Standard Compliance
IEC 61000-3-11
IEC 61000-3-12
IEC 61000-6-2
IEC 61000-6-4
IEC 61727
IEC 62116

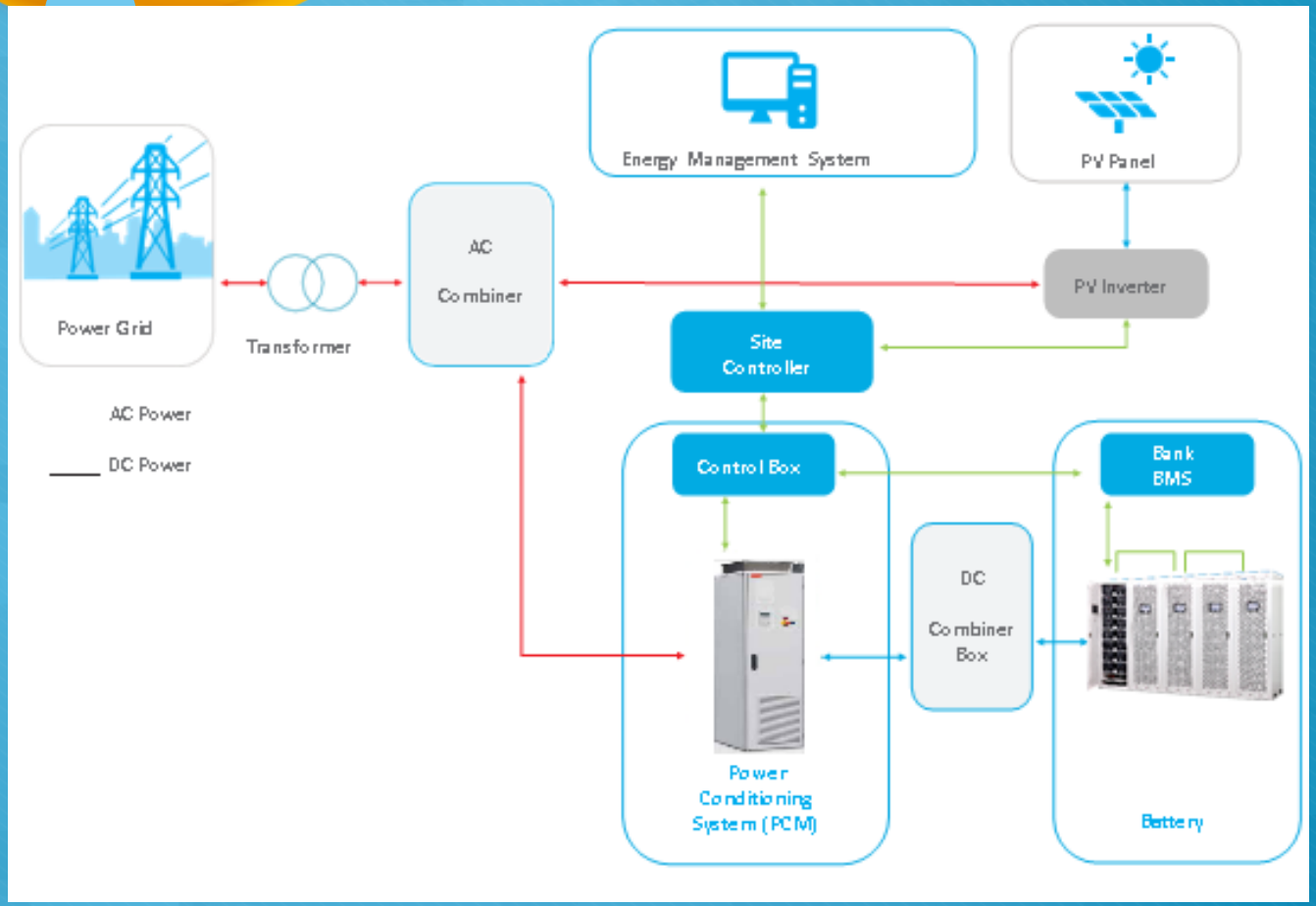
GRID CONNECTED MODULAR ESS

Grid Connected (ON-GRID) Modular Energy Storage System Concept

Concept

- ✓ 1000kWh Battery System (Scalable)
- ✓ 8 Inverter Modules
- ✓ 3 Inverter Frame
- ✓ Data logger, lighting, plug sockets, air conditioning system, hydrolic lifter for technical service, portable work table

GRID CONNECTED MODULAR ESS



GRID CONNECTED MODULAR ESS

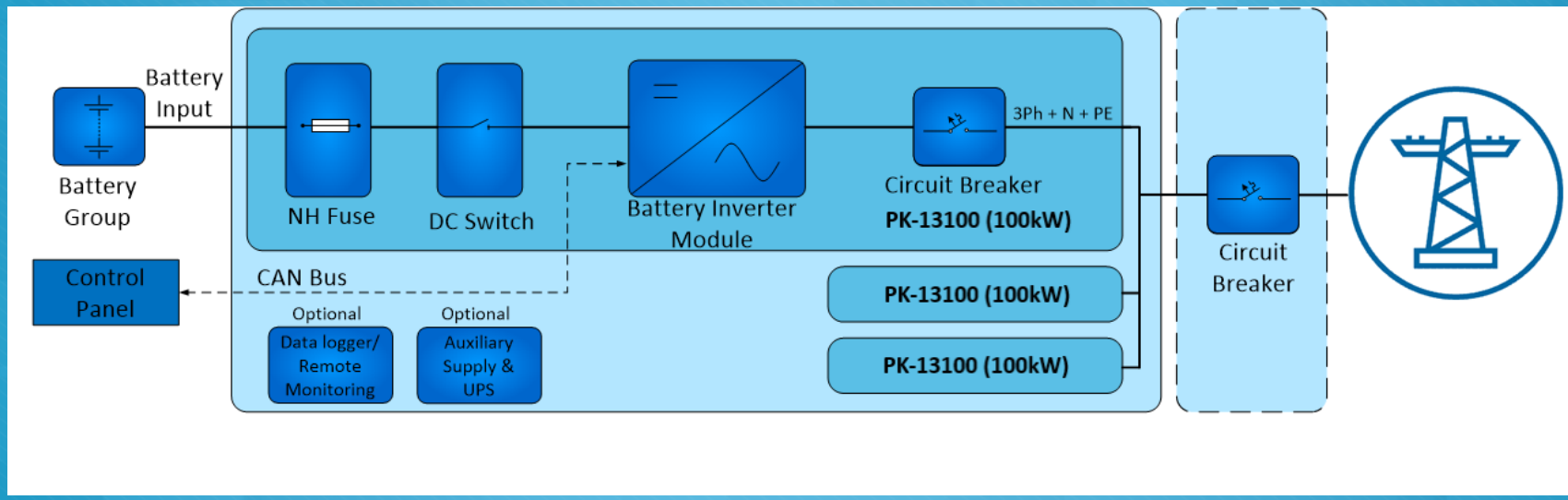
- 100/125kW compact 3 phase PCS
- 3 Phase battery inverter modules
- High availability (modular structure)
- Operating with different battery types (SUPER CAPS, LiFePO4)
- Bidirectional energy flow (charge/discharge)
- Active/Reactive power control (optional)
- CAN Bus control
- Short troubleshooting time

GRID CONNECTED MODULAR ESS

- Direct LV grid connection (no special transformer needed)
- High DC voltage (> 660 V)
- Power Shifting Concept
- Overvoltage, overcurrent, overload & overtemp. protection
- Anti-islanding Protection (IEC 62116 & IEC 61727)

SYSTEM BLOCK DIAGRAM

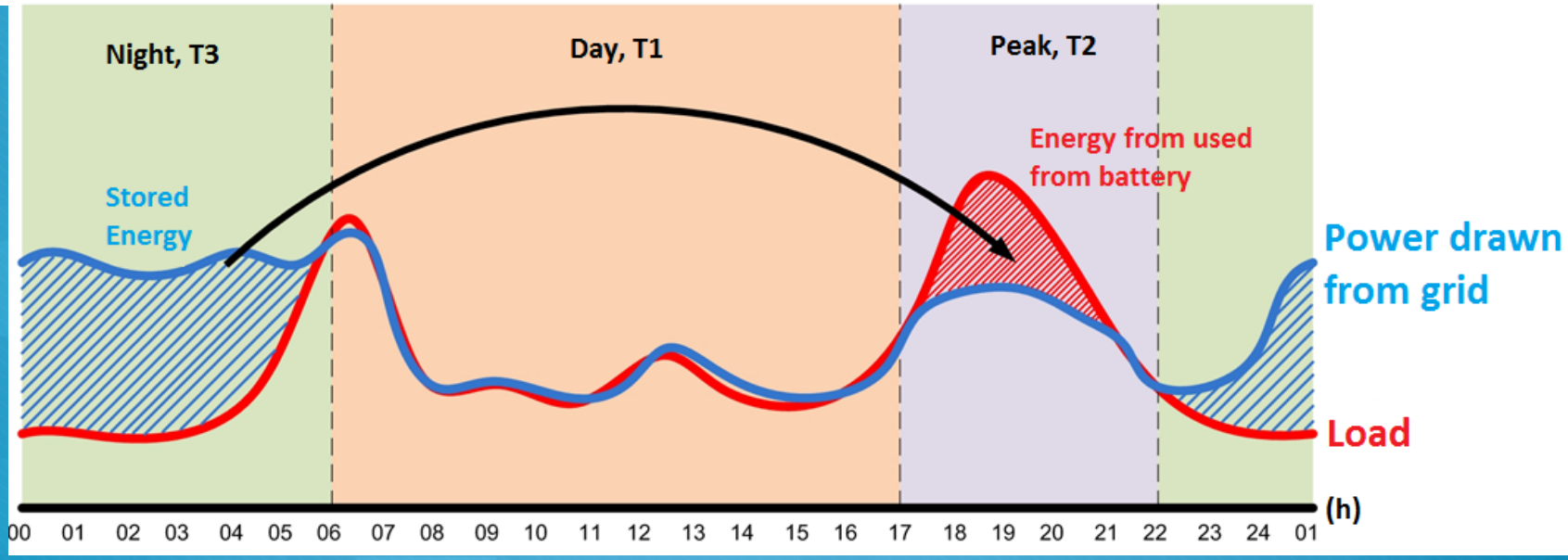
- **100/125 kW Inverter block diagram:**



GRID CONNECTED MODULAR ESS

ESS Operatinal Modes

- With ESS, during low price time period energy can be stored to the batteries and can be used during time periods with high price.

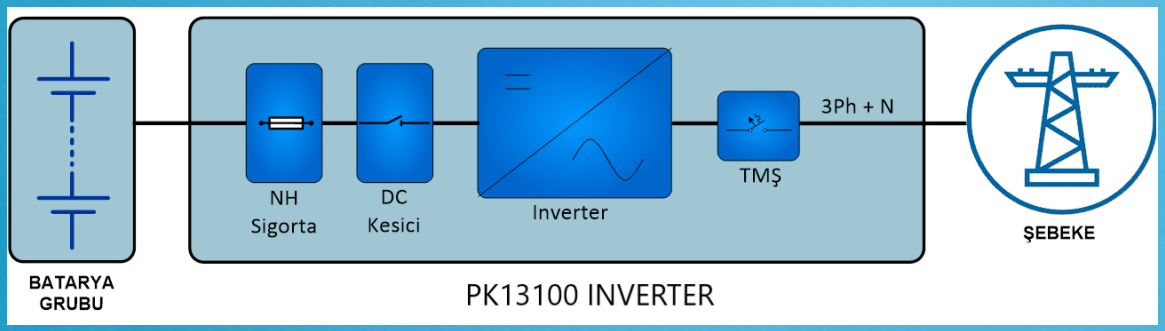


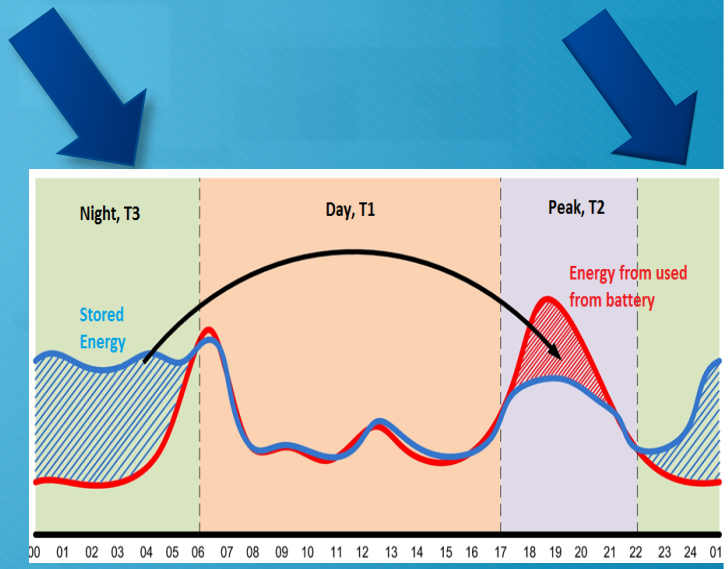
POWER SHIFTING CONCEPT

ESS Operatinal Modes

1. T3 (Low Price)

In this mode of operation, power drawn from the grid is used to charge the batteries.



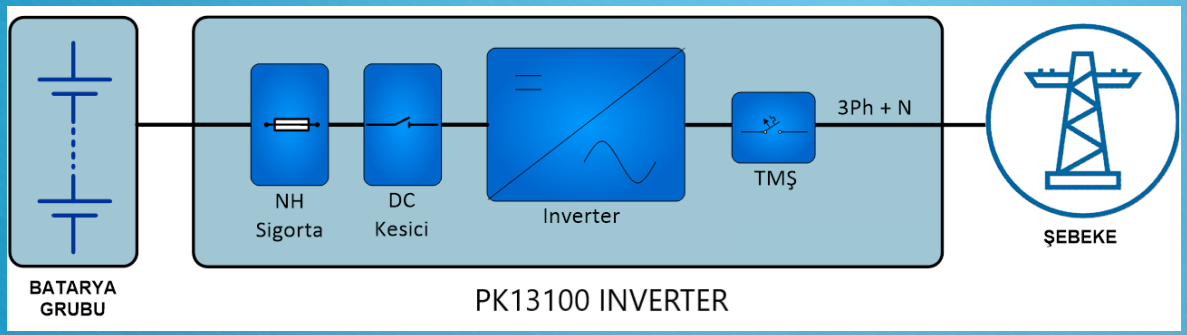


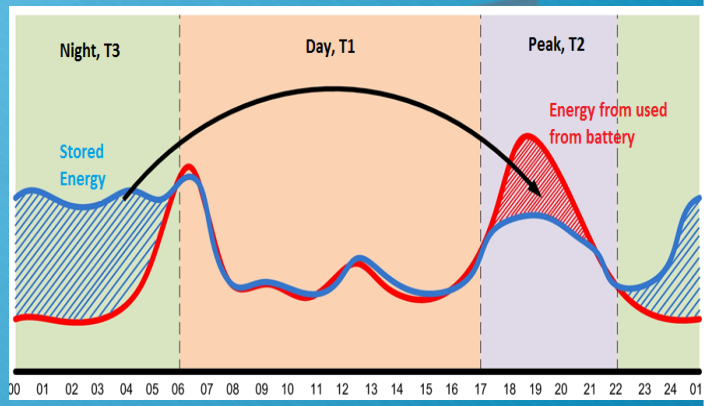
POWER SHIFTING CONCEPT

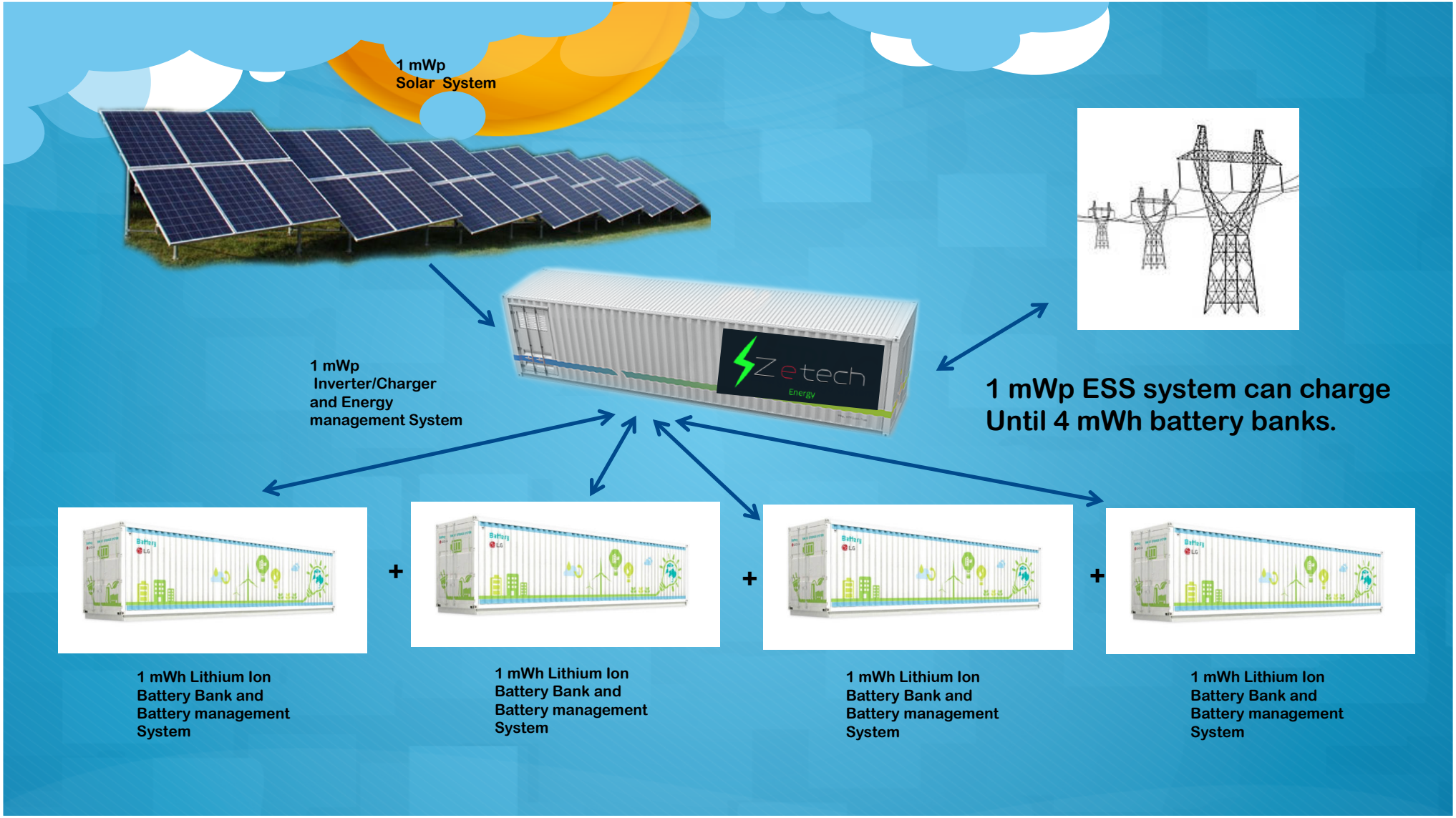
ESS Operatinal Modes

2. T2 (High Price)

In this mode of operation, energy is transmitted to the grid via discharging the batteries.






1 mWp
Solar System
1 mWp
Inverter/Charger
and Energy
management System
Zetech
Energy
1 mWp ESS system can charge
Until 4 mWh battery banks.
+
+
+
1 mWh Lithium Ion
Battery Bank and
Battery management
System
1 mWh Lithium Ion
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