Energy Management System
(Energy Management System - EMS)

Optimized charging infrastructure

- Make optimal use of your existing grid connection
- Avoid excessive peak power and related costs
- Optimize car charging through static and dynamic prioritization
- Provide high availability of charging stations and high charging performance for satisfied users

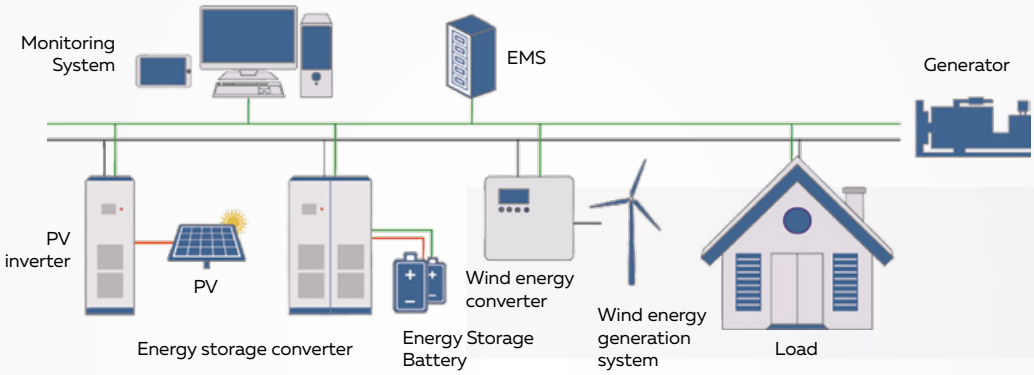
Optimized use of self-generated power

- Optimize electric car charging with green power and reduced CO2footprint
- Reduce your power costs through optimal consumption of self-generated power
- Reduce your peak load at the grid connection point and thuscosts by generating renewable power

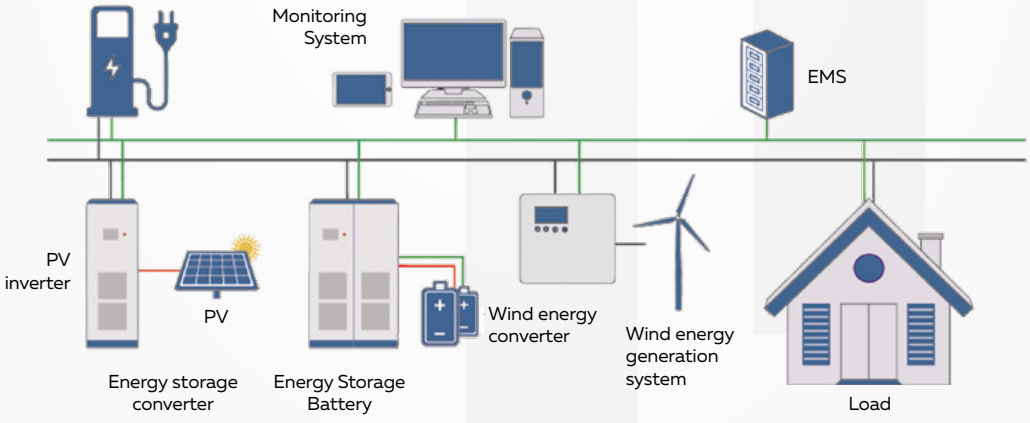
Optimized use of stored power

- Increase the use of self-generated power
- IReduce your power and grid connection costs
- ICharge more cars at the same time with higher power without expanding the grid connection
- IProvide backup power in case of grid problems

Off-grid Applications: Off-grid system is an independent energy system that does not rely on traditional power grids. Energy storage systems typically work with renewable energy devices (such as solar panels and wind turbines) to provide safe, clean, and reliable electricity to remote or geographically challenging areas while effectively reducing power supply costs.



Microgrid Applications: Microgrid system is a distributed energy system connected to the power grid and operates in collaboration with it in a small area. It can improve autonomous power supply capability, reduce dependence on the grid, and balance loads through energy storage systems. As one of the core equipment of microgrid systems, energy storage systems ensure a smooth and reliable energy supply. Additionally, they optimize scheduling and improve the safety and stability of the grid through intelligent control.



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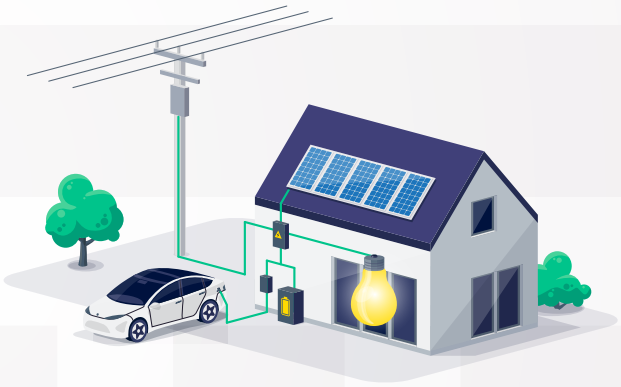
Grid-side: Energy storage systems balance the load on the power grid, improving its stability and reliability. They store energy during low demand periods to meet high demand during peak periods. By cutting peaks and filling valleys,they can alleviate the contradiction between supply and demand, reduce operating costs, monitor load fluctuations, and quickly respond to grid dispatches to improve frequency stability.

Generation-side: Energy storage systems improve the efficiency of renewable energy utilization and resolve issues of electricity fluctuation and instability. These systems store excess energy and release it when needed to ensure a steady supply of energy. They also improve the stability of new energy output and transient power impacts on the grid, there by enhancing the quality of electric power.

User-side: Energy storage systems improve energy utilization efficiency and save energy consumption. For instance, solar power panels store energy during the day for use at night or during cloudy and rainy days to reduce costs. They also smooth out power delivery, increase capacity utilization, reduce transformer requirements and basic electricity fees, and generate economic benefits based on differences in peak and off-peak electricity prices.



How does energy management work?