

# INFINITE POWER. UNLIMITED POSSIBILITY.

For a Brighter Tomorrow



# OUR ENERGY SYSTEM IS CHANGING. **POWIN IS LEADING THE CHARGE**

We are ushering into the new frontier of energy where clean, local, abundant and affordable power is made available to everyone. The ability to store power effectively and efficiently is the key to unlock this transition. Powin is changing the way we power everything – through innovation.

## **This is Powin**

### **This is Energy Storage Made Simple**

Energy storage is essential for our transition to a sustainable, carbon-free world. But with time running out not just any energy storage solution will do. To accelerate the renewable revolution and sidestep the worst effects of climate change, we need simple, safe, and scalable energy storage we can count on. And that's where Powin's comprehensive approach to energy storage comes in.





## Why Powin

# BIGGER THAN BATTERIES: THE POWIN DIFFERENCE



### Your Safety is Our Everything

Our commitment to safety guides every decision we make, from product design and engineering to vendor selection and field service. We were one of the first utility-scale adopters of LFP batteries. This battery chemistry is considered the safest among lion batteries and can function at temperatures 70 to 100 degrees higher than NMC batteries. This is just one of the ways we go above and beyond to exceed existing fire standards.



### An Experience You Can Trust

Powin is one of the world's leading energy storage providers, having already deployed gigawatt-hours of systems around the world. And a decade of projects with 98.1% fleetwide availability says it all. Based in Oregon, USA, we're recognized as one of the top two battery storage system integrators in the US market and on of the top three globally, with projects in nine countries. But really, this is just the beginning for us.



### A Seamless Experience From A-Z

Powin is a vertically integrated, end-to-end platform. This means you don't need to worry about coordinating with multiple vendors, as we own and manage every step in our supply chain. This includes designing the battery rack, cabling systems, grid disconnects/connects, and high-level system controls that monitor everything – including how the system interfaces with the grid.



### Beyond Energy Storage

Because innovation is at the heart of everything we do, and we're committed to delivering cutting-edge technology, you can rest assured that your energy needs are in good hands. With our expertise in optimizing the performance and reliability of energy storage systems, you'll benefit from solutions that increase efficiency, reduce costs, and improve energy management.



### Complete Visibility

Unlike other more limited platforms, Powin's bottom-up design starting from the battery cell ensures complete visibility into all critical aspects of the energy storage system. This approach enables us to monitor every activity in each individual battery cell, providing predictive diagnostics for proactive maintenance. And because we're transparent with all this data, you gain access to unprecedented in-depth views of the system's behavior.



### We're Partners in This

We're firmly committed to a customer-centric approach. This means we're all about accommodating your specific needs and tailoring the experience to suit you. So much so that it's part of our company culture and is built into our DNA. This is reflected in our contracting process, designed to be straightforward, flexible, and user-friendly.



## Hardware That's Built To Last

# COMPLETE END-TO-END ENERGY STORAGE

Our vertically integrated hardware was designed to push energy systems forward by enabling increased renewable penetration and power decentralization. This means increased safety, reliability, and serviceability.

## First of its Kind Meet Stack750

The Stack750E is a truly game-changing energy storage platform. Its fully modular design and independent segments allow for granular control and monitoring of the entire system.



### Modular Design

### Built for Speed and Scale

The system is fully modular, pre-built, and tested in outdoor enclosures for quick deployment, lower installation costs, and increased reliability.



### Flexible & Configurable Systems

### Designed for Today's Energy System

The Powin Stack750 platform is flexible and adaptable, capable of supporting a variety of energy system configurations and specifications.



### Built-In Redundancy & Granular Control

### Engineered for Reliability and Safety

Stack750 provides high-quality power consistently with its backup systems, precise control over the entire system, efficient cooling, and effective thermal management.

## Powerful Platform Capabilities

### The Powin PCS

With the Powin PCS, you have complete control over how Powin systems are connected, built, and maintained. This includes the Power Plant Controller, which adds important features like power systems modeling, PCS commissioning, and long-term service to deliver optimal performance and maximize the value of your energy storage system.

## Features and Benefits

- Building Blocks from 1 to 3 MW
- AC & DC coupling
- Fast response time
- Open control platform
- Plug & play

## Charged & Ready to Meet Tomorrow's Energy Needs

### Power Conversion

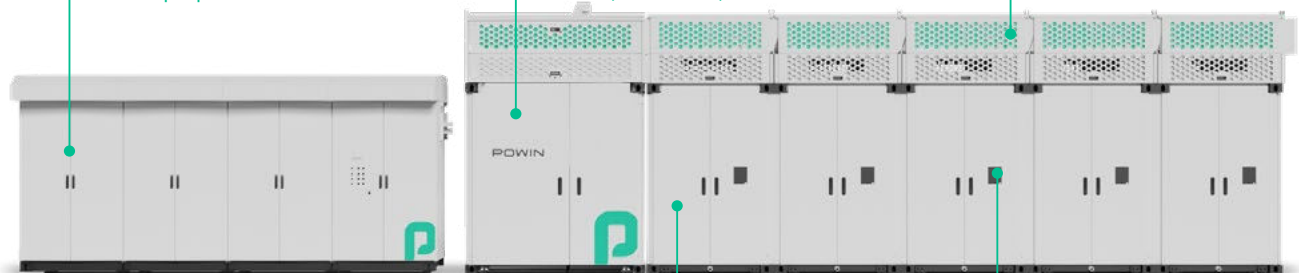
In-house bidirectional inverter and main step-up isolation transformer

### Collection Segment:

DC Disconnect Cabinet, AC Load Panel, HVAC Controls, Fire Panel, Comms and Controls

### Pre-integrated Cable Tray

collects the DC Cable, AC Cable and Comms to each Stack750



### Energy Segment

Up to 21 Stack750s per lineup. NEMA 3R/IP55 outdoor rating, optional NEMA 3RX

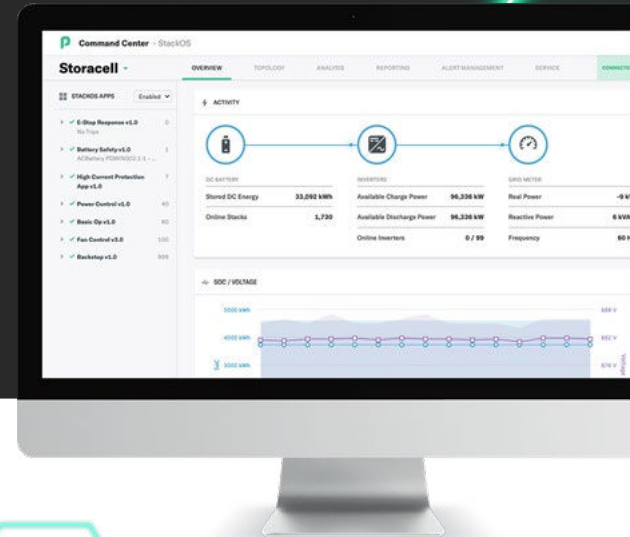
### Gas detection activates

emergency ventilation, bringing in fresh air and exhausting gases to outside

## Powin StackOS Operating System: Next Generation Software

# SEAMLESS ENERGY STORAGE MANAGEMENT

Experience the ease and simplicity of energy storage management with the Powin StackOS Operating System. With this streamlined energy storage management experience, you'll also benefit from optimized performance, unparalleled visibility at each layer of the energy storage system, and reduced costs. This is a purpose-built platform that includes battery management, energy management, and thermal management.



## Introducing Powin StackOS



**Configurable Applications** – Experience full system-level control with multiple real and reactive power control applications that can be stacked and prioritized to handle even the most complex use cases.



**Elegant Command Center UI** – Enjoy local and remote real-time system monitoring and control with our elegant, easy-to-use web-based Command Center, which is hosted securely in the cloud.



**Data Transparency for Deep Analytics** – Gain a comprehensive view of system performance thanks to the critical data we collect and share on each battery cell's temperature, charging rate, state of charge, and depth of discharge.



**Emergency Interface for First Responders** – Know emergency personnel are safe when interacting with Powin equipment thanks to a direct connection to the battery system, which maintains visibility even if site-level comms are down.



**State-of-the-Art Cybersecurity** – Rest assured that you're in good hands with energy systems employed in some of the most stringent grid network environments, meeting all NERC CIP security standards.

## Future-Ready Energy Infrastructure

## Powering Our Changing World

We perform a variety of applications to meet the needs of today's grid:

**Peak Shaving** – Reduce electricity use and avoid excess charges for grid usage at peak hours of the day.

**Load Shifting** – Shift energy usage to more optimal timeslots to reduce power consumption.

**Renewables Integration** – Seamlessly integrate renewables by smoothing power output to reduce rapid voltage and power swings.

**Spinning Reserves** – Instantly compensate for generation or transmission outages by discharging MWh to GWh of battery capacity.

**Grid Services** – Maintain reliability by providing frequency regulation, voltage support, black start, and grid inertia.



**We're Partners in This**

# YOUR ENERGY NEEDS COME FIRST. **ALWAYS**

As much as technology is at the heart of what we do, it's about so much more than that. Your energy needs are a top priority, and we're committed to providing solutions tailored to any size project developer, IPP, or utility. And that's where our decade's worth of experience deploying over 2.5 GWh of energy storage comes in. We also work hard to support all our project partners every step of the way because we understand that every project is unique and deserves individual attention.

## An Unforgettable Experience



**Comprehensive Maintenance** - Get responsive service for necessary maintenance and cadenced preventative maintenance plans to ensure optimal system performance.



**Wrapped Warranties** - Enjoy full warranty management of all Powin system components backed by our suppliers.



**Best-in-Class Guarantees** - Trust us to maximize projects through capacity, efficiency, and availability guarantees, fully managed by Powin for up to 20 years.



**Cell-Level Monitoring** - Gain full visibility and direct, non-API transparency into your storage system to the cell level with the StackOS battery management platform.



**Analytical Reporting** - Access comprehensive insights about system health and performance with StackOS, which combines cell and system analytics with AI.



**Exceptional Support** - Speak directly with a Powin technician for personalized support and assistance in monitoring, diagnosing, and resolving system issues.



**Hands-On Training** - Get comprehensive training from our experienced reps with all service packages.



## Powin in Action: Our Case Studies

# BUILDING A BETTER FUTURE. ONE BATTERY AT A TIME

Every project we undertake moves us closer to the kind of world we're trying to create. Because for us, it's about so much more than the MWs and MWhs. It's about creating a sustainable future powered by clean energy. We're working on fixing our broken energy systems one battery at a time.



### Bolstering the Texas Grid

#### APEX

Power

**200MW**

Energy

**500MWH**

COD

**MID-2024**

**Use Case:** ERCOT Grid Services

**Status/Location:** In Construction / Texas

### The most powerful battery in the world

#### Waratah Super Battery

Power

**850MW**

Energy

**1680MWH**

COD

**MID-2025**

**Use Case:** Grid reliability and stability, renewable integration

**Status/Location:** In construction/ New South Wales, Australia

### First of its kind for Southern Power

#### Tranquillity

Power

**72MW**

Energy

**288MWH**

COD

**Q1 2022**

**Use Case:** PV+ESS, Solar Shifting

**Status/Location:** California

### Enough to power 90,000 homes

#### Longroad Sun Streams 3

Power

**215MW**

Energy

**860MWH**

COD

**MID-2024**

**Use Case:** PV+ESS, Solar Shifting

**Status/Location:** In construction/ Arizona

### One of the world's largest solar & storage projects

#### Garland

Power

**88MW**

Energy

**352MWH**

COD

**Q1 2022**

**Use Case:** PV+ESS, Solar Shifting

**Status/Location:** California



# A NEW WAY TO **POWER OUR WORLD**

## **More than just an energy platform provider.**

We're a team of dedicated professionals committed to accelerating the transition to clean energy. Our comprehensive solution includes grid-scale batteries, power conversion systems, and state-of-the-art software controls that enable our clients to safely and effectively implement energy storage systems on a large scale.

## **A leader at the intersection of power and innovation.**

We have over 15 GWh of energy storage systems that are deployed and under construction. But we didn't start out that way. We began in 1989 as a high-quality contract manufacturing company, leveraging our extensive supplier network and relationship base across Asia and North America.

## **We're on a mission to change how our world is powered.**

At Powin, we are advancing the next frontier of energy and changing the way we power our daily lives by ensuring access to clean, resilient, and affordable power.



Interested in learning more? Contact us at [contact@powin.com](mailto:contact@powin.com) or visit our website at [www.powin.com](http://www.powin.com)