

# Optimizing Energy Storage: New Products Released by a China Top Battery Charge and Discharge module Manufacturer

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EINPresswire.com/ -- The rapid global adoption of electric vehicles (EVs) and the necessity for robust energy storage systems (ESS) are placing unprecedented demands on power electronics. The ability to efficiently manage the flow of energy—charging a battery from the grid and discharging power back or to a vehicle—requires specialized, high-performance modular systems. These [Battery Charge and Discharge modules](#) are the



fundamental components enabling everything from EV fast charging to Vehicle-to-Grid (V2G) functionality. Shenzhen Acadie New Energy Co., Ltd, recognized as a highly capable China Battery Charge and Discharge module Manufacturer, is addressing this dynamic market with the release of new systems that emphasize both power flexibility and control precision. By strategically focusing on both EV infrastructure and energy storage products, the company is demonstrating how advanced power electronics are essential for the next stage of global energy transition, setting new benchmarks for system integrators and technology providers worldwide.

## The Technical Core: High-Power AC/DC Charge and Discharge Systems

The company's recent product releases, such as the 60KW-120KW AC/DC Charging and Discharging System, represent a culmination of expertise gained from years of operation in both the EV and ESS sectors. These systems are essentially modular power solutions designed for high-power applications, capable of managing substantial energy flow bidirectionally between the AC grid and a DC battery system.

A key feature of these systems is their scalable power range (60KW to 120KW), which allows integrators to tailor the installation capacity precisely to the application, whether for a mid-sized commercial EV charging hub or a larger energy storage container. The inherent bidirectional functionality is what truly differentiates these systems; it allows not just for efficient charging of

an EV or ESS battery, but also for controlled discharge. This capability is vital for V2G applications, where EVs can return power to the grid, and for ESS applications, where stored energy is released during peak demand periods (arbitrage) or for essential grid stabilization services (ancillary services).

The R&D efforts, centralized in Xi'an, focus heavily on the embedded software and control precision of the discharge module. Accurate control over the discharge process is critical for preventing battery degradation and ensuring that the power returned to the grid is of high quality and compliant with stringent utility standards. The modules are manufactured utilizing commission processing and the proven production capabilities of the IMI Chengdu factory (SpeedTech), ensuring the final product meets the necessary power density, efficiency, and reliability standards required for demanding international deployments.

#### Integrated Business Model Driving Innovation

Founded in 2017 in Shenzhen, the company's sustained growth is attributable to its strategically integrated business model, which capitalizes on the deep interdependencies between electric mobility and stationary energy storage.

One segment focuses on the sales of EV charging piles, backed by the manufacturing competence of its affiliated entity, Shenzhen EN Plus Tech Co., Ltd. This direct engagement with the EV market provides valuable, real-time feedback on charging protocols, connector standards, and the performance demands of high-rate charging, informing the design of the charge and discharge modules.

The other segment is dedicated to the development and sales of new energy storage products and battery testing equipment. The new charge and discharge systems are the essential hardware link between these two segments. They are directly applicable in EV charging stations (as high-power DC rectifiers) and are central to advanced ESS applications. This synergistic structure allows the company to develop components that are "future-proofed"—designed with the flexibility to serve both current EV charging needs and the emerging complexity of V2G and microgrid storage applications.

As an active international trader, Shenzhen Acadie New Energy Co., Ltd excels at navigating global supply chains and regulatory frameworks, positioning its high-power modules effectively in competitive overseas markets.

#### Versatile Applications in the New Energy Landscape

The new 60KW-120KW AC/DC systems are not limited to a single niche; their design enables powerful applications across the evolving new energy landscape:

**V2G and Smart Charging Infrastructure:** The bidirectional capability is foundational for V2G projects, allowing EV fleet owners and charging station operators to generate revenue by selling stored electricity back to the grid during periods of high demand. These modules manage the

complex communication and precise power control required for such services, turning static electric vehicles into dynamic, decentralized energy resources. Furthermore, the modularity ensures that charging stations can be scaled economically to meet growing regional EV density.

**Commercial and Industrial (C&I) Energy Storage:** In C&I settings, the systems are used to perform energy arbitrage and provide firm power capacity. The discharge modules enable the ESS to perform precision load shifting, drawing power when utility rates are low and feeding it to the facility when rates are high, yielding measurable reductions in electricity costs and contributing to energy resilience. The high power capacity of the new systems makes them particularly suitable for managing large industrial loads.

**Microgrid Power Balance:** Within complex microgrids, which integrate solar, wind, and battery storage, the charge and discharge modules are crucial for maintaining system stability. They ensure that power flows are perfectly balanced, absorbing surplus generation into the batteries and discharging power instantly to the microgrid load when renewable output drops, ensuring continuous power quality and preventing system collapse. Their integrated design simplifies field installation and reduces complexity compared to traditional distributed component setups.

#### Global Market Validation and Export Success

The company's ability to successfully export its specialized power electronics and system solutions to a variety of developed and developing nations provides strong market validation for the quality and compliance of its products. By 2022, its products were operating in over ten countries, demonstrating widespread acceptance across different regulatory and climatic environments.

The confirmed presence in highly mature markets like Norway, Sweden, Germany, and France confirms that the charge and discharge systems meet the stringent efficiency, safety, and grid interoperability standards required by leading European utilities and charging networks. These regions often lead in V2G pilot projects, where the precision of the discharge module is tested to its limits.

Similarly, exports to high-growth markets like South Korea, India, and Turkey validate the competitive quality-to-cost ratio and the adaptability of the system design to varied infrastructure challenges and rapid deployment requirements. This established global footprint attests to the effectiveness of the company's international trading strategy and its commitment to delivering products that meet diverse global needs.

#### The Continuous Evolution of Power Module Technology

Maintaining relevance as a key component supplier requires sustained investment in future-forward technology. The company's R&D focus is evolving toward integrating new generation semiconductors (such as SiC or GaN) into the charge and discharge modules to further boost operational efficiency and significantly increase power density, making future systems smaller and more cost-effective. Furthermore, the development of smarter, network-enabled control

interfaces is a priority. These enhanced capabilities will allow for seamless integration with advanced smart grid management software and communication protocols, essential for participating in complex grid markets and optimizing decentralized energy resources globally. This forward-looking commitment ensures the continued high performance and adaptability of the module portfolio.

#### A Future Defined by Smart Power Management

The introduction of these advanced AC/DC Charging and Discharging Systems reinforces the company's position as an important supplier in the global power electronics market. By providing high-efficiency, flexible, and bidirectional modules, the company offers critical hardware essential for scaling both EV charging infrastructure and energy storage solutions worldwide. This commitment to technical excellence and a dual-market focus ensures the company is actively contributing to a more sustainable, resilient, and intelligently managed global energy system. To explore the full technical specifications of the 60KW-120KW systems and the company's comprehensive range of new energy solutions, please visit the official corporate website: <https://www.evcharging-station.com/>.

Shenzhen Acadie New Energy Co., Ltd

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+86 133 5925 4960

[email us here](#)

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