

CONNECT SERIES

DC Coupled Battery Solution



WORLD CLASS BATTERY ENERGY STORAGE TECHNOLOGY





DC COUPLED BATTERY (UP TO 5 MW)

EVO Power's CONNECT Series is a DC Coupled Battery Solution engineered to amplify the revenue stream of utility-scale Solar PV Plants (capable of DC-Coupled SMA PV Inverters).

Designed in close collaboration with OEM partners, CONNECT Series allows increasing the size of the PV plant thereby facilitating clipping recapture and time shifting the stored energy.

The DC Coupled PV Plant also allows for participation in Market services such as FCAS (limited events), Energy Arbitrage etc.

Furthermore, in most cases, minimal or no additional grid studies are required to retrofit the PV Plant with CONNECT Series.

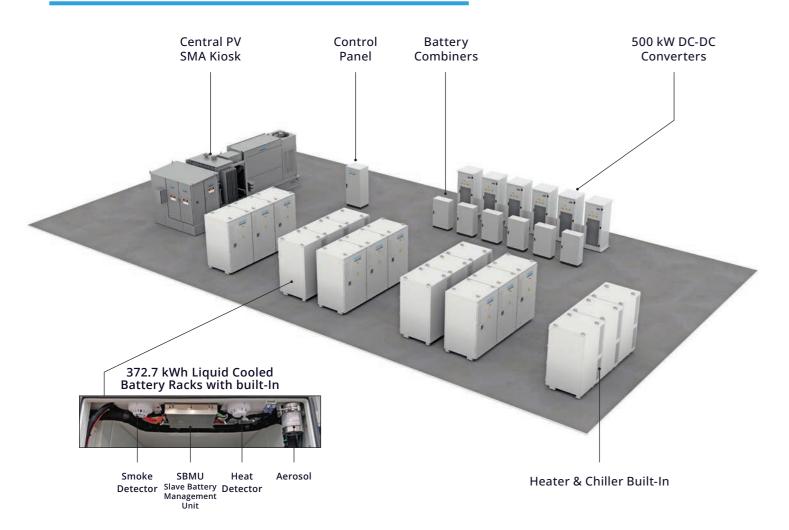
CONNECT utilises the latest utility-grade LFP Liquidcooled Battery Technology with each freestanding IP66 battery including built in heaters, chillers, fire-suppression system, and market leading performance warranties.





POWER

SYSTEM COMPONENTS

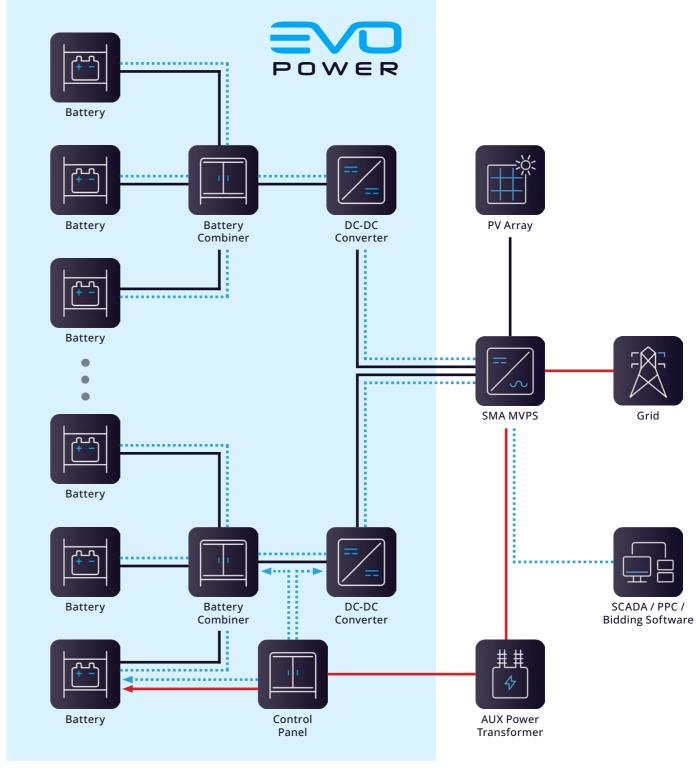


Example: CONNECT Series 3 MW DC-DC / 6.7 MWh Battery solution

= FEATURES

- Amplify revenue stream by adding storage to Solar PV Plants (capable of DC Coupled SMA PV Inverters)
- Increase the plant size (Storage helps to oversize the PV array considerably and store the excess energy)
- Clipping recapture allows for time of use PPAs PV Smoothing (such as in case of cloud events)
- Ancillary services such as FCAS (limited to partial load and lower services), Energy Arbitrage etc.
- No additional grid studies required in most cases

SYSTEM SCHEMATIC





Note: Control Panel provides comms & LV AUX to all Batteries





SPECIFICATIONS

| DC/DC CONVERTER SPECIFICATIONS | |
|---|--|
| Max. Continuous Power (at 30 °C) | 500 kW at 1000 VDC 600 kW at 1200 VDC to 1500 VDC |
| Max. Continuous Current | +/- 500 A |
| (at 30 °C) | |
| Average Efficiency | 98.2% |
| BATTERY STORAGE | |
| Nominal Energy DC / C Rating | 372.7 kWh / 0.5C or 1.0C 1164.8 ~ 1497.6 VDC |
| Voltage Range (Nominal Voltage) | (1331.2 VDC) |
| Chemistry | LFP |
| DC Fusing | DC fuses prewired as standard inside Battery Rack |
| Fire Suppression System | Pre-integrated Fire Suppression system with smoke and heat detectors plus aerosol |
| Battery Management Unit | Slave BMU supplied with each Battery Rack |
| BATTERY COMBINER | |
| Rated Current | 500 A |
| DC Fusing | 2 x 750A SQB-DC153 fuse per Battery supplied |
| CONTROL PANEL | |
| Input Voltage | 400VAC |
| Fire Suppression system | Master Fire Control Panel with 4 hours of UPS backup |
| Battery Management Unit | Master BMU supplied |
| Battery Data Logger | Supplied for Data Logging of Battery for Warranty Support |
| ENVIRONMENTAL | |
| Operating Temperature Range / Humidity Range | Battery: -30°C ~ 55°C, DC-DC Converter: -25°C ~ 55°C 0 to 95% |
| IP Ratings | DC-DC Converter IP54, Energy Storage IP66, Battery Combiner IP54, Control Panel IP54 |
| COMPLIANCE | |
| DC-DC Converter Standards | IEC 61000-6-2, IEC 62109-1, UL 1741, UL 62109-1 |
| Battery Related Standards | UN 38.3, UL 1973, UL 9540A, IEC 62619, IEC 61000-6-2/-4, IEC 62477-1 |
| Battery Combiner | AS 61439 |
| DIMENSIONS & WEIGHTS | |
| System Dimensions (mm, L x W x H) | 1001 x 851 x 2,045 per DC-DC Converter, 800 x 400 x 1,200 per Battery Combine 1,300 x 1,300 x 2,280 per Battery Rack, 600 x 800 x 1,920 per Control Panel |
| Weight of Key Components | 590 kg per DC-DC Converter, 250 kg per Battery Combiner, 3,500 kg per 372.7 kWh Battery Rack, 250 kg per Control Panel |

EXAMPLE LAYOUT

Example layout for CONNECT Series 3 MW DC-DC / 6.7 MWh Battery solution, including:

- 18 x Battery Racks
- 6 x DC/DC Converters
- 6 x Battery Combiners
- = 1 x Control Panel

