

CPID: China's First PV Power Battery Swap Station Has Been Put into Operation

Recently, CPID (stock code: 02380.HK) has successfully put China's first PV power battery swap station, part of a project in CPID's green power transportation segment, into operation in Yinchuan. Phase I of the project includes two battery swap stations and can serve 100 heavy-duty trucks at the same time, each station designed with eight posts. Through the intelligent battery swap scheduling system, the station can provide 200 battery charging cycles a day, fully guaranteeing the battery charging demand of the vehicles for all-weather operation.

The station converts sunlight into green electricity through distributed PV power, graded battery energy storage, and power charging and discharging, realizing the integration of "solar power, energy storage, charging and consumption", basically balancing local power generation and consumption, and forming a benign development ecology with complementary battery charging and swap for new energy vehicles.

The project has innovated and developed application scenarios and business models, intelligent IOT control systems, coupling modes for battery swap and energy storage, intelligent management systems for battery swap station operation and maintenance, technologies for direct connection between distributed energy resources and battery swap stations, and centralized control systems for distributed battery swap stations, and successfully made a new breakthrough in the technologies for distributed PV power DC output and heavy truck DC charging.

On the Qiyuan Vehicle and Power Cloud Platform, the information of vehicles, cargo, transportation, yards and stations, and battery charging and swap is integrated on the Internet of Things (IoT), with the transportation efficiency of vehicles greatly improved and fuel and electricity consumption reduced by more than 30%. A new model of "zero-carbon intelligent logistics" has been established, with the whole process visible and controllable, realizing the all-round digital intelligent control of transportation vehicles.

The project not only fully embodies the characteristics of multi-point power supply, free connection and flexible participation of distributed PV power stations, but also is a successful exploration of the application of the "PV + transportation" mode, which is an important practice of decentralization of energy and carbon neutrality in green transportation.