Honeywell | Energy Storage Solutions

Battery Energy Storage Solutions for Industrial Operations

Solution Note

Scalable, Flexible, and Intelligent Energy Storage

Compact, end-to-end modular battery energy storage system (BESS) and energy management designed for enhanced energy density while delivering significantly reduced installation costs.

Industrial organizations are under pressure to use energy more efficiently, reliably and economically, while reducing environmental impact and improving safety and regulatory compliance.

Assets may be geographically dispersed and often include aging infrastructure and systems lacking the ability to meet rigorous performance objectives. Many businesses utilize a variety of equipment manufacturer and control systems which may not be optimized to meet the operating demands of the current market and do not satisfy enterprise-wide data requirements.

At the same time, automation solutions for energy operations are often implemented in a piecemeal fashion. Different technology suppliers provide point solutions that present integration challenges.

Honeywell Ionic™ Modular 10x8x8 ft enclosure is designed to address space considerations.

Solution

Honeywell can provide a complete turnkey product as part of our end-to-end approach. The Honeywell Ionic™ system, utilizing lithium-ion battery cells, emphasizes flexibility and futureproofing with a variety of choices for battery block and power conversion system (PCS) options. It is supported by Honeywell's control & energy management system, and a battery cell-agnostic battery management system (BMS) which optimizes energy use, enhances uptime, enables use cases such as peak shaving, and supports the creation of a Virtual Power Plant. Additionally, it offers cell-level performance insights and is adaptable to advancements in battery chemistry, safeguarding users from future supply-chain risks.

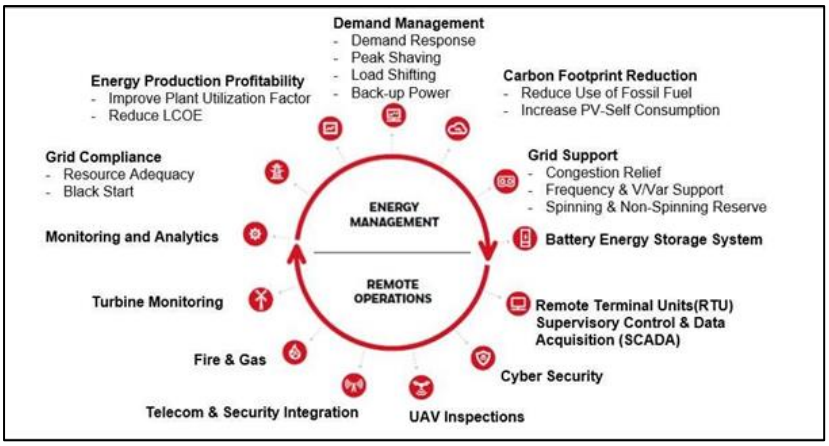
Honeywell BESS solutions maximize use of renewal energy sources.

FEATURES & BENEFITS

- Enables significant electricity cost savings
- Improves business resiliency
- Maximizes use of renewable energy
- Ensures system has bandwidth to meet peak demand
- Turnkey DC block, controls and analytics, energy services, and service agreements in one place.
- Small, flexible variant to address space issues
- Vendor-agnostic solutions with certified integrations

Honeywell offerings include high density enclosures, and flow battery options along with our renowned SCADA and micro-grid controller plus our three (3) decades of complex integration and project execution capability. In addition, Honeywell offers energy services utilizing monitoring and advanced analytics from remote operations centers.

Finally, we offer a variety of building automation, fire and gas safety, and cybersecurity solutions along with warranty and maintenance services for a complete solution from a single source.



Honeywell's full suite of related offerings

BESS Features

Renewable energy stakeholders can partner with Honeywell to develop and deploy an energy storage program to help industrial organizations achieve significant electricity cost savings and improved sustainability and resiliency. Honeywell's solutions emphasize energy density, flexibility, and futureproofing with scalable, modular designs, flexible installation and augmentation, and high voltage efficiency.

Customers can contract with Honeywell for turnkey project delivery, including fully integrated battery energy storage systems, control and energy management software solutions, and analytics and services. Honeywell can operate and maintain energy storage systems from its Remote Operations Centers (ROCs) and utilize proprietary predictive analytics and value stack optimization algorithms. Our advanced control technologies enable precise battery dispatch along with network security and cybersecurity protection.

Honeywell's end-to-end, fully integrated operations platform typically consists of a state-of-the-art, multiple megawatt-hour Battery Energy Storage System (BESS); Experion® Elevate cloud-enabled Supervisory Control and Data Acquisition (SCADA) system; ControlEdge™ Remote Terminal Units (RTUs); and advanced battery scheduling and peak prediction software.

An optional addition to this overall solution is Experion Orion consoles providing an intuitive Human-Machine Interface (HMI) for system operators and high level dashboards for end-user executives.

Honeywell's technology enables batteries to charge during off-peak times and draw from the BESS when energy demand on the grid and costs spike—typically on air conditioning-intense summer days or heating-intense winter days. Honeywell offers several key features that differentiate our offerings:

- Few companies offer turnkey battery block, controls, analytics and energy services, and service agreements in one place.
- Honeywell has one of the smallest, most flexible variants to address space issues.
- Few suppliers have vendor-agnostic solutions with certified integrations.
- Honeywell has financing partners to help mitigate upfront costs.

Honeywell offers a variety of battery block and power conversion system (PCS) options

Benefits

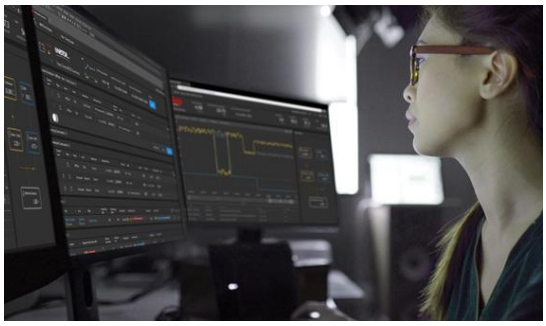
Honeywell's Battery Energy Storage Systems offer technology, software, and services to help optimize operations, reduce carbon footprint, and deliver significant cost savings to industrial companies, independent power producers, and utilities. Combine new and traditional energy generation to improve redundancy and grid stability. Advantages include:

- Lower installation costs
- High voltage efficiency
- Grid stability
- Revenue stacking
- Reduced electricity and maintenance costs
- Improved business continuity
- Reduced auto-producer backup and emissions

Honeywell can operate and maintain energy storage systems from its Remote Operations Centers (ROCs) and utilize proprietary, AI-based peak prediction and value stack optimization algorithms.

Complete, Integrated Energy Management

With over 200 patents, Honeywell offers complete, integrated solutions for energy storage including integrated BESS hardware, energy monitoring and control systems, and energy services utilizing monitoring and advanced analytics from remote operations centers (ROCs). Pretested and certified enclosures, multiple battery block and PCS-agnostic solutions, and autonomous controls can be combined with an integrated view of assets with comprehensive software providing peak prediction, frequency regulation, autonomous dispatch, and virtual power plant capabilities along with warranty tracking and operations and maintenance suggestions from our ROCs. Your Honeywell contact can provide a specification sheet.



Complete, integrated control and energy management

Why Honeywell?

Honeywell has installed over 5GW of traditional power generation and over 500MWh of energy storage deployments at over 50 sites. Whatever the project size, Honeywell leverages our renowned automation platform and cybersecurity solutions combined with the largest system installed base and nearly 50 years of global experience in control automation to guide you with smart technologies and energy management best practices. With a global team of supply chain, technology, and service experts, you can rely on us for reduced risk and improved performance.

With continuous innovation and seamless on-line migration to the latest release, some of Honeywell's greatest advances are the result of our commitment to helping customers continuously evolve while maintaining their current systems. We provide lifecycle investment protection by providing smooth migration paths to the latest control system technology when the time is right.

For More Information

Learn more about how Honeywell's energy storage solutions at Energy Storage Solutions or contact your Honeywell Account Manager or System Integrator.

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