CPID 100 MW HV Cascade Grid-Connected Energy Storage System Selected as China's First Major Technical Installation in the Power Sector

On July 27, 2023, the 100 MW HV cascade grid-connected energy storage system, a breakthrough in systematic and complete design developed by China Power Energy Storage Development Limited, a subsidiary of CPID, was selected by the National Energy Administration (NEA) as China's first major technical installation in the power sector (in the third batch). The system is the world's first 35 kV/100 MW HV cascade grid-connected energy storage system based on the Chinese-made IGCTs with independent intellectual property rights.

The system is jointly developed by China Power Energy Storage Development Limited, Tsinghua University, Three Gorges Group and China XD Group as a breakthrough in new type of energy storage technology, filling the gaps at home and abroad. The project will be built as a model of 100 MW HV cascade grid-connected energy storage system, introducing a large-scale energy storage development scheme that can be replicated, promoted and expanded, applicable to the modular and standardized development of large-scale energy storage power stations, and bringing application value and practical reference to related industries.

Among the existing five categories of large-scale electrochemical energy storage system technology, centralized energy storage application is the most common and has the largest market share. HV cascade energy storage has obvious

advantages in efficiency, system loss, footprint, battery protection, command response time, etc., and is more suitable for large-scale energy storage power station scenarios. With the clarity of the energy storage business model and the owner's emphasis on product performance, HV cascade energy storage will demonstrate its outstanding safety and cost advantages.

The first major technical installation means that the system has first achieved major technological breakthroughs in China, with independent intellectual property rights, and has not yet achieved market performance in batch. The system has a demonstration function and will be given priority in the relevant planning and project approval by the relevant authorities, and after successful evaluation and demonstration, it will be listed in the *Catalog of Major Energy Technology and Equipment for Promotion and Application*, and will be promoted and applied in the construction of subsequent energy projects. China Power Energy Storage Development Limited will take advantage of this breakthrough to promote cooperation in equipment innovation, strengthen R&D and application, and accelerate the demonstration and application of innovative achievements.