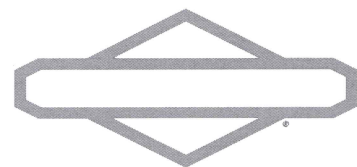




SCALABLE / FLEXIBLE / POWERFUL

# PHI High-Voltage (HV) Energy Storage Solutions

For Commercial and Industrial Operations



**BRIGGS & STRATTON**



# SimpliPhi Your Power with Modular and Scalable Energy Storage Systems to Meet Larger Power Requirements for Commercial & Industrial Projects

**Optimize your energy usage,** reduce utility charges and gain instant access to backup power with SimpliPhi's High Voltage Energy Storage Batteries and Integrated Systems. PHI High Voltage (HV) cobalt-free lithium-ion energy storage systems feature the safest, highest performing, most cost-effective HV battery available to build and deliver flexible systems and scalable solutions based on power, voltage and capacity to meet your specific commercial or industrial project requirements.



Validated by the US Army and Marine Corps as "Safe, with Zero Failure Rate," PHI LFP batteries have the longest proven track record in some of the harshest climates and use cases globally.



# Unlocking the Full Potential of Energy with Storage



## **Shave off expensive peak charges**

SimpliPhi's energy storage systems (ESS) reduce or eliminate peak electricity charges by discharging during your peak electrical loads.



## **Eliminate Time of Use (TOU) Charges**

SimpliPhi's ESS reduce or eliminate TOU charges by charging when the utility rates are low and discharging when rates are high.



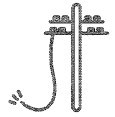
## **Participate in Demand Response (DR) Programs**

SimpliPhi's ESS allows you to take advantage of utility rate incentives by responding to utility signals, rapidly discharging and reducing overall peak utility load demand, offsetting the capital cost of your system.



## **Optimize Your Onsite Renewable Generation (Wind and Solar)**

Behind-the-meter (BTM) storage combined with renewable energy (RE) technologies can provide both cost savings and resiliency by storing the power you generate to use when you need it.



## **Emergency Backup Power and Resilience**

SimpliPhi's ESS provides critical reserves for equipment during utility power outages - saving you significant money from lost operations.



## **Microgrids and Off-Grid Applications**

SimpliPhi's ESS microgrids can create energy resiliency for mission-critical loads on-grid while also bringing power to areas where the grid is not available or prohibitively expensive.



# Why SimpliPhi for HVEnergy Storage?

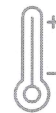
The PHI High Voltage Lithium Ferro Phosphate (LFP) battery is optimized with proprietary cell architecture and manufacturing processes, as well as state-of-the-art BMS and stack controllers, for highly efficient, non-hazardous, on-demand power.



**Scalable Configurations  
with Sizing up to 2MWh**



**The Lowest Storage  
LCOE in the Industry**



**Wider Operating Temp  
Reduces HVAC Requirements**

## **Safe-by-Design**

### **Starting with the Chemistry**

SimpliPhi's proprietary non-hazardous LFP battery design, paired with a proprietary HV BMS, provides greater reliability, safety and performance in comparison to other technologies. SimpliPhi HV is also capable of interfacing with third-party external BMS of choice.

SimpliPhi's LFP cells are cobalt-free, mitigating the hazards of thermal runaway with fire propagation, which is a serious risk in traditional Li-ion chemistry.

SimpliPhi cells are UL1642 Certified and UL9540A safety tested to ensure reliable performance over a 10 year warranty.

### **Scalable and Easily Configurable Solutions to Meet Project Requirements**

SimpliPhi HV solutions offer a modular design that easily scales and can be tailored to your project. With our inverter-agnostic approach, you can use your own electronics, or third-party software platforms. The PHI HV Battery can be wired in series to build a system that matches voltage requirements from 200 VDC to 1250 VDC and 100kWh to 2MWh.

## **Cobalt-Free, High Power and High-Performance Batteries**

LFP chemistry combined with over a decade of SimpliPhi innovation optimizes the life-cycle, depth of-discharge, rate of charge & discharge and roundtrip efficiency, increasing the performance, durability and longevity of PHI HV batteries. Our LFP batteries can withstand extreme conditions, maintaining system integrity.

### **Future Proof Solutions for Multiple Applications**

With conventional energy storage, sizing and planning for future needs is difficult. SimpliPhi HV systems are available in racks of batteries, which can be selfcontained in 10, 20, or 40-foot containers, which makes increasing capacity easy and creates a dynamic platform to future proof your energy investment.

### **Proven Track Record of Delivering**

With over a decade of experience, we have tens of thousands of energy storage systems deployed in over 40 countries delivering in excess of 100MWh. Validated by US Army and Marine Corps as "Safe, with Zero Failure Rate," our LFP batteries have the longest proven track record in some of the harshest environments and use cases globally.



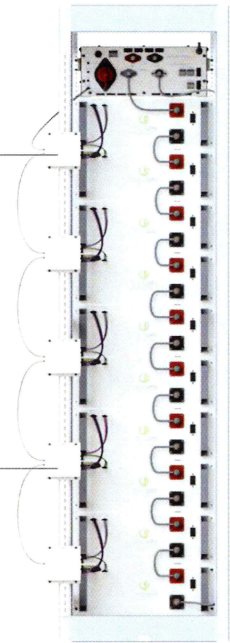
# Flexible System Configurations

Our system configurations range from individual batteries to racks scaled to meet your energy requirement which can be housed in outdoor containers. This approach eliminates the need to construct a building to protect the system electronics and allows for quick and easy system installation and commissioning.

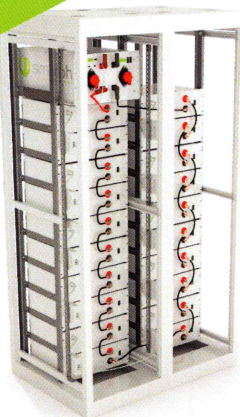


## PHI High Voltage Rack

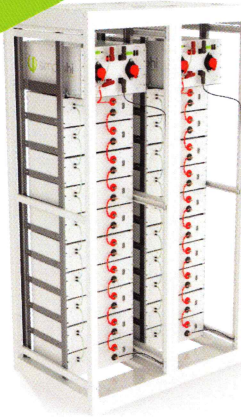
For custom system requirements, integration can be done in the field to meet unique project specifications, allowing unparalleled flexibility. Customers can scale up the project and change configurations as needed, whether in outdoor enclosures or indoor systems.



24V



48V



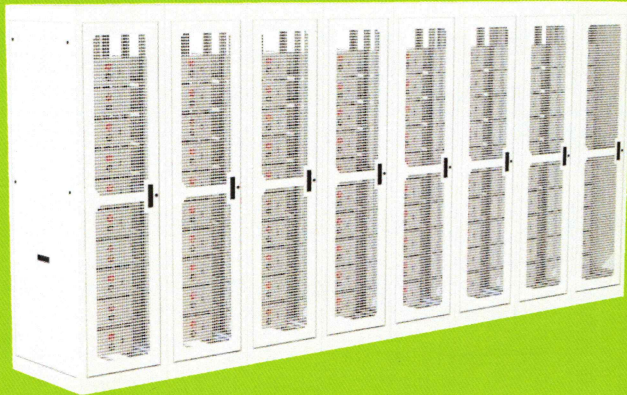
## Flexibility in Module Voltage

- Both 24V and 48V versions are capable of stacking in series up to 1,200 VDC.
- 24V minimizes additional BMS as one cell interface is required for every two battery modules. This also halves the number of stacking controllers per system.
- 48V provides increased power density per stack for sites that have restricted space available.
- Both systems afford communication via Modbus TCP (Ethernet), Modbus RTU (RS-485), CAN, or Sunspec/MESA.
- EMS controls can be provided via any approved system provider.



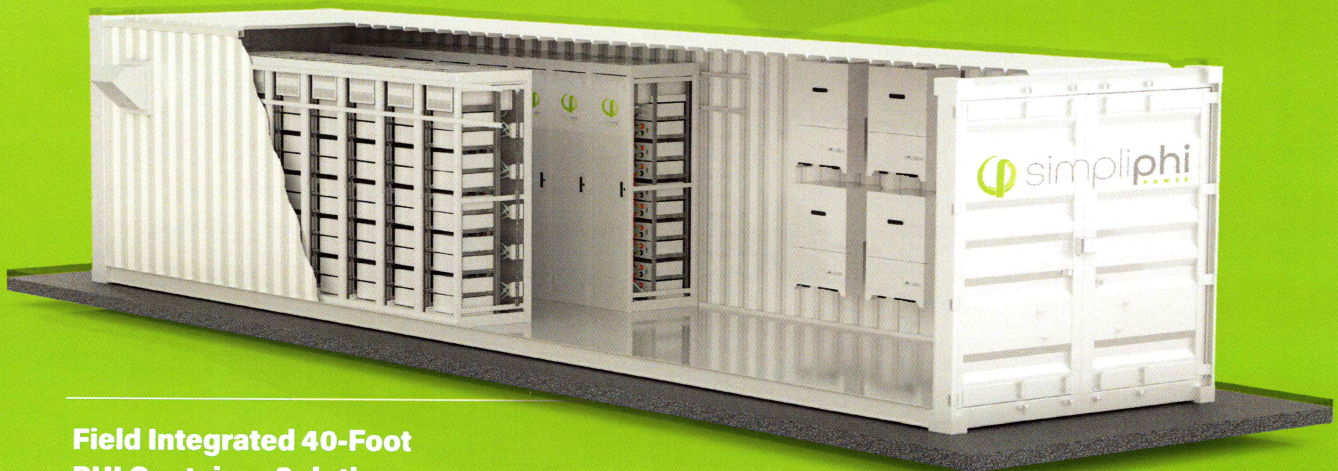
# PHI Containerized Solutions

Field integrated solutions with inverters, racks and batteries, available in 10, 20, or 40-foot containers.



**PHI HV Indoor Racks-  
Special Order with Doors**

**Field Integrated 20-Foot  
PHI Container Solution**



**Field Integrated 40-Foot  
PHI Container Solution**





## **SimpliPhi creates high performance, reliable and cost-effective energy storage solutions that are safe and non-hazardous for businesses**

PHI High Voltage energy storage solutions deliver industry-leading control and reliability without toxic coolants or thermal monitoring to achieve peak shaving, load shifting, emergency backup, demand response, and even frequency regulation functions.

PHI High Voltage energy storage solutions feature the safest, highest performing, and most cost-effective HV battery available to deliver dynamic and flexible solutions for any commercial energy storage or optimization project. And with SimpliPhi, adding energy capacity is as easy as bringing self-sufficient modules or containers to provide the system size you need.



# Creating Safe, Reliable and Affordable Power for Clean and Resilient Communities



**Deploying SimpliPhi's HV energy storage systems throughout the distribution network plays an essential role in enhancing grid reliability, improving efficiency, creating cost savings, providing power resiliency and security.**

- Provides backup power in the event of grid failures or shutdowns
- Enhance grid reliability and resiliency while accommodating to new load growth
- Optimizes energy usage by avoiding peak demand charges or Time of Use rates
- Reduce grid congestion and defer the need for T&D upgrades and buildout
- Maximizes utility rate incentives by responding to utility signals, discharging and reducing peak utility load demand,
- Balance renewable generation variability and supply grid services