

How Intellvation Advances CE Certification Solid State Battery BESS Manufacturing Through Technology Innovation

XUZHOU, JIANGSU, CHINA, August 18, 2026 /EINPresswire.com/ -- As global demand for safer, higher-density, and more efficient energy storage continues to grow, solid-state battery technology is attracting increasing attention across the energy storage industry. From utility-scale applications to commercial and residential energy storage, battery systems must deliver not only high energy density and long service life but also reliable safety and compliance for international markets. Against this background, [Intellvation](#) is advancing the development of solid-state battery and Battery Energy Storage System (BESS) technologies through integrated research, manufacturing, and energy storage solutions. With a focus on large-capacity solid-state battery cells, Battery Management Systems (BMS), energy storage power stations, and charging infrastructure, the company is developing technologies designed to support the transition toward cleaner and more sustainable energy.



Rising Demand for Safer and More Efficient BESS Technology

The rapid expansion of renewable energy has increased the need for dependable energy storage. Solar and wind power generation can fluctuate according to weather and time of day, making energy storage systems essential for balancing electricity supply and demand. Traditional battery technologies have helped accelerate energy storage deployment, but the industry continues to seek improvements in safety, energy density, longevity, and system

efficiency. Solid-state batteries are emerging as a promising technology because their solid electrolyte architecture can provide opportunities for enhanced safety and improved energy storage performance.

For BESS manufacturers serving international customers, however, technological performance is only part of the equation. Products must also meet applicable quality, safety, and market-access requirements. Certifications such as CE can therefore play an important role when energy storage products enter international markets.

Building Expertise in Large-Capacity Solid-State Batteries

Super Power New Energy Co., Ltd., the company behind Intellvation, was registered in September 2018 with a registered capital of US\$40 million and a solid-state battery cell production capacity of 3 GWh.

The company's business covers the research and development of large-capacity solid-state battery cells and their BMS, along with the R&D, manufacturing, and sales of energy storage power stations and charging stations. It also develops and produces new materials for large-capacity solid-state batteries.

One of the company's key technological capabilities is the manufacturing technology for 500Ah solid-state battery cells. This capability is supported by a professional technical team consisting of five PhDs and ten master's-level professionals, providing a foundation for continuous research and technological improvement.

Rather than focusing on a single battery product, the company has developed an integrated industrial ecosystem covering research, development, production, and sales. Its Shanghai sales operation serves as an international market window, while its Jiangsu headquarters coordinates technology development and resource allocation. Manufacturing bases in Shandong and Xuzhou support stable production and product delivery.

From Semi-Solid Batteries to Next-Generation Solid-State Technology

Intellvation's development has been shaped by continuous investment in battery technology. In 2018, the company established its Jiangsu operation and began focusing on the R&D and manufacturing of solid-state batteries. The objective was to develop safer and more efficient battery technologies for the emerging energy storage market.

By 2020, the company achieved a technological milestone with the mass production of semi-solid batteries featuring an energy density of 180 Wh/kg. This development demonstrated the company's ability to translate solid-state battery research into commercially oriented products. In 2021, a manufacturing facility in Shandong was established to address growing demand for industrial and commercial energy storage. Equipped with modern production lines and quality control systems, the facility strengthened the company's capacity to support larger-scale energy storage applications.

The company's development continued in 2022, when its Xuzhou base began focusing on household energy storage batteries and intelligent energy management systems. This expanded its application portfolio from industrial energy storage toward residential renewable energy management.

A further breakthrough came in 2023, when the company addressed challenges related to solid-

electrolyte interface stability. The resulting technology increased battery energy density to 220 Wh/kg, creating a stronger technical foundation for future solid-state battery products. In 2024, the company relocated its sales center to Shanghai to strengthen international cooperation and develop a global market structure integrating R&D, production, sales, and service.

Integrating Battery Cells, BMS, and BESS Systems

A competitive BESS solution requires more than high-performance battery cells. System-level coordination between cells, BMS, power conversion equipment, thermal management, and energy management is essential for reliable operation.

Intellvation's approach combines large-capacity solid-state battery development with BMS research and energy storage power station solutions. This integrated model allows battery technology to be considered together with system management and application requirements. The BMS plays an important role in monitoring battery operating conditions and supporting safe and efficient system operation. By combining cell-level innovation with intelligent management, Intellvation aims to create energy storage systems capable of meeting the requirements of different application scenarios.

Its products are positioned for applications including electric vehicles, industrial energy storage, and portable power sources, while its energy storage solutions can support the broader adoption of renewable energy.

Supporting International BESS Market Requirements

For energy storage manufacturers targeting international markets, compliance and product qualification are increasingly important considerations. CE certification can help demonstrate conformity with applicable European market requirements, while other certifications and testing requirements may apply depending on the destination market and product category.

Intellvation's development strategy therefore emphasizes both technological advancement and product quality. Its manufacturing bases use modern production equipment and quality control systems, while the company's integrated industrial structure supports coordination between R&D, production, and market requirements.

This approach is particularly relevant for BESS projects, where reliability must be maintained across large quantities of battery cells and complete energy storage systems.

Sustainability as a Core Development Direction

The growth of energy storage is closely connected with the global transition toward cleaner energy. Effective storage systems can help renewable energy resources become more flexible and usable, supporting better utilization of solar and wind power.

Intellvation places sustainability at the center of its development strategy. Its solid-state battery solutions are designed around improved safety, energy efficiency, and longevity, while the company also emphasizes sustainable materials, responsible production processes, and efforts to reduce waste and emissions.

This sustainability-oriented approach extends beyond product development. The company aims to combine technological innovation with environmental responsibility and contribute to the

development of cleaner energy infrastructure.

A Manufacturing Ecosystem Designed for Global Customers

Intellvation's manufacturing and operational structure provides a foundation for supporting customers across different markets. Jiangsu serves as the operational and R&D coordination center, Shanghai functions as an international sales window, and production bases in Shandong and Xuzhou provide manufacturing support.

This geographical structure allows the company to connect technological research with manufacturing capacity and international customer demand. For BESS customers, such integration can be valuable when projects require customized battery specifications, stable production capacity, technical support, and coordinated project management.

With a 3 GWh solid-state battery cell production capacity and experience in large-capacity battery development, the company is positioned to continue expanding its role in the global energy storage market.

Looking Ahead

The future development of BESS will increasingly depend on the ability to combine safety, energy density, intelligent management, compliance, and manufacturing scalability. Solid-state battery technology represents one potential pathway toward higher-performance energy storage, while system integration will determine how effectively these battery technologies can serve real-world applications.

From its initial focus on solid-state battery R&D in 2018 to breakthroughs in semi-solid and solid-state battery energy density, Intellvation has continued to expand its capabilities across battery cells, BMS, energy storage power stations, charging stations, and new battery materials.

By combining technological research with modern manufacturing facilities and an international sales structure, Intellvation is working to advance CE-compliant solid-state battery BESS solutions for customers seeking safer, more efficient, and sustainable energy storage technologies.

As the global energy transition accelerates, the company's continued investment in large-capacity solid-state batteries and integrated BESS technologies may provide an important foundation for the next generation of energy storage applications.

For more information about Intellvation's solid-state battery and BESS solutions, please visit:

<https://www.intellvation.com/>

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