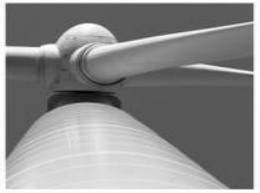
Nature, the only solution!

MONSSON

What are the drivers for Co-location of PV, Wind and Energy Storage within Energy Markets



Innovating in Renewable Energy Since 2004

A Legacy of Leadership
Over 6,000 MW of renewable projects developed worldwide

Diverse Expertise
Active in wind, solar, hybrid energy projects, research and development, energy trading

Operational Excellence
114 MW wind and solar in operation, 60 MWh energy storage systems and 156 MWh under construction

Global Innovation
Delivering large-scale renewable energy projects across multiple countries

Advanced Technology Enabling Co-location of PV, Wind & Storage

In-house Innovation
Fully designed and developed by Monsson, integrating Li-Ion batteries into seamless energy solutions

Versatile Applications
Suitable for integration with PV and Wind, for grid services, arbitrage, balancing, and peak shaving.

Built for Extreme Climates
Custom-built, insulated structures ensure optimal temperature control, extending battery lifespan and maximizing market competitiveness.

Advanced Software Control
Proprietary software ensures reliable and efficient performance across all energy needs, responding dynamically to market conditions.

Mireasa Hybrid Park Case Study

Battery Energy Storage

- 6 MW x 4h – stage 1, operational
- 24MW x 2h – stage 2, operational
- 24 MW x2h – stage 3, under construction

Extension of Battery Storage to 54 MW x 4h - under construction, COD Q4 2025

Wind farm, 50 MW - operational since 2015

Solar PV Plant, 35 MW - under construction, COD Q3 2025

Location: Constanta, Romania

Addressing Battery Degradation and Operational Efficiency

Climate-Adaptive Design. Insulated housing maintains constant battery temperatures whatever outside ambient temperature.

Multiple layers for parameters and safety monitoring. Redundant safety systems monitor temperature, gas emissions, and potential hazards.

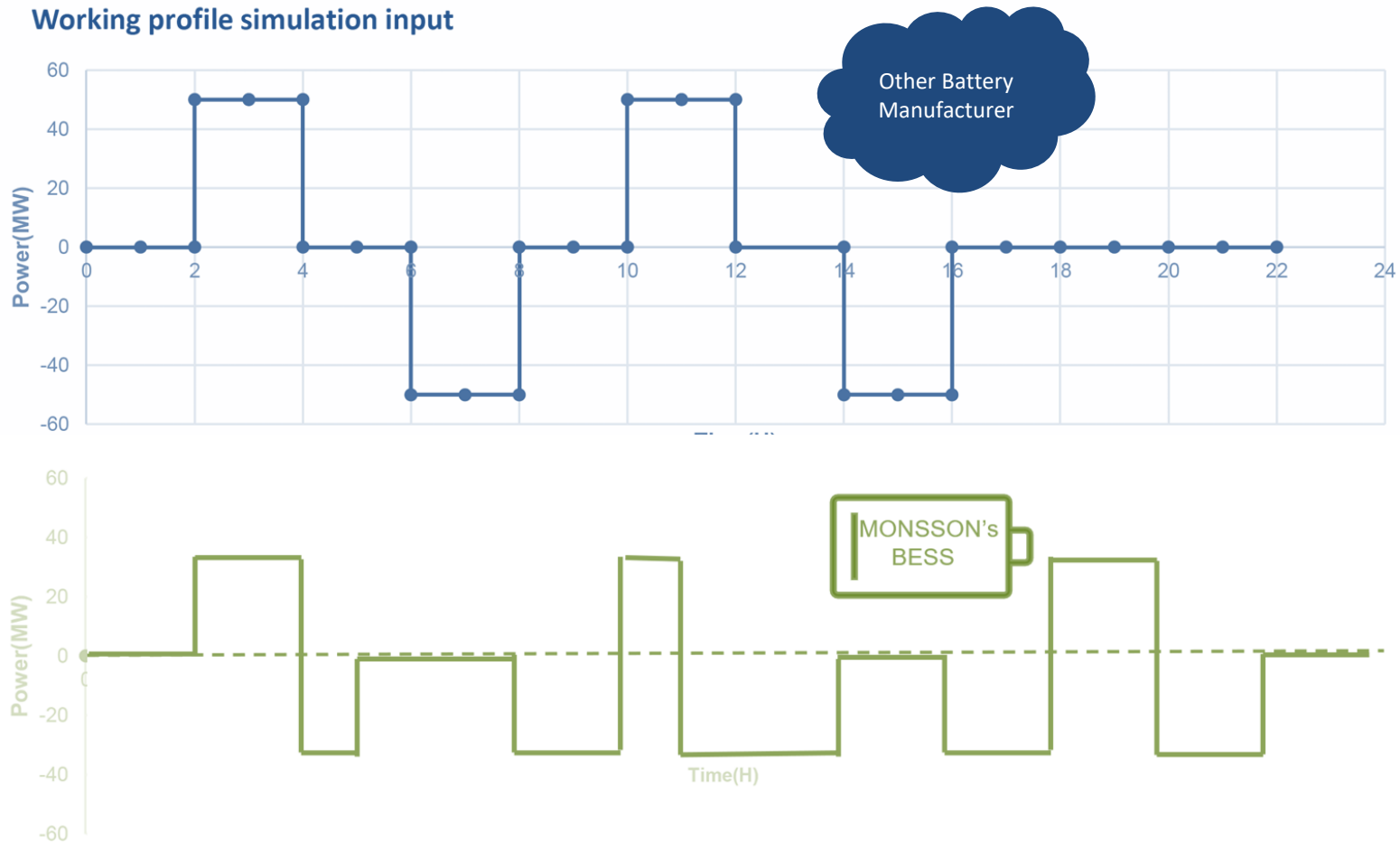
State-of-the-Art Cooling Systems: Minimizes energy consumption and prolongs battery life.

Automated and Remote Operation: Ensures real-time efficiency and year- round reliability.

Easy Operation and Maintenance. Designed for year-round easy access to all equipment and reduced downtime for scheduled or unplanned works.

Impact: Ensuring long-term operational efficiency

Reframing Technology Differentiators to Support Market Drivers



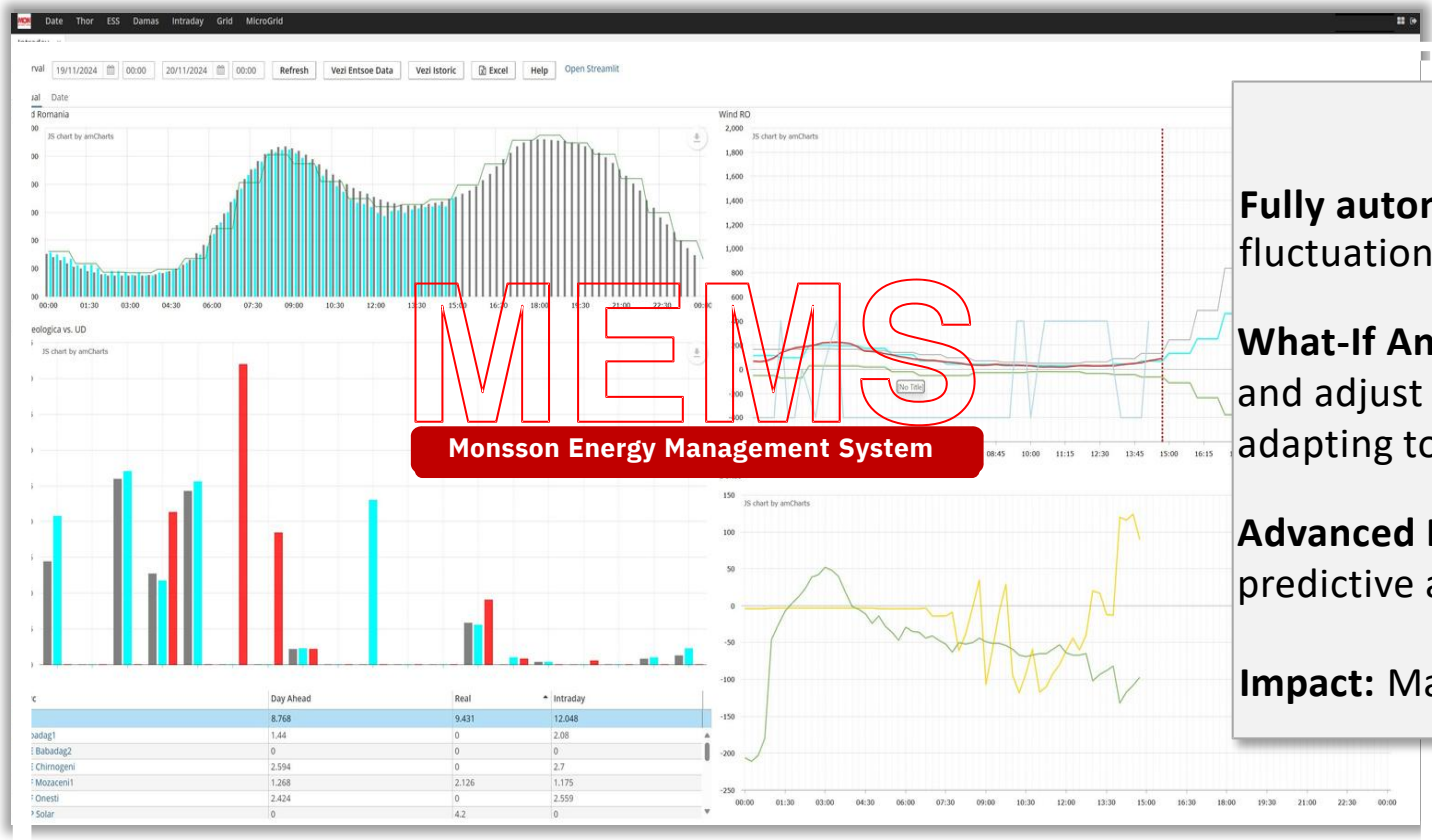
No cooldown required
- Charge & discharge immediately.

Charge & discharge immediately.
- No overheating issues.

More cycles per day
Maximized revenue in energy markets, always ready to respond

Impact: Dynamic adaptation to energy market fluctuations

Reframing Technology Differentiators to Support Market Drivers



Addressing Market Volatility

Fully automated operation enables response to market fluctuations in real time.

What-If Analyses: Simulations to anticipate market conditions and adjust operational strategies, optimizing revenue by adapting to peak demand periods.

Advanced Forecasting: SCADA integration allows for predictive adjustments based on market data.

Impact: Maximized profitability and system stability.

Reframing Technology Differentiators to Support Market Drivers

Addressing Cost Management

Real-time monitoring helps anticipating potential operational issues, reducing repairing costs and minimizing downtime.

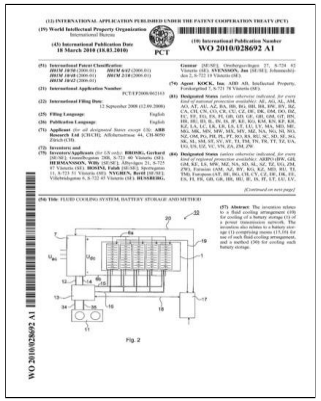
Easy to Repower: Replaceable components for lower long-term operational costs.

Modular and Scalable: Easily expandable to meet growing energy storage demands.

Impact: Maximized profitability and system stability.

Certified and Registered for quality

TUV Certification/ Undergoing DNV certification meeting strict standards for large-scale energy storage



Patent application. Registered in Romania as 'Electrical Energy Storage Installation in Li-Ion Batteries' (OSIM A/ 00074/21.03.2024)

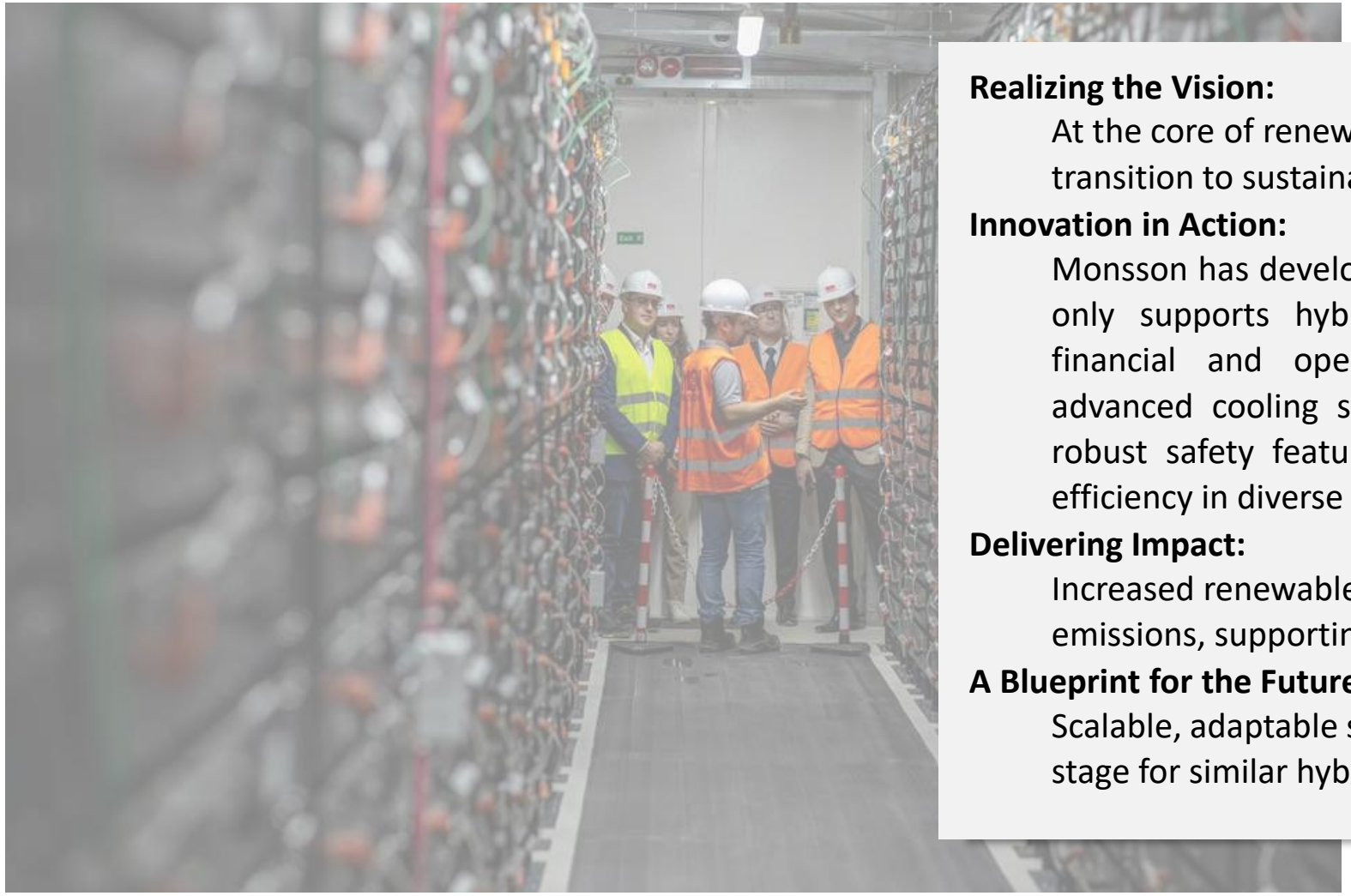
EU-manufactured components comply with grid codes and EU environmental standards for sustainable energy storage

Registered with the BOIP (Benelux Office for Intellectual Property).

The Advantages of an optimized solution

	Category	Monsson BESS	Other Solutions (Container)
1.	ENERGY EFFICIENCY	**~90%** - Maximized energy recovery & revenue.	**~85%** - Higher losses, lower revenue.
2.	CLIMATE RESILIENCE	Thermal-insulated design → Reliable in extreme conditions, lower energy use.	Needs active cooling → Extra costs, higher consumption.
3.	COOLING & DEGRADATION	Advanced cooling → Extends battery life	Accelerated degradation in similar conditions
4.	OPERATIONAL COSTS (OPEX)	Optimized access & maintenance → Minimized downtime & failures.	**40% of O&M report weekly issues*** → Higher downtime & costs.
5.	SAFETY & RELIABILITY	Advanced safety→ Reduces thermal runaway risk	Higher risk → Extra safety measures needed.
6.	GRID & MARKET INTEGRATION	Full market access → No cooldown limits, maximized participation.	Market limitations→ Cooldown limitation, minimized participation.
7.	EASY TO REPOWER	Modular design → Easy component replacement, extended lifespan.	Full system overhauls needed → Higher replacement costs.

Comprehensive Impact and Conclusion



Realizing the Vision:

At the core of renewable integration, Monsson drives the transition to sustainable and resilient energy systems.

Innovation in Action:

Monsson has developed an energy storage solution that not only supports hybrid projects but also enhances their financial and operational performance. By integrating advanced cooling systems, intelligent SCADA control, and robust safety features, the system ensures reliability and efficiency in diverse operational scenarios.

Delivering Impact:

Increased renewable penetration and grid flexibility. Reduced emissions, supporting global energy transition goals.

A Blueprint for the Future:

Scalable, adaptable solutions already demonstrated, set the stage for similar hybrid projects worldwide.

Thank you for your attention.

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ASSET MANAGEMENT DIVISION

Battery Energy Storage