EXPERION® ENERGY
CONTROL SYSTEM

Leverage all the capabilities of a fully integrated energy management system

Honeywell

As a global leader in process control and automation technology, Honeywell is committed to providing a fully integrated process control and energy management system. Our comprehensive solution is delivered to you in a turnkey project, as part of an end-to-end approach, all supported by unsurpassed outcome-based guarantees.

Honeywell's Experion® platform is proven technology running at thousands of critical sites worldwide. With this best-in-class system, commercial and industrial end users, independent power producers, and utility operators can optimize their energy performance, reduce capital and operating costs, and comply with strict regulatory requirements.

UTILIZE A FULLY INTEGRATED DISTRIBUTED ENERGY SOLUTION

At Honeywell, we're helping industrial owners/operators around the world make the most of new, smarter energy technologies and battery storage systems and guiding them towards best practices for energy management.

Our Experion Energy Control System is an advanced remote operations energy management platform. Combined with our industry-leading Battery Energy Storage System (BESS), it delivers guaranteed business outcomes for industrial customers.

MEET TODAY'S UNIQUE ENERGY MANAGEMENT NEEDS

Honeywell's single, integrated platform provides renewables integration along with energy storage, and scales to remotely operate one to many sites from an operations center owned by the end user or by Honeywell. Existing Honeywell customers can benefit from using their Experion infrastructure to expand from process control to energy management.

Experion Energy Control System is a unified suite consisting of battery energy storage, microgrid and renewable energy control, SCADA remote operations, and advanced analytics — all designed to meet today's unique energy needs.

OPTIMIZE YOUR OPERATIONS
WITH PROVEN TECHNOLOGY

Honeywell has spent decades innovating technology for efficient and sustainable industrial operations. Our Experion Energy Control System makes it easier to anticipate and manage demand and energy generation in today's complex energy ecosystem.

Honeywell's proven battery energy storage systems, software solutions, and outcome-based performance guarantees help end users optimize their operations and realize significant cost savings.

The key components of Honeywell's end-to-end solution include:

MODULAR BATTERY ENERGY STORAGE SYSTEM (BESS)

Honeywell BESS is our own lithium-ion-based battery energy storage system for self-consumption or independent power producers and utilities. It provides an optimized energy outcome, improves uptime, and reduces carbon footprint to help meet your corporate sustainability goals.

What it offers

- Scalable architecture allows you to right-size the system for both front of the meter and behind the meter use cases without oversizing
- Proven lithium-ion-based cell chemistry, with energy storage scalable from 500kWh to 4GWh
- Optional, industry-leading off-gas detection prevents thermal runaway before it even starts
- Integrated Honeywell controls to support all use cases
- Specifically designed for use in extreme environments
- Turnkey installation from utility engagement, engineering, procurement, construction, commissioning, start-up, operations, and maintenance

How it performs

- Lowers energy costs with peak shaving, load-shifting, energy arbitrage, and more
- Optimizes renewables and reduces curtailment, extends production hours, and increases self-consumption
- Minimizes downtime with back-up power, black-start capabilities, load-shifting, and peak shaving
- Reduces carbon footprint to meet corporate sustainability objectives
- Enables you to participate in ancillary markets like frequency regulation, voltage support, demand-response, etc. when your system is not in use to pay off your asset faster
- Increases lifetime value of grid infrastructure with transmission and distribution deferral and congestion relief use-cases

MANAGE RENEWABLES AND
ENERGY STORAGE ASSETS
WITH HONEYWELL

ELECTRICITY
TRANSMISSION
& DISTRIBUTION

RENEWABLE
FUEL

RENEWABLES

EV

EV

EV

INDUSTRIAL
PLANT

ENERGY
STORAGE

INDUSTRIAL
PLANT

REMOTE
OPERATIONS CENTER

&

VIRTUAL POWER PLANT

COMBINED
HEAT & POWER
GENERATION

MICROGRIDS

THE
FUTURE
IS
WHAT
WE
MAKE IT

—
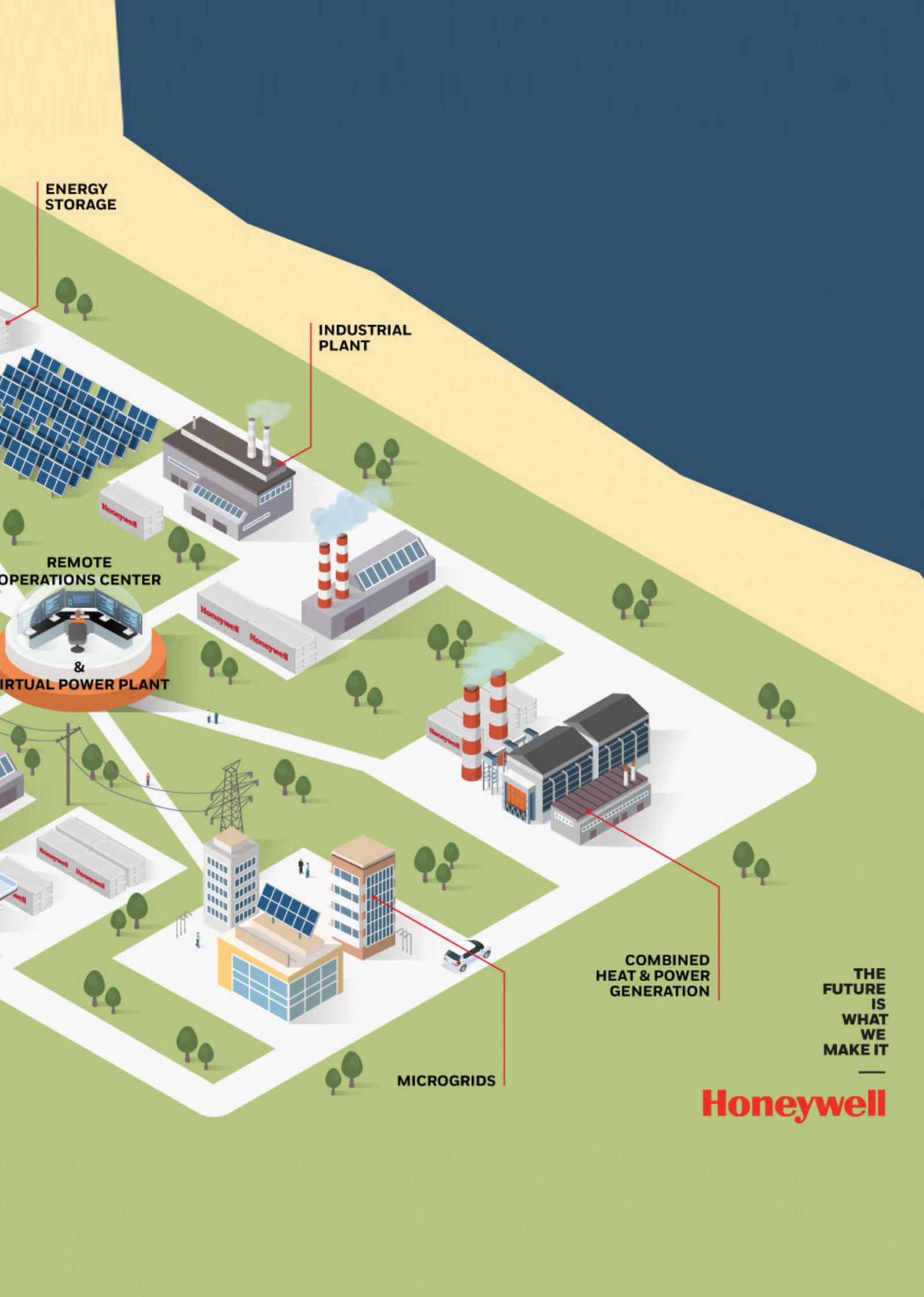
Honeywell

INTEGRATED SCADA SOLUTION

Honeywell provides a powerful software platform incorporating innovative technology for HMI and SCADA applications. Our proven Experion SCADA solution provides a single pane of glass for viewing and controlling single sites or fleets of new and existing assets.

The Experion HMI incorporates features developed from years of extensive research of human factors. For example, summary displays are streamlined to show and compare thousands of pieces of equipment at once.

With Honeywell's approach, upgrade paths are always available so you can be confident your SCADA system will be available and up to date for the complete lifetime of your asset.

What it offers

- Connect new and existing systems with extensive protocol options
- Vendor-agnostic solution lets you interface with all your assets and devices to bring all your data to a single location

- Flexible architecture allows fully on-site installation, cloud-hosting by Honeywell, or a hybrid of both — optional redundancy at every layer lets us build a solution for your use case and budget
- Experion HMIWeb displays provide a level of customization not seen in other renewables SCADA systems
- Customisable group level scheduling and empower you to control your fleet of assets as one, ensuring you meet your KPIs
- Innovative alarm management features using the same alarm subsystem found in critical plants and infrastructure running Experion today
- Automated reporting tools generate site KPI reports and production numbers and distribute them to stakeholders automatically
- Fully supported upgrade paths ensure your control system is always current for the complete lifetime of the asset

How it performs

- Enables you to view and control all your assets from one place and monitor your sites in real time

- Allows you to quickly identify underperforming assets and then take action using equipment summary displays and task-based filters to easily compare asset performance based on previous site output to determine where maintenance is required
- Employs exception-based predictive maintenance instead of reactive approaches
- Includes a built-in alarm, data, and event historian to compare and analyze past performance and perform post-event analysis in accordance with regulatory requirements for data retention
- Provides GraphQL API to integrate your trading desk to control your fleet of assets
- Includes mobile and web applications to let you see your data from anywhere at-a-glance
- Provides scalable and cybersecure solution to control one or hundreds of sites
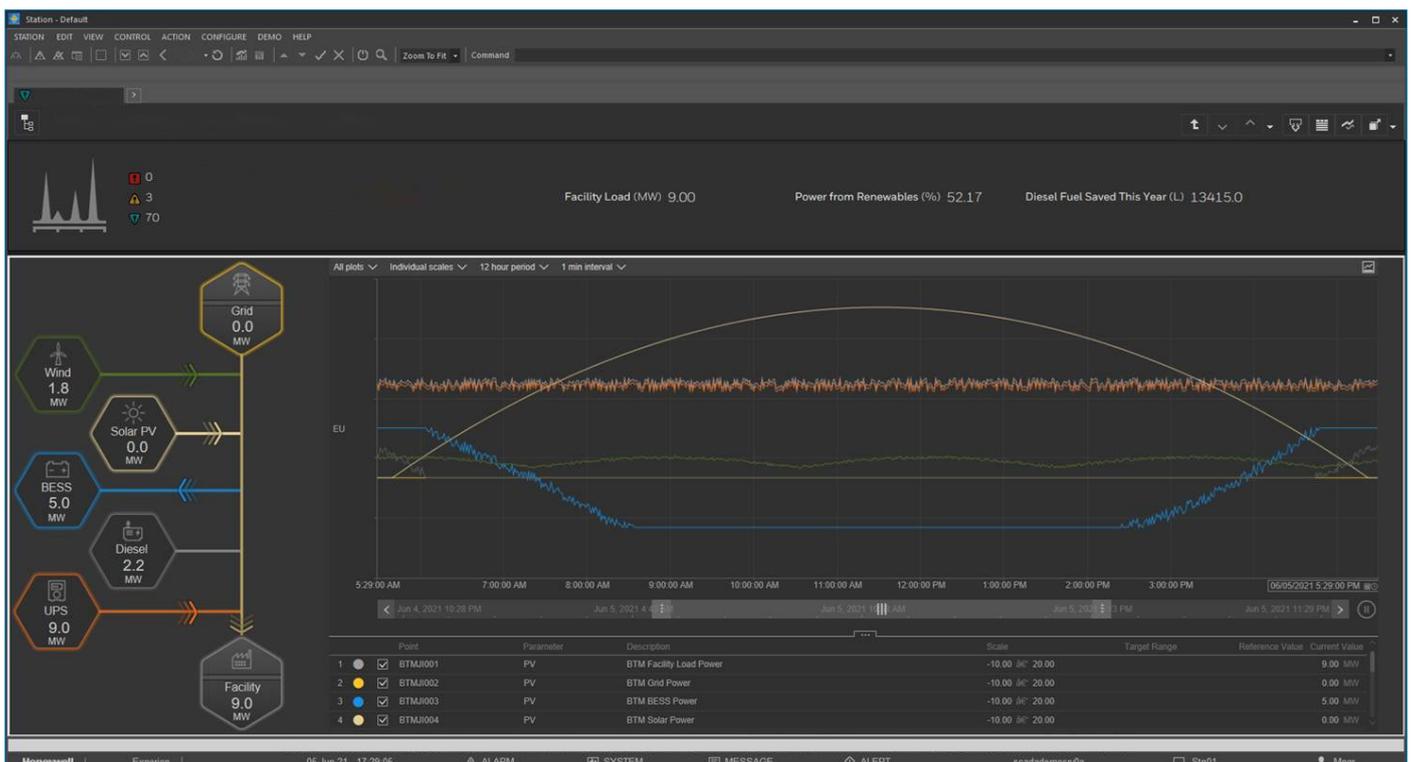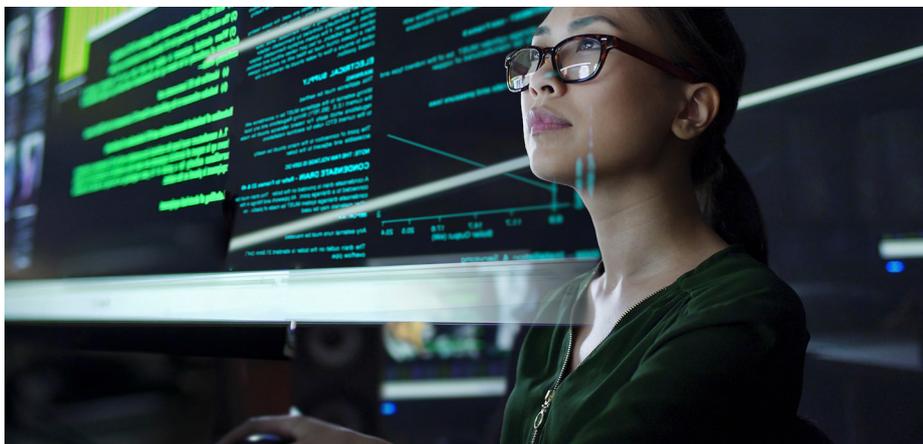
MICROGRID CONTROLS

The Honeywell microgrid controls is based on the proven ControlEdge™ RTU and PLC controllers, which are powerful, modular, and scalable devices capable of all remote automation and control applications. The microgrid controls provides improved management of field assets through simplified and efficient remote monitoring, diagnostics, and management.

With this solution, you can reduce equipment monitoring and diagnostics from hours to minutes and standardize your data collection and interfaces across all your assets.

The Honeywell microgrid controls gathers data from power generation sources, loads, and other external signals to optimize outcomes for reducing costs, increasing revenue, and ensuring power availability.

What it offers
- Local control algorithms ensure your microgrid is managed safely and efficiently during communication outages
- Native controller and networking redundancy support for high-availability applications
- Various hardware options let you specify the ControlEdge RTU or PLC based on your specific environment and I/O requirements
- Data retention uses onboard memory to store data during times of communication outage — data is backfilled when communications are restored
- Integration with any system using industry standard protocols like MODBUS RTU/TCP, DNP3, MQTT, OPC-UA, and local hardwired I/O

- Extensive library of control algorithms for renewable energy
- Remote updates of controllers for the latest features and cyber-security updates
- Cybersecurity built in with ISASecure EDSA Level 2 certification ensuring the safety of the system, personnel, and data

How it performs
- Optimizes selection of energy sources based on priorities for generator efficiency curves, dynamic grid power pricing, start/stop maintenance costs, weather forecasts, and carbon footprint reduction
- Optimizes uptime of critical loads by ensuring power availability
- Reduces fuel and maintenance costs for generation sources by using efficiency curves and renewables maximization, and by reducing start/stop wear
- Allows additional income earnings from selling power during times of excess power generation or by participating in energy markets
- Gathers data from new and existing field assets to monitor performance and predict failures
- Supports assets are running within their warranty limits

ENERGY PERFORMANCE CONTRACT

As part of our Energy Performance Contracts, the Experion Energy Center does remote asset monitoring, energy resource management, and supervisory control in a single integrated platform. This holistic solution eliminates the need to establish your own remote operations center and can benefit your business in numerous ways.

With a traditional approach, the end user manages, maintains, and operates the Experion Energy Control System. Honeywell's software as a service solution provides all system management and maintenance in our cloud while you operate the system. If desired, Honeywell can manage, maintain, and operate your assets with an outcome-based guarantee.

What it offers
- Honeywell operated and maintained control rooms in global locations
- Single point of contact for operations and support through Honeywell Global Technical Assistance Centers
- 24/7 remote monitoring from facilities situated around the world
- Complete enterprise-level access to asset performance via web-based dashboards
- Data is accessible through secure protocols
- Full functionality of the Experion Energy Control System

How it performs
- Provides outcome-based performance guarantees based on your specific KPIs
- Reduces CAPEX and saves on infrastructure costs using Honeywell's control room instead of the customer's facility
- Reduces OPEX using Honeywell's highly trained operators to monitor and control assets
- Enables best-in-class cybersecurity managed by Honeywell experts
- Reduces project start-up time using existing Honeywell infrastructure
- Employs distributed control resources to maintain operational continuity during natural disasters or technology interruptions
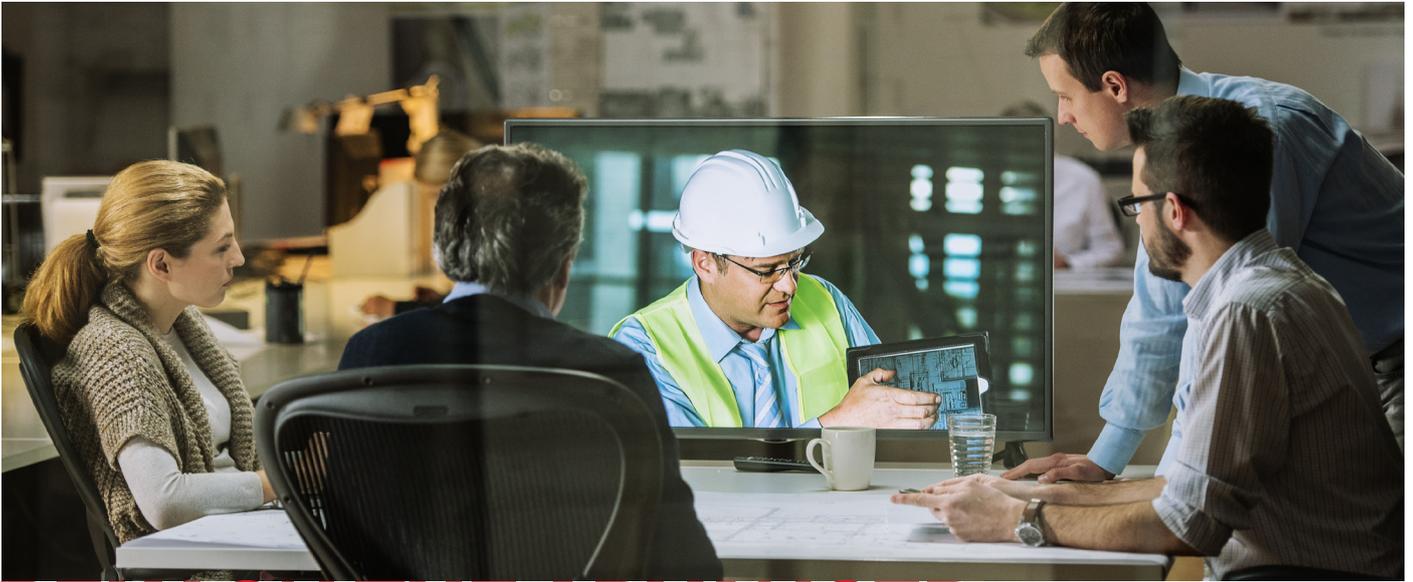
RELY ON THE ADVANCED
EXPERION PLATFORM

Honeywell's Experion remote operations energy management platform offers a holistic, turnkey solution for all your rigorous operational requirements.

- **Energy Management**
  - Technology-agnostic platform
  - Monitoring, control, insights
  - Drives value for the end user
- **Honeywell BESS**
  - Robust, onboard battery energy storage applications
  - Built-in integration with Experion

- **Turnkey Services**
  - Design & Installation
  - Global EPC partners for end-to-end execution
- **Operations and Maintenance**
  - Expert Honeywell operators manage your assets
  - If preferred, you can maintain and operate assets yourself with Experion

- **Energy Performance Contracts**
  - Based on each customer's unique KPIs
- **Financing**
  - Finance your asset through our partners

For More Information

To learn more about Honeywell Energy Storage Solutions, contact your Honeywell sales representative or visit
https://hwll.co/energy-storage-solutions

Honeywell Process Solutions

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THE
FUTURE
IS
WHAT
WE
MAKE IT

Honeywell