

EMS Energy Management System

EMS Cloud Platform



Friendly human interaction interface:

- ◆ Combined with comprehensive data acquisition and monitoring system functions.

24/7 real-time monitoring:

- ◆ Seamless accessing to the scheduling center, and receiving scheduling command.
- ◆ Realizing friendly data transmission between BMS and PCS devices.
- ◆ Real-time response fault alarm function.

Flexible application scenarios:

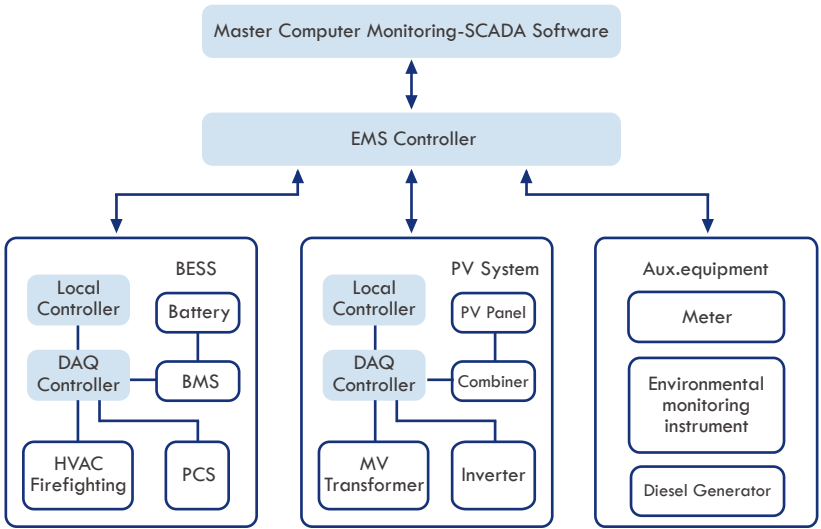
- ◆ Advanced control strategy to realize peak and frequency modulation, peak and valley arbitrage, demand management, etc.

Function Presentation:

Platform Function	Detailed Presentation
Operation data acquisition and monitoring	EMS local controller collects the real-time information (i.e. PCS, BMS, transformer monitoring and control device), and the processed data (i.e. real-time values, historical statistics, trends, alarm events, etc.) can be displayed and forwarded in the monitoring screen, and saved to the historical data server.
Independent SOC control	When EMS cannot control operation of energy storage battery, PCS control charging and discharging of energy storage battery independently to keep SOC within reasonable range.
Smooth Output	Generation side - EMS controll the charge and discharge of BESS or the output of other power generation to smooth power output by real-time monitoring of power generation User side - EMS controll the charge and discharge of BESS to achieve peak shifting by real-time monitoring of power consumption.
Time-of-use price	EMS control the battery energy storage to perform different charging and discharging strategies at diffrent time of use price, so that the user can realize peak-valley arbitrage.
Power distribution control	In the on-grid mode, EMS follows power grid dispatching orders and data acquisition(i.e. current SOC, SOH, charging and discharging state, and alarm data) to implement power distribution control.
Anti-power reversal control	when the microgrid access to power grid, EMS ensures the micro grid to meet load electricity consumption by increasing the energy storage charging power or reducing power generation output.
Power security boundary control	Due to the sudden load fluctuation in the micro-grid system (i.e. solar, wind), the system adopts emergency control measures to increase/decrease the system output to make it return to the safe operating range.

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Data Acquisition and Communication Structure

