电网侧中高压调峰用储能系统解决方案

High/medium Voltage Energy Storage Solution for Peak-Shaving on Power Grid Side

WS-E-500kW×n系列

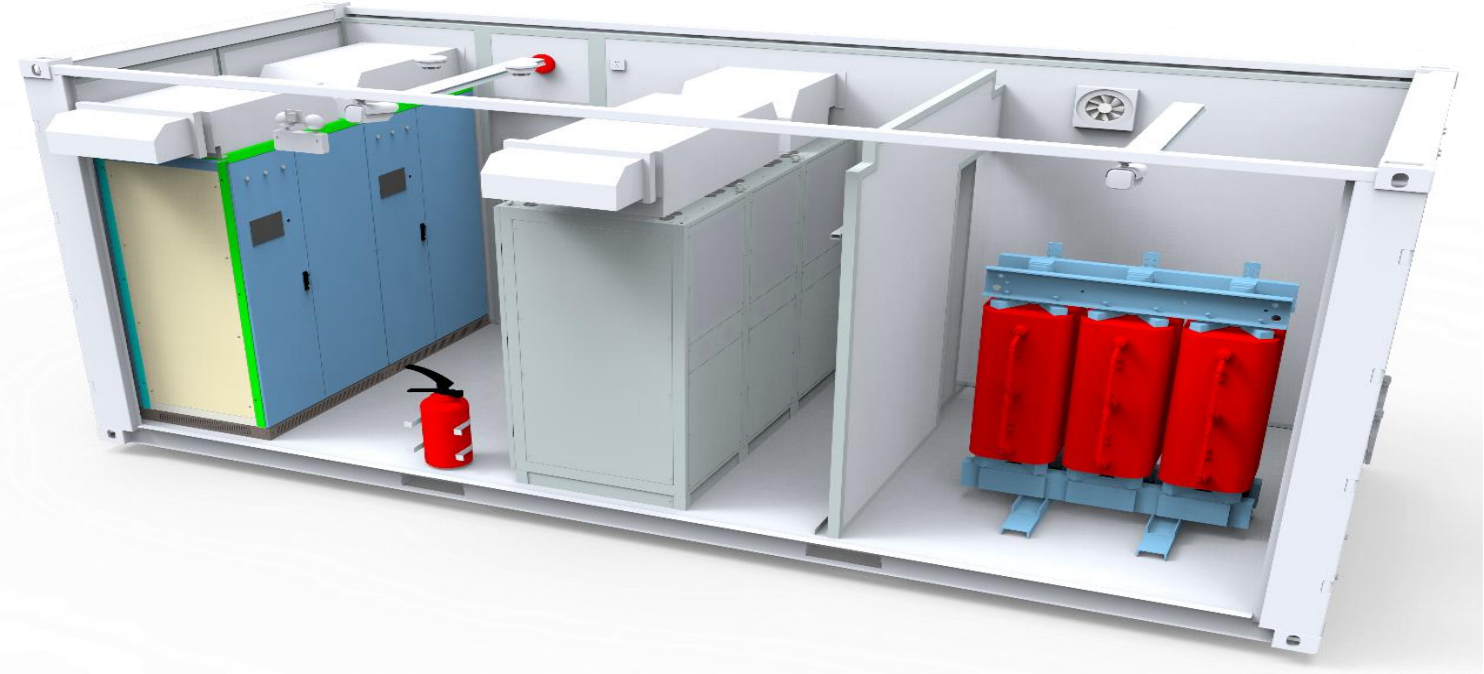
系统简介System Introduction

不同时间段电网侧变电站所承载的功率需求不一致，如夏季用电高峰来临，电网侧电力供需矛盾凸显，导致小时级的用电缺口频繁发生。在电网侧变电站配置多个兆瓦级的中高压调峰用储能系统进行功率调节，可以提高电网侧供电的灵活性和可靠性，以及火电设备的利用率。

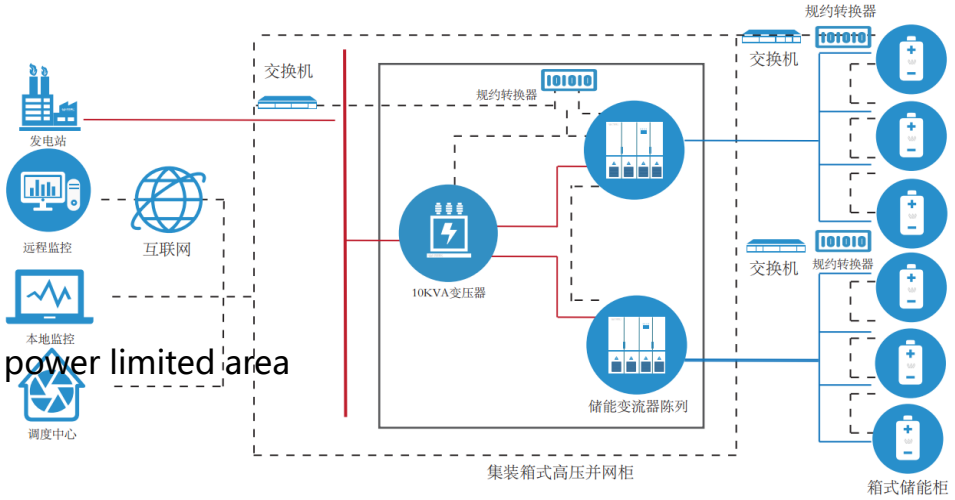
The power demand carried by grid-side substations in different time periods is not consistent. For example, the contradiction between the supply and demand of grid-side power becomes prominent when the peak of power consumption occurs in summer, resulting in the frequent occurrence of hour-level power gap. The flexibility and reliability of grid-side power supply, as well as the utilization rate of thermal power equipment, can be significantly improved by the installation of several megawatt-level high/medium voltage energy storage systems used for power regulation in grid-side substations.

系统组成System Composition

主要由40尺储能电池仓和20尺逆变并网升压仓组成，含BMS、PCS、EMS、升压变、站控、配电、监控、消防、空调、照明、门禁、避雷接地等；



The high/medium voltage energy storage system, mainly composed of one 40-foot battery container and one 20-foot grid-connected containers, contains BMS, PCS, EMS, transformer, station control, distribution, monitoring, fire extinguisher system, air-conditioning, lighting, entrance guard system, lightning protection, etc.



适用场景 Application

变电站、火电站、可再生能源发电限电区域

Substations, coal-fired power station, PV/Wind power limited area

系统特点 System Features

依据61850规约接受电网调度；

Accepting order from the dispatch center based on IEC60870 telecontrol protocol

有效提高电网输出调节能力和频率稳定性，使电网更稳定更灵活

Effectively improving the output regulation ability and frequency stability of power grid, making power grid be more stable and flexible

提高电网发电的可规划性和可计划性

Improving the planning and regulation of power generation

减少火电机组的数量，提高火电设备利用率

Reducing quantities of thermal power unit, increasing the utilization rate of power equipment.

储能电池可大倍率充放电

Abilities of energy storage batteries charging and discharging at large rates.

模块化设计，安装维护方便快捷

Modular design, easy installation and maintenance.