

## Kongres Container

# BESS solar panel system



## Overview

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Largely, BESS systems use lithium-ion batteries to store electricity. They can be used either as stand-alone or coupled with renewable energy sources. Main characteristics used by the industry and which vary with different BESS chemistries are: 1. Rated Power Capacity 2. Rated Energy Capacity 3. Depth of Discharge (DOD) 4. Storage Duration 5. Cycle.

A typical BESS includes: 1. Battery modules - connected in series and parallel for required capacity. 2. Storage enclosure with thermal management. 3. Power conversion system (PCS) - All the clusters from the battery system are connected to a common DC bus and further DC bus extended to PCS. 4. Battery management system (BMS), which continuously monitors.

BESS systems are gaining traction for both technical and commercial reasons. Technically, they provide immense benefits to the grid: 1. Use in emergency response systems or for storm outages 2. Frequency regulation 3. Grid stability 4. Reduction of grid congestion 5. Ramp rate control 6. Energy arbitrage 7. Peak shaving 8. Black start - providing quick response.

The siting of any power generation resource is important, but the immense flexibility of BESS systems mean they can be installed and utilized in any number of ways: 1. Front-of-meter or behind-the-meter 2. Near to the loads/energy sources or independent/standalone 3. Co-located with variable renewable energy resources 4. Used to augment traditional.

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### **Contact Us**

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