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Energy Storage System Solution to Inspection Team

For the most practical cases, the inspection team should be self-sufficient in the inspection area. From the energy requirement perspective, the inspectors need energy for their daily accommodation support. There are different categories of On-Site Inspection (OSI) equipment, more than 100 tonnes, which need electricity supply for normal functionality. This work provided a photovoltaic energy storage system solution to the inspection team. As a customized transportable solar ground power station, it can realize rapid deployment and installation with lightweight and flexible photovoltaic modules. It utilizes LiFeO₄ cells, which are safer with a higher energy ratio of up to 175Wh/kg. One 7-meter-sized energy storage container has the maximum output power of 200kW/400kWh/CNTR. The system could provide continuous power support for off-grid areas quickly, with the working temperature as low as -40°C. During the day, the energy storage system would be charged by sunlight; at night, it would charge the OSI equipment for use the next day. Photovoltaic energy is also a kind of green energy. Its application to the OSI mission is also in line with the United Nations Sustainable Development Goals.

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