINET STORAGE DESIGNED FOR MAXIMUM CUSTOMER VALUE



## **SUPERIOR IRR**

De-risked projects with 20-year performance guarantee. SPS drives value by eliminating costly balance-of-system components. Installation costs have been reduced through use of modular cartridge technology, perfected in the telecom world. C-2-C™ system arrives at site with all inter-cabinet connections included for quick and seamless installation.

## **100% AVAILABILITY**

Engineered using principles from telecom applications for enhanced availability, providing cost effective N+4 redundancy and no single point of failure. MTBF = 300,000 Hours. MTTR = 60 Minutes.

Response time 2 msec.  
Up to -20°C to 60°C operation (with de-rating). High volume automated manufacturing with strong automotive QA processes built in (IAT 16494:2016). NEMA 3R/IP55 rated.

## **COMPACT DESIGN**

Balance of System Simplified, Miniaturized & Integrated, with 143 kW/306 kWh Per m<sup>2</sup> Footprint.

## **OPTIMIZED REVENUE**

For the first time, storage integrates multiple customer value streams to maximize IRR. C-2-C™ enables true revenue stacking by segmenting storage into configurable units which can be dynamically reconfigured in real time to perform distinct revenue functions.

## **SUSTAINABILITY**

SPS practices Circular Life-cycle Design Principles. LFP cells are 100% recyclable and meet all ROHS compliance requirements.

## **HIGH EFFICIENCY**

Ultra-high efficiency power electronics & low auxiliary (10 kW) power requirements. Intelligent thermal management using forced air cooling.

Cabling & large switch gear eliminated.

## **MAXIMUM SAFETY**

UL1741, UL1973, CSA/UL 9540/A and NFPA855 compliant.

7-Layers of safety built in for optimum protection against thermal runaway - 4 prevention layers and 3 containment layers.

There are an additional 6 unique protection layers for public and worker safety.

Holistic cybersecurity approach that meets IEC-62443-4-1 and BDEW whitepaper and NERC CIP.1.

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