
SOLARITY

Historia

SOLARITY



2009

EPC en la
República Checa



2011

Desde EPC
a la distribución



2020

Conocido
distribuidor
internacional

Distribuidor de energía fotovoltaica sistemas en 4 continentes

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50

mercados activos



>2 GW

entregado



60+

empleados

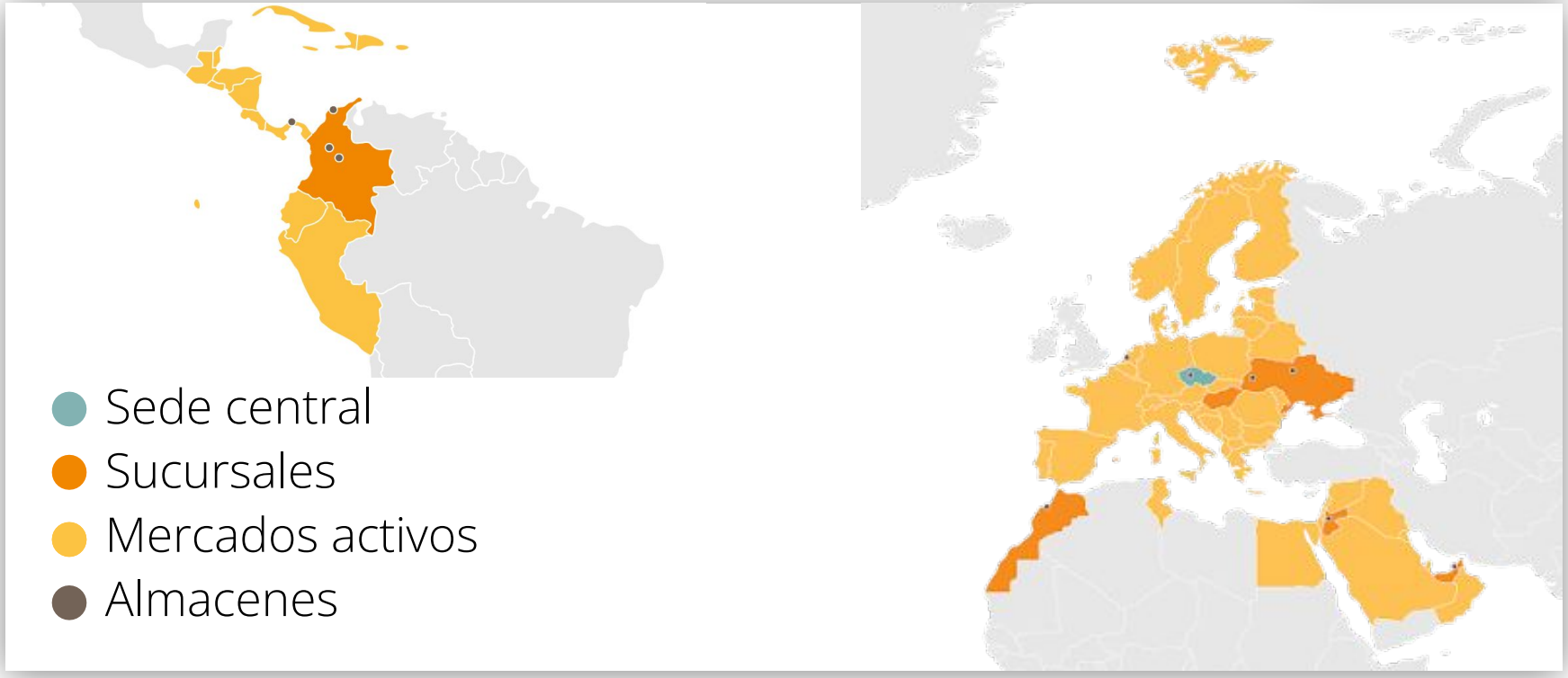


6

oficinas

PRAGA | BUDAPEST | KIEV | AMMÁN | CASABLANCA | BOGOTÁ

Internacional



Concéntrese en su negocio

SOLARITY

Nosotros nos
encargamos del resto



Fabricantes

Solarity

Instalador

SOLARITY

Beneficios y servicios



Conocimientos técnicos

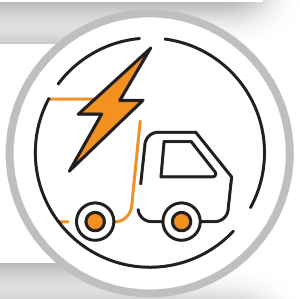


Capacitación

Financiación



Logística





Programa de socios



Soporte técnico local

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Más que un distribuidor



Soporte BESS en todas las etapas

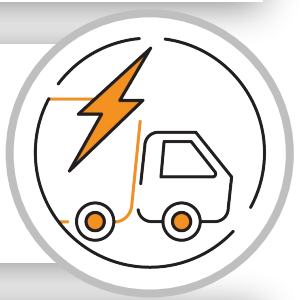


Conectamos EPC e instaladores

Co-inversión en plantas de energía fotovoltaica



Entrega justo a tiempo





Probamos nuestros productos



Conectando EPC e inversionistas



SOLARITY

Mejor calidad

Sólo elegimos productos que hacen felices a los clientes.

- **Fácil de vender**
- **Fácil de instalar**
- **Rendimiento comprobado**

Nuestros socios

JA SOLAR

Jinko Solar

RUNERGY

TW SOLAR

Pytes

Fronius

LIVOLTEK

solis

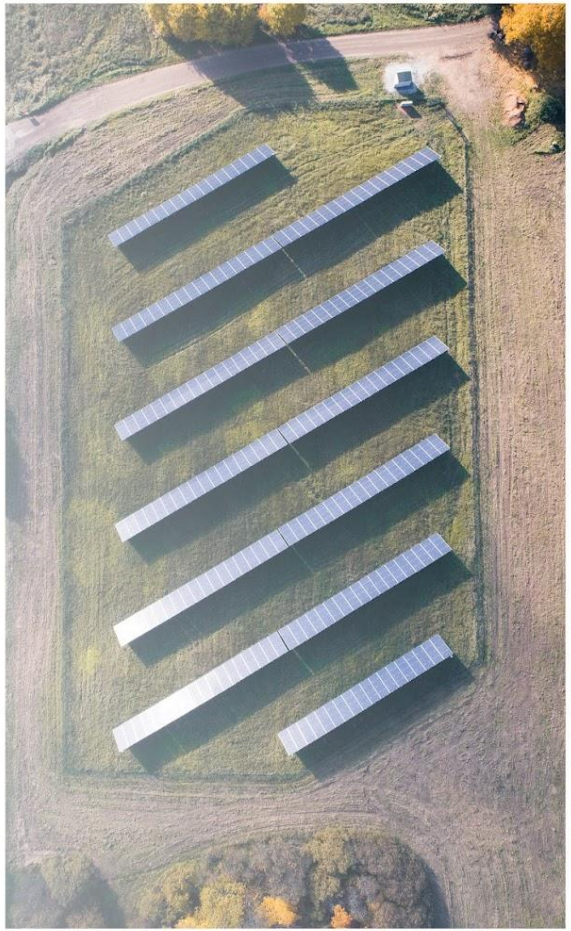
SOLUNA

Jinko ESS

Deye

TECLOMAN

KBE BERLIN

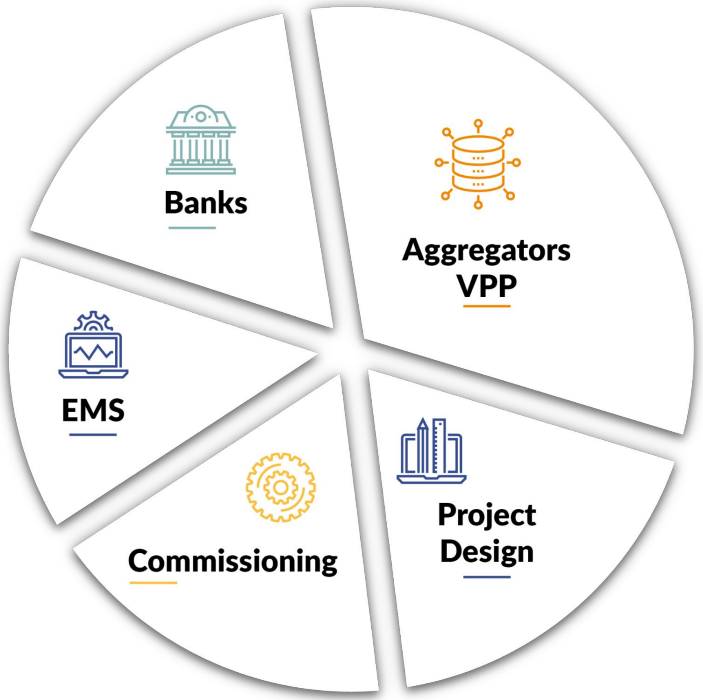


Tu socio ideal para BESS

- **Experiencia demostrada:**
  - 15 años de experiencia en el sector con presencia en 4 continentes.
  - Ingenieros internos cualificados y certificados que garantizan el ciclo de vida completo del proyecto BESS, desde el diseño hasta la puesta en marcha.
  - Experiencia real con un proyecto de 5 MW/10 MWh en Hungría.
  - Desarrollo activo de decenas de proyectos BESS >1 MW, con un total de >1 GWh en camino.
- **Soluciones personalizadas y completas:**
  - Paquetes BESS flexibles que se adaptan con precisión a sus necesidades gracias a una amplia investigación de mercado y comparación de BESS, listos para usar según las necesidades de su proyecto.
- **Dominio del mercado:**
  - Profundo conocimiento de las particularidades de los mercados de Europa Central y Oriental: desde los marcos legales, incluyendo las subvenciones, hasta los EMS, los agregadores, los bancos y los socios de O&M.

Paquete completo BESS para EPC

- **Potencial global exponencial:** tendencia y novedad en todos los mercados.
- **Una nueva fuente de ingresos para:**
  - propietarios de parques fotovoltaicos
  - nuevos inversionistas
  - EPC
- **Solarity** puede ayudarle en todas las etapas del proyecto: ¡tenemos las soluciones completas para usted!



¿Qué es BESS?



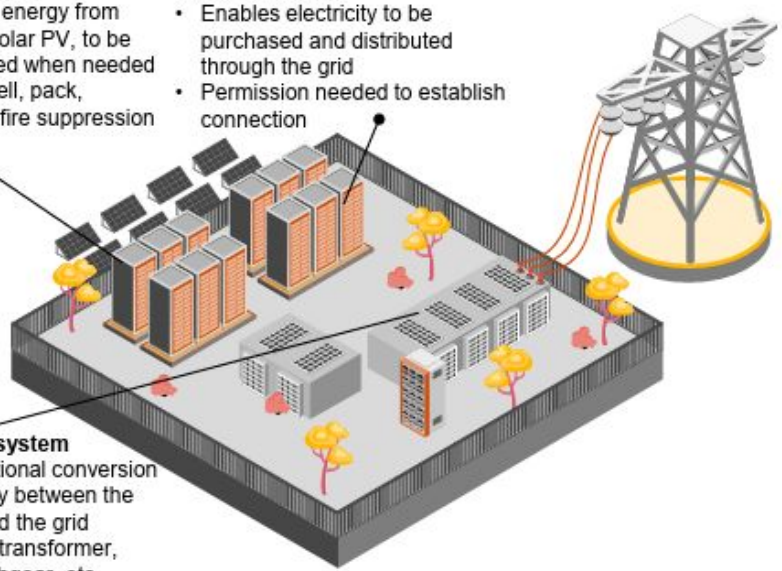
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Battery energy storage systems provide multiple benefits incl. revenue potential, cost reductions, resiliency and sustainability

Battery energy storage systems (BESS) overview

Energy storage system
- Enable storage of energy from renewables, like solar PV, to be stored and released when needed
- Includes battery cell, pack, container, HVAC, fire suppression system, etc.

Grid connection
- Enables electricity to be purchased and distributed through the grid
- Permission needed to establish connection



Power conversion system
- Device for bidirectional conversion of electrical energy between the battery system and the grid
- Includes Inverter, transformer, high voltage switchgear, etc.

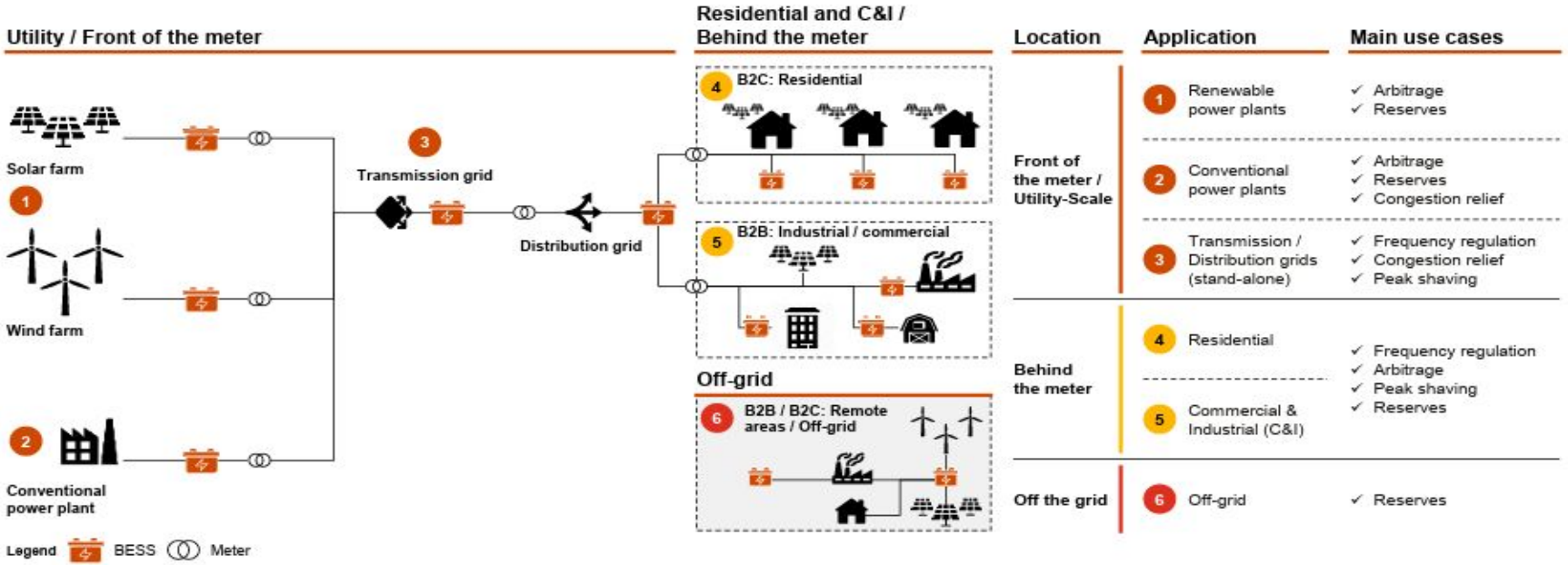
Key benefits

Revenue	• Access to ancillary services (e.g. FCR) • Minimize curtailment, generate new revenue streams • Sell energy surplus on energy market
Savings	• Shift consumption to lower-cost hours • Optimize physical setup (e.g. oversizing) and self-consumption if co-located with on-site generation • Reduce reliance on the grid
Resiliency	• Provide backup power and black start capability • Leverage stored solar energy • Ensure power supply during outages
Sustainability	• Increases peak load for PV generation • Improves self-consumption of generation • Grows share of renewables to the grid

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BESS have ‘front of the meter’, ‘behind the meter’ and ‘off grid’ applications

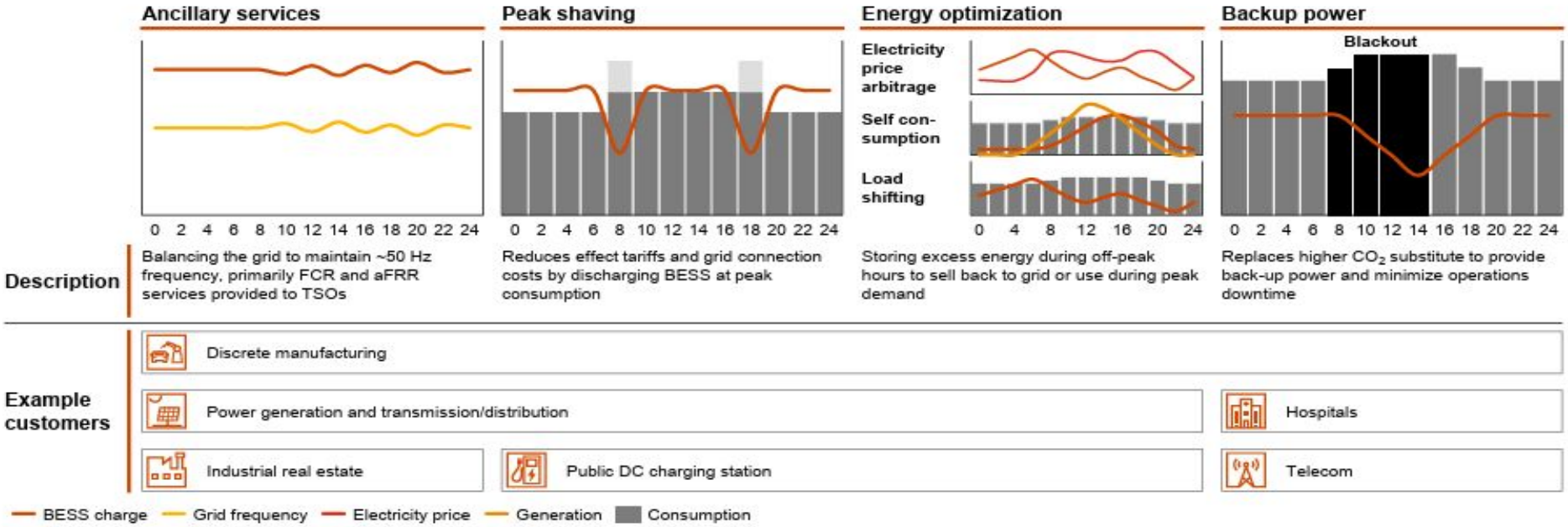
BESS applications



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BESS is utilized in different ways, with ancillary services representing the major application use case today

Current primary use cases for BESS



Regulación Colombia BESS



Key regulation

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Resolution	Year	Primary Focus	Key Provisions for BESS
CREG 098	2019	Incorporation of grid-scale BESS to mitigate transport network insufficiencies.	Defines selection process via UPME tenders; establishes Expected Annual Income (IAE) remuneration mechanism; outlines connection and operational obligations for BESS.
CREG 070	2021	Adjustments to Res. CREG 098/2019.	Modifies IAE payment profile rules; specifies IAE revenue sourcing through STN/STR charges.
CREG 101 023	2022	Quality of service requirements for BESS.	Sets unavailability limits and compensation mechanisms for BESS approved under Res. CREG 098/2019, aligning with STN/STR standards.
CREG 101 072	2025	Regulation of Energy Communities.	Grants legal status to energy communities; enables collective generation, self-consumption, and grid sales; allows virtual boundary aggregation, fostering distributed BESS.
Decree 0393	2026	Regulation of BESS	MinEnergía - Definition of technical services and compliance - 6 months (October 2026) CREG - Detailed regulations on remuneration and operation - 12 months (April 2027)

C-rate applications



C-rate applications

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C-Rate	Use Case	Customer Application	Industrial Equipment	Average C&I Size	Advantages	Disadvantages
0.25C	Long-Duration Storage	Load shifting and energy arbitrage	Continuous manufacturing (e.g., food processing)	100 kWh - 500 kWh	- Cost-effective for long-duration storage - Supports energy management	- Low power output - Limited to longer discharge periods - Less responsive to sudden demand changes
		Energy management during peak hours	Pumps, conveyors			
0.5C	Peak Shaving	Reducing demand charges	Textile machines, HVAC systems	100 kWh - 1 MWh	- Balanced power output - Flexible for varying loads - Suitable for most C&I applications	- Moderate response time - May not handle extreme power spikes effectively
		Backup for short-term outages	Refrigeration units, compressors			
1C	High-Power Applications	Emergency backup power	Data centers, heavy machinery	100 kWh - 1 MWh	- High power output - Quick response time - Ideal for dynamic energy needs	- Higher costs - May require more complex management - Potentially higher degradation rates with frequent cycling



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BESS Products

Portafolio BESS

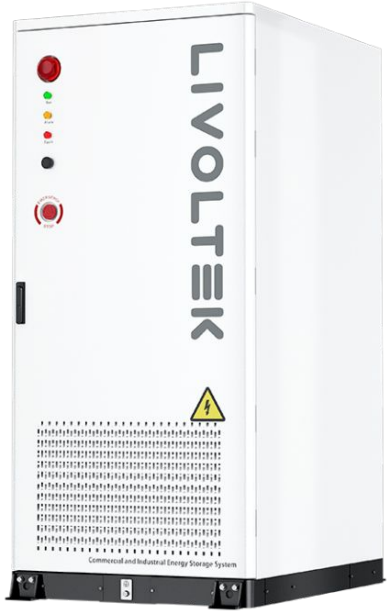
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Utility	TECLOMAN
C&I	SOLUNA™ solis Pytes LIVOLTEK

Livoltek C&I BES-P125X261E

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Model	BES-P125X261E	BES-P125X261U
Battery Parameters		
Nominal DC Voltage	832 V	
Battery Voltage Range	702 ~ 936 V	
Battery Type	LFP 314 Ah	
Battery Module Specification	1P52S 166.4V 314Ah 52.2kWh	
Number of Packs	5	
Total Energy	261.2 kWh	
Nominal Power	125kW	
Max. Power	137.5kW	
Rated Charge/Discharge Current	157 / 157 A	
Depth of Discharge	Max. DOD: 100%; Recommend DOD: 90%	
Operating Temperature	Charge: -20 ~ 55°C; Discharge: -20 ~ 55°C	
AC Parameters @On-grid		
Rated AC Power	125 kW	
Max. AC Output Apparent Power	137.5 kVA	
Rated Output Voltage	3L/N/PE, 3L/PE, 220/380V, 230/400V	3L/N/PE, 3L/PE, 277/480V
Voltage Range	340 ~ 460 V	408 ~ 528 V
Rated AC Frequency	50±5 / 60±5 Hz	
Adjustable Power Factor Range	-1 (Leading)~ 1 (Lagging)	
Rated AC Current	180.4 A	150.4 A
Max. AC Current	198.5 A	165.4 A
THDi(Rated power)	<3%	
AC Parameters @Off-grid		
Rated AC Power	125 kW	
Max. Output Power	137.5 kW	
Rated Output Voltage	3L/N/PE, 3L/PE, 220/380V, 230/400V	3L/N/PE, 3L/PE, 277/480V
THDv (linear load)	±2%	
General		

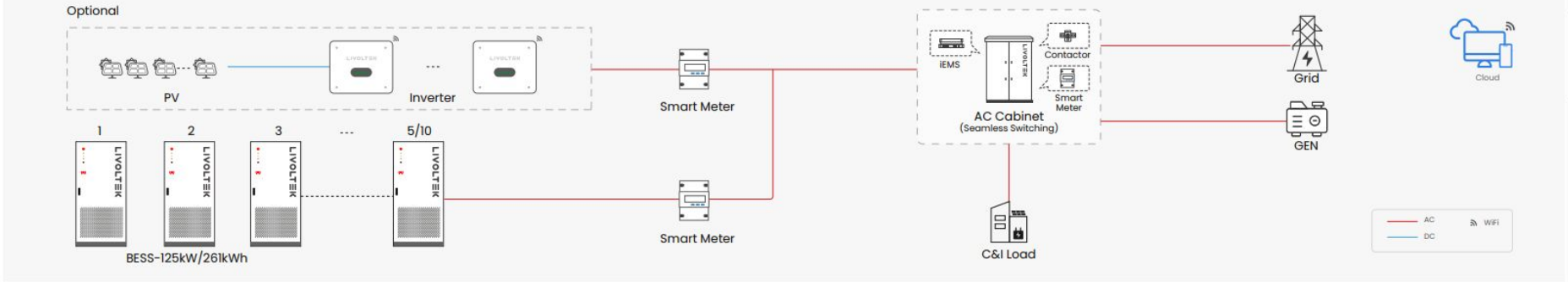


Livoltek C&I BESS - BHF-X225

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On/Off-grid PV+ESS Solution

- Up to 5 units in parallel (Seamless switching)
- Up to 10 units in parallel (Seamful switching)



Soluna C&I BESS - Power Cell

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PowerCell X2408- 60K



PowerCell 1220- 150K



Soluna C&I BESS - Power Cell

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TECHNICAL SPECIFICATIONS

PHYSICAL CHARACTERISTICS

Dimension(WxDxH,mm)	700x1000x2010/Cabinet (Battery Only)
Weight (kg)	880 /Cabinet (Battery Only)
Protection Level	IP 55

ELECTRICAL CHARACTERISTICS

Battery Type	LiFePO4
Total energy capacity	60 kWh
Usable energy capacity	48 kWh
Battery capacity (Nominal)	100Ah
Voltage range(Usable)	537.6~672V
Nominal voltage	614.4V
Charge voltage (CV)	656.6V
Discharge cut-off voltage	604.8V
Charge/discharge current (Nominal)	50A/50A
Charge/discharge current (Max)	100A/100A
Recommend Depth of Discharge	80%
DC Disconnect	Contactor Fuse
BMS Communication	CAN

OPERATING CONDITIONS

Installation	Indoor /outdoor
Operating Temperature	-20~50℃
OperatingTemperature(Recommended)	15~30℃
Storage Temperature	-20~60℃
Storage Temperature (Recommended)	15~30℃
Humidity	5%~95%
Altitude	Max. 2,000 m
Cooling Method	Fans and air conditioning

RELIABILITY AND CER TIFICATION

Compliance Standard	IEC62619/IEC62477, UN38.3/RoHS
Warranty	5 Years

TECHNICAL SPECIFICATIONS

PHYSICAL CHARACTERISTICS

Dimension(WxDxH,mm)	1200x1050x2010/Cabinet
Weight (kg)	1800 /Cabinet
Protection Level	IP 55

ELECTRICAL CHARACTERISTICS

Battery Type	LiFePO4
Total energy capacity	150 kWh
Usable energy capacity	120 kWh
Battery capacity (Nominal)	200 Ah
Voltage range(Usable)	672 ~ 840V
Nominal voltage	769 V
Charge/discharge current (Nominal)	100A/100A
Charge/discharge current (Max)	100A/200A
Recommend Depth of Discharge	80%
DC Disconnect	Contactor Fuse
BMS Communication	CAN

OPERATING CONDITIONS

Installation	Indoor /outdoor
Operating Temperature	-20~50℃
OperatingTemperature(Recommended)	15~30℃
Storage Temperature	-20~60℃
Storage Temperature (Recommended)	15~30℃
Humidity	5%~95%
Altitude	Max. 2,000 m
Cooling Method	Fans and air conditioning

RELIABILITY AND CER TIFICATION

Compliance Standard	IEC62619/IEC62477, UN38.3/RoHS
Warranty	5 Years

Soluna C&I BESS - Power Cell

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Solis C&I BESS - Evercore

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Models	EverCore-100kWh-50kW-NV	EverCore-120kWh-60kW-NV	EverCore-261kWh-125kW-NV
System			
Rated energy capacity	100.5 kWh	120.6 kWh	261.2 kWh
Max. cycle rate	0.5 P		
Max. cycle efficiency ①	89%		
Usable energy capacity	90.5 kWh	108.5 kWh	235.1 kWh
Dimensions (W × H × D)	1240 × 2000 × 1540 mm		1750 × 2250 × 1450 mm
Dimensions (without inverter) (W × H × D)	950 × 2000 × 1540 mm		1350 × 2250 × 1450 mm
Weight	1800kg (Cabinet) + 73 kg (Inverter)	1940 kg (Cabinet) + 73kg (Inverter)	2500 kg (Cabinet) + 170 kg (Inverter)
Operating temperature range	-25 ~ +55℃		
Storage temperature range	0 ~ +40℃		
Operating humidity range	≤95% (non-condensing)		
Max. operation altitude	4000 m		
System temperature control mode	Industrial-grade air-conditioning (Cabinet); Air cooling (Pack); Intelligent fan-cooling (Inverter)		
Fire suppression mode	Default: Aerosol, Explosion relief valve, Fire water inlet Optional: Flammable gas detector, Explosion relief panel, Explosion-proof exhaust fan, Audible and visual alarm		
Ingress protection	IP55 (Cabinet) + IP66 (Inverter)		
Anti-corrosion class (Battery)	C4/C5 (Optional)		
Anti-corrosion class (Inverter)	C5		
Noise (rated operating condition)	70 dB @ 1 m		75 dB @ 1 m
Lightning protection	Type II (AC port), Type II (PV&Battery)		
Protection mode	Anti-islanding protection, residual current detection, insulation resistance detection, AC overcurrent protection, and AC cable connection protection		
Certification standards	IEC62619, IEC61000-6/2/4, IEC62040, IEC63056, IEC62477, UN38.3		
Battery			
Cell type	LFP 3.2 V / 314 Ah		
Cell cycle life ②	6000		
System battery configuration	1P100S	1P120S	1P260S
Rated voltage	320 V	384 V	832 V
Operating voltage range	280 ~ 360 V	336 ~ 432 V	728 ~ 936 V
Rated DC current	157 A		
Number of battery packs	5	6	13
Battery pack capacity	20.1 kWh		
Battery pack weight	140 kg		
Inverter			
Inverter model	S6-EH3P50K-H	S6-EH3P60K-H	S6-EH3P125K10-NV-YD-H
Rated output power	50 kW	60 kW	125 kW
Max. apparent output power@On-grid	50 kVA	60 kVA	125 kVA

Preliminary





Pytes C&I BESS - HV48300 MAX

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Configuration	2P7S	1P14S	1P15S
System Nominal Energy	225 kWh	225 kWh	241 kWh
System Nominal Voltage	358.4 V	716.8 V	768 V
System Voltage Range	313.6 ~ 403.2 V	627.2 ~ 806.4 V	672 ~ 864 V
Cells Capacity	314 Ah		
Continuous Discharging/Charging Current	157 A*2	157 A	157 A
Depth of Discharge	90%		
Operation Temperature	Charge: 32°F~113°F (0°C~45°C) Discharge: 14°F~122°F (-10°C~50°C)		
Storage Temperature	Within 1month: -4°F~122°F (-20°C~50°C) 1-3months: 14°F~104°F (-10°C~40°C) 3-12months: 32°F~86°F (0°C~30°C)		
Operation Humidity	0~95%, No Condensation		
Protection Level	IP55		
Cycle Life	≥6000 cycles		
Warranty	Battery Module 10 years		
Certification	UL9540(TBD), UL 9540A(TBD), UL 1973(TBD), UN 38.3 NFPA 855, NFPA 68/69		



Pytes C&I BESS - HV48300 MAX

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Energy storage systems with flexible configuration from 2h to 8h are available.

S6-EH3P50K03-NV-YD-H-US



x 2

HV48300 MAX – 2P7S



x 1

Max. AC Output Power	110kW
Nominal Energy	225kWh
Rated Grid Voltage	480V
Duration of Discharging	2h

Up to 10 groups in parallel

S6-EH3P50K03-NV-YD-H-US



x 10

HV48300 MAX – 2P7S



x 5

Max. AC Output Power	550kW
Nominal Energy	1125kWh
Rated Grid Voltage	480V
Duration of Discharging	2h

Tecloman utility BESS - Alcor

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Model	TESS-125-262-LTE
AC (On-Grid)	
Rated Power*	125kW
Rated Voltage	400V
Rated Current	180A
AC System Type	3L/N/PE
Voltage Range	400Vac (-15% ~ +10%)
Rated Frequency	50Hz/60Hz
THDI	<3% (at rated power)
Power Factor	>0.99
Power Factor Range	±1
Overload Capability	110% overload (10 min), 120% overload (1 min)
AC (Off-grid)	
Rated Power:	125kW
Rated Voltage	400V
Rated Current	180A
Rated Frequency	50/60Hz
THDU	<3% (linear load)
DC (Battery)	
Cell Type	LFP 3.2V/315Ah
Configuration	260S1P
Charge/Discharge Rate	≤0. 5
Rated Battery Voltage	832V
Battery Voltage Range	728V ~ 936V DC



Tecloman utility BESS - Polar

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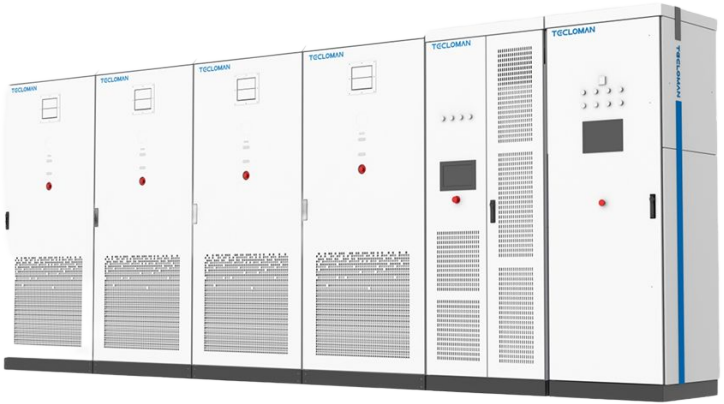
Model	THESS-30-114 THESS-30-129 THESS-30-143 THESS-30-157	THESS-60-114 THESS-60-129 THESS-60-143 THESS-60-157	THESS-90-258 THESS-90-286 THESS-90-315	THESS-120-286 THESS-120-315	THESS-150-315 THESS-150-387 THESS-150-430 THESS-150-473
AC (Grid tied)					
Apparent Power	33kVA	66kVA	100kVA	132kVA	165kVA
Rated Power	30kW	60kW	90kW	120kW	150kW
Rated Voltage			400V		
Rated Current	43A	87A	130A	173A	217A
Voltage Range			360V ~ 440V		
Frequency			50/60Hz		
THDI			<3%		
Power Factor			-0.9 leading ~ 0.9 lagging		
Wire Connection			3 / N / PE		
AC input	33kVA	66kVA	100kVA	132kVA	165kVA
AC (Off-grid)					
Apparent Power	33kVA	66kVA	100kVA	132kVA	165kVA
Rated Power	30kW	60kW	90kW	120kW	150kW
Rated Voltage			400V		
Rated Current	43A	87A	130A	173A	217A
THDU			⩽2%		
Frequency			50/60Hz		
Overload Capability			110% for long-term; 120% for 1min		
DC (Battery and PV)					
Max. PV Open-circuit Voltage			1000V DC		
Rated PV Power	30kWp	60kWp	90kWp	120kWp	150kWp



Tecloman utility BESS - Vega

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Model	TESS-1000-2096
AC (On-Grid)	
Rated Power*	1000kW
Rated Voltage	400V
Rated Current	1444A
AC Wiring	3L/N/PE
Voltage Range	400Vac (-15% ~ +10%)
Rated Frequency	50Hz/60Hz
THDI	<3%(@Rated Power)
Power Factor	>0.99
Power Factor Range	±1
Overload Capacity	110%@10min, 120%@1min
AC (Off-Grid)	
Rated Power	1000kW
Rated Voltage	400V
Rated Current	1444A
Rated Frequency	50Hz/60Hz
THDU	<3% (Resistive load)
DC (Battery)	
Cell Type	LPF 3.2V/315Ah
Configuration	260S8P
Battery Capacity	2096kWh
Charging and Discharging rate	≤0.5P
Rated Voltage of Battery Rack	832V
Voltage Range	728 ~ 949V



Tecloman utility BESS - Ymir

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Model	TBAT-5015-15-L-E
Cell Type	LFP 3.2V / 314Ah
Battery Module Configuration	1P104S
Max. Voltage of Cell	3.6V
Min. Voltage of Cell	2.8V
Number of Module per Rack	8
Battery Rack Configuration	1P416S
Number of Racks per Container	12
Nominal DC Voltage	1331.2V
Operating Voltage Range	1164.8~1497.6V
Nominal Capacity	5.015MWh
P-rate	0.5P / 0.25P
Max. charging/discharging power	2500kW
Temperature Range	-30 ~ 55℃
Cooling Method	Liquid cooling
Relative Humidity	≤95%RH，non-condensing
Cycle life	≥8000 cycles（25℃，90%DOD，80%EOL）
Max. Altitude	≤5000m（>3000m needs to be customized，>2000m derating）
Auxiliary power supply specification	3P+N
IP Protection Degree	IP55
Anti-corrosion level	C3 / C4 / C5（Optional
Fire Suppression System	Aerosol + Water
Weight	42.5T
Dimensions（W×D×H）	6058×2438×2896 mm



Tecloman 10 MWh caso de éxito

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Thank you
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