



LEVERAGING ENERGY STORAGE TO DECARBONIZE AND MAXIMIZE INDUSTRIAL OPERATIONAL PERFORMANCE

RALUCA BARBIERU-RASIT
BESS SEGMENT SOLUTION LEADER - EMEA

Honeywell

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HONEYWELL OVERVIEW
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ENERGY AND INDUSTRY
MACROS

Honeywell

WE MAKE
COOL THINGS
ACCELERATING DECARBONIZATION

HONEYWELL OVERVIEW

NASDAQ: HON | ~715 sites | ~97,000 employees | Charlotte, NC headquarters | Fortune 500 | 2023 Revenue: ~\$37B

AEROSPACE TECHNOLOGIES



Our products and services are used on virtually every commercial, defense, and space aircraft. We build aircraft engines, cockpit and cabin electronics, wireless connectivity systems and mechanical components. Our hardware and software solutions create more fuel-efficient aircraft, more direct and on-time flights and safer skies.

BUILDING AUTOMATION



Commercial building owners and operators depend on our operational technology hardware, software and analytics to help create safer and more efficient and productive facilities. Our solutions and services are used in more than 10 million buildings worldwide.

ENERGY & SUSTAINABILITY SOLUTIONS



We help solve tough sustainability and energy transition challenges across our end markets that help reduce emissions and deliver innovative sustainable solutions while seizing new opportunities to deliver outstanding value to our clients and shareholders.

INDUSTRIAL AUTOMATION



We provide solutions to support our customers to help deliver results with enhanced productivity and safety standards. Our innovation powers process solutions, asset performance management, cybersecurity, and warehouse and retail automation.

HONEYWELL CONNECTED ENTERPRISE

We empower those who make, move and operate critical resources to grow responsibly. Our flagship Honeywell Forge solutions drive business outcomes around performance, efficiency, cybersecurity and safety by uniting data across assets, people and processes. We leverage the latest technologies and persona-focused design to help uncover hidden insights, increase productivity and enhance the user experience from the shopfloor to the top floor.

Shaping the Future Across Industries

HONEYWELL TO BE CARBON NEUTRAL

BY 2035

We pledge to be carbon neutral in all our facilities and operations by 2035. here is where we stand today:



90%

REDUCTION

in GNG emissions since 2004



5,700

SUSTAINABILITY

projects since 2007



50%

R&D

**Focused on solutions for
improved environmental and
social outcomes**

OUR JOURNEY TO CARBON NEUTRAL

**Honeywell Romania
Manufacturing Plant (Lugoj, Timis)**

THE CHALLENGES

- **Grid reliability**

**core problem - frequent loss of grid power,
resulting in plant shutdowns**

- **Power Quality and Renewable Integration**

- **Reduce carbon footprint**

- **Reduce energy bill costs**

OUR JOURNEY TO CARBON NEUTRAL HONEYWELL LIFE SAFETY MANUFACTURING PLANT

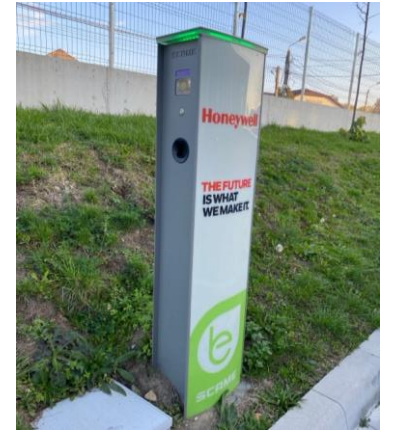
Rooftop Solar – 1 MW PV



Carport – 0.7 MW PV



EV Chargers



Solar PV Inverters



Diesel Generators for last instance usage



BESS 1.2MW/1.6MWh



Manufacturing Facility



HONEYWELL BATTERY ENERGY STORAGE

**ENERGY
SERVICES**



**HONEYWELL
FORGE**



**CYBER-
SECURITY**

Connect

Predictive

Proactive / EOL

Outcomes

Route to Market

Trading Analytics
Contract Engagement with ISO
/ grid operators
Dispatch data and setpoints

Fuel Generator



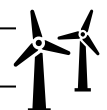
Grid



Solar Panels



Windmills



**Control and Energy
Management System**

Building Load



Green H2



Plant Load



Industrial Heat



Modular: <1MWh



XL: 1- 6 MWh



Max: 6-100+ MWh



**Honeywell
Lean Project Execution**

HONEYWELL EMBRACING THE SUSTAINABILITY TARGETS



BEST-IN-CLASS VENDOR AGNOSTIC SOLUTION

8+

Combinations of **DC Block and PCS** certified

50+ GW

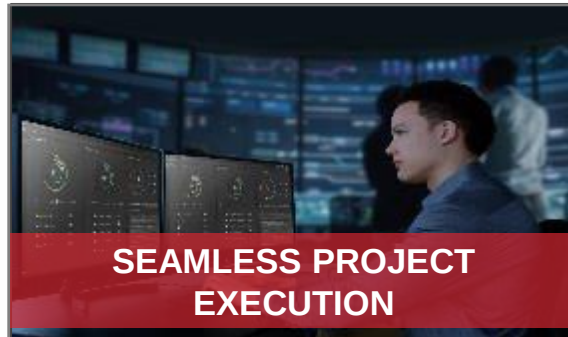
of **traditional power generation** leveraging vendor agnostic automation solutions



Solution deployment flexibility – **Cloud or on-premise**



Best-in-class **cyber security**



SEAMLESS PROJECT EXECUTION

500+ MWh

of **BESS** deployed at **50+ sites** across the world

900+

Project Engineering and management workforce

100+

Supply chain management workforce, **>10% in China** close to vendors



Global project execution methodology



CONTINUOUS INNOVATION

40+ years

of **continued innovation** in **energy control systems and SCADA** for power industry

2,000+

Worldwide **Experion Deployments** in wide range of applications

3400+

Patents and patent application worldwide



UNMATCHED RELIABLE AFTER-SALES SUPPORT

900+

After-sales support personnel

30+ years

of continued after-sales service support at **complex projects**

2 ROC

Remote Operating Centers (ROC) dedicated to BESS

Brand Honeywell

Stable and trusted long-term partner

Honeywell as a Long-Term Reliable Partner

WHICH PROBLEMS WE CAN SOLVE FOR YOU - BESS APPLICATIONS

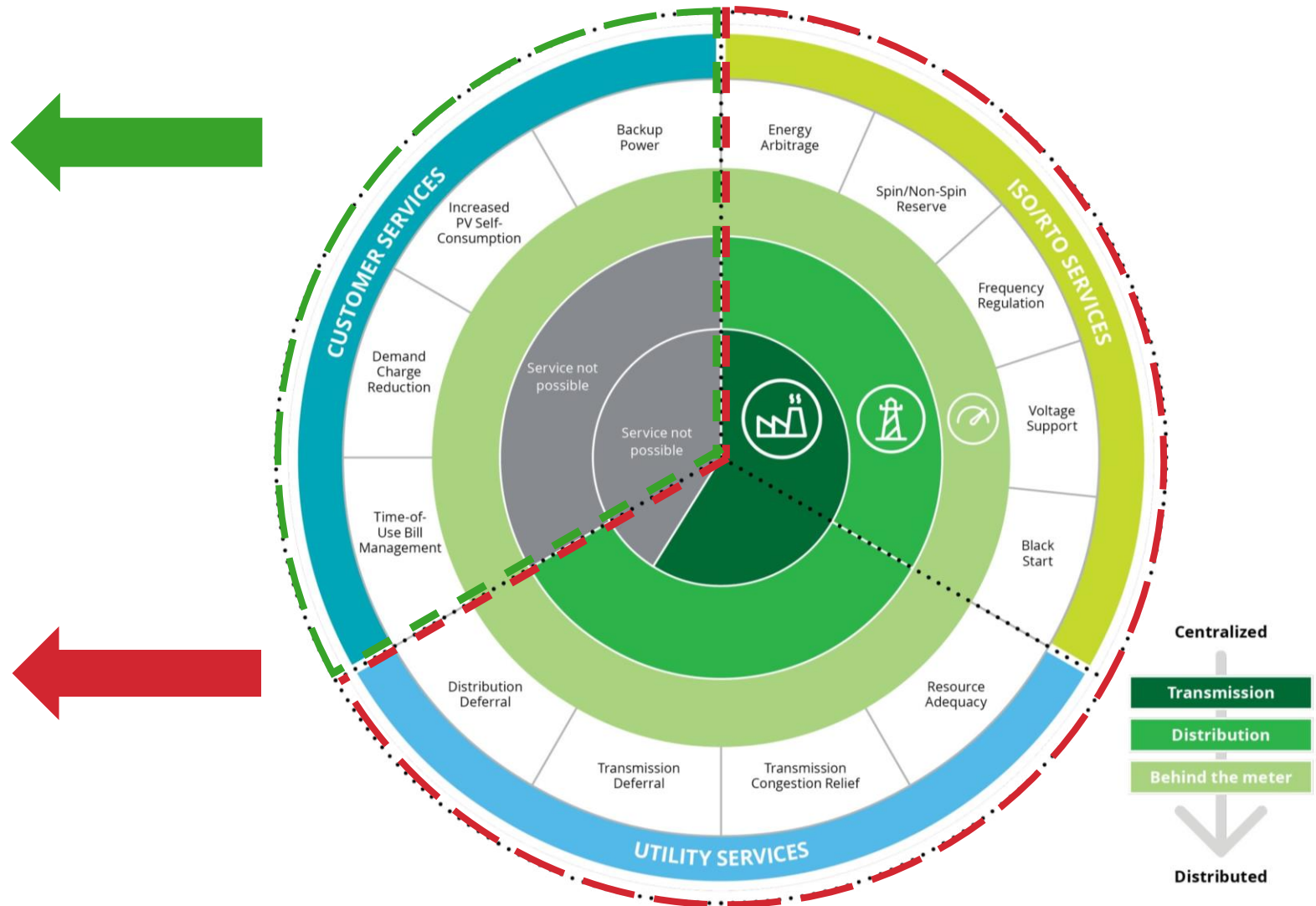
BTM USE CASES

- Time of Use Bill Management
- Demand Charge Reduction
- Increased PV Self-Consumption
- Back Up Power



FTM USE CASES

- Energy Arbitrage/Energy Shifting
- Frequency Regulation
- Voltage Support
- Black Start
- Resource Adequacy
- T&D Deferral



THE IMPORTANCE OF SUSTAINABILITY INITIATIVES IS ACCELERATING ON A GLOBAL SCALE

Battery Energy Storage Systems play a vital role, unlocking the true potential of renewable energy sources and ensuring a consistent power supply and grid stability

ENERGY AND INDUSTRY MACROS

- **Energy users are preparing the business for a net-zero world, creating a **profitable transition****
- **Power supply and operations are transitioning **towards more renewable energy capacity** to decarbonize the power sector**
- **The variability of solar and wind power poses a challenge to grid stability. **To bridge the gap between intermittent renewable energy generation and continuous electricity demand, battery energy storage systems (BESS) offer a compelling solution****

ANY QUESTIONS?



Visit us at our booth nr. 7
You can see virtual power plant and the
rest of the Experion Energy Control
System features in the **demo center**