Sinexcel

Be **Sin**cere, Be **Excel**sior!

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Public Listed
@ SZES 300693

100+ Million US$
Annual Revenue

180+ Design Engineers of
600 Employees

California
USA

Local Service &
Pre-support
@ Pan-America

North Ireland
UK

Local Service &
Pre-support
@ Europe & Africa

Shenzhen,
China

Engineering Center

Manufacturing

Local Service &
Pre-support
@ Asia-pacific

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Factory Huizhou:
About 400,000 Square meters, The production line will be put in action in March,2019

Factory Suzhou
About 800,000 Square meters, The production line will be put in action in Jan,2020

Under Construction, Coming soon

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No. 1
in Asia/China for low-voltage AHF/SVG/AVC

LV Power Quality

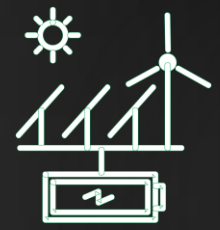
EV Charging

10,000+
EV Quick chargers
120,000+
Charger Module

Installed in Asia

150+
Battery Cell/Pack Manufacturer In China

Battery Formation



Energy Storage & Micro-grid

100MW +
Bi-directional Storage Inverter Installed globally.

ESA/MESA
member

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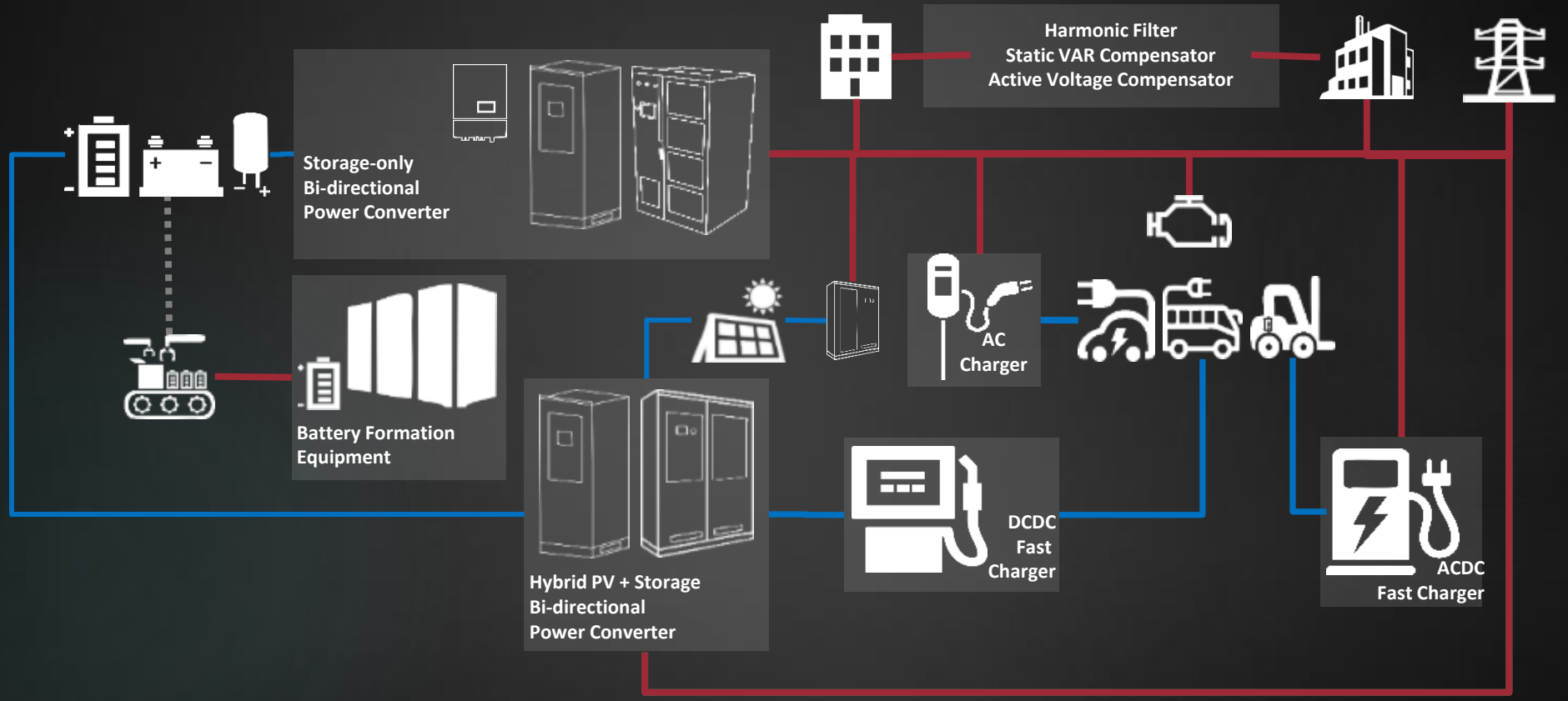

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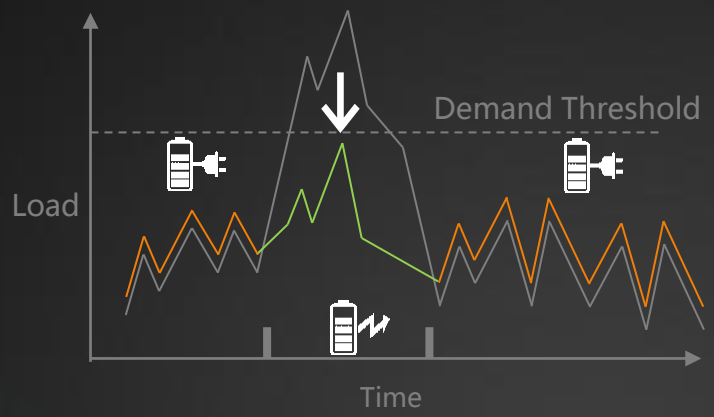
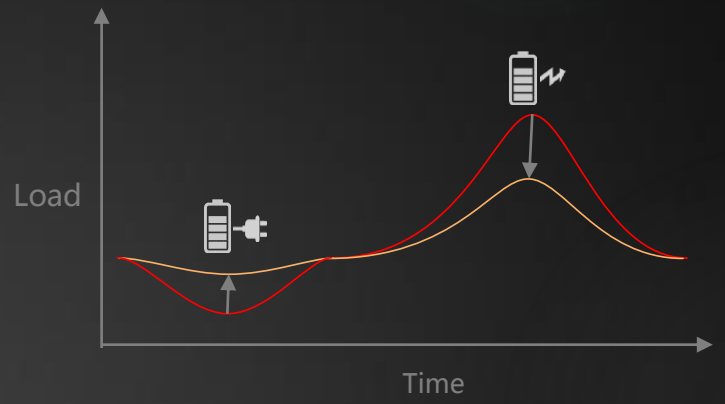
Battery Energy Storage
&
Micro-grid

Value

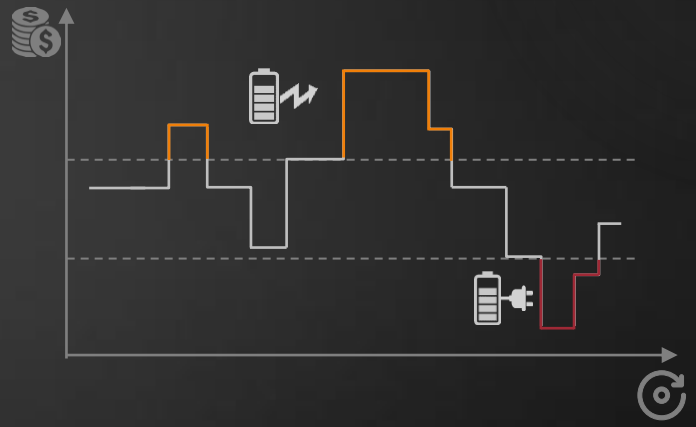


Demand Charge Management

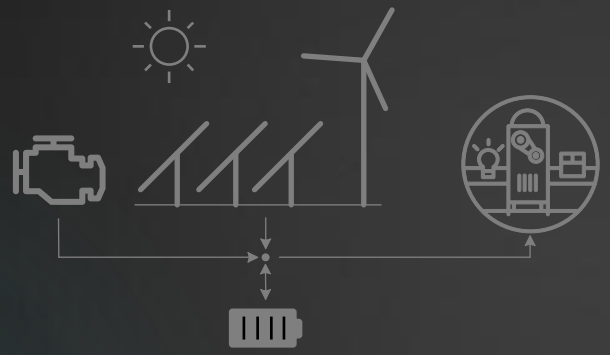


Peak Shaving

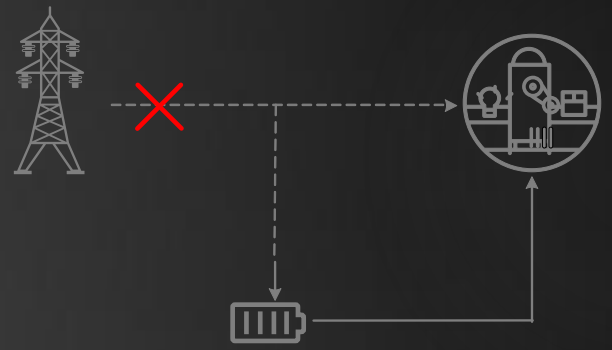
Frequency Regulation



Spot Market



Micro Grid

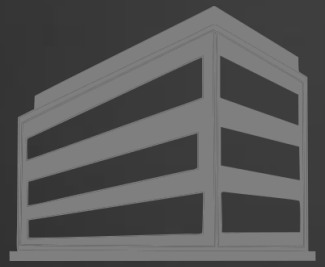


Backup power

Applications

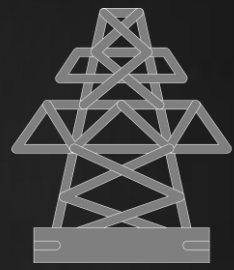
Residential

Community



Commercial

Industrial



Utility

System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Design
& Know-how

Service
& Support

Manufacturing
& Credibility

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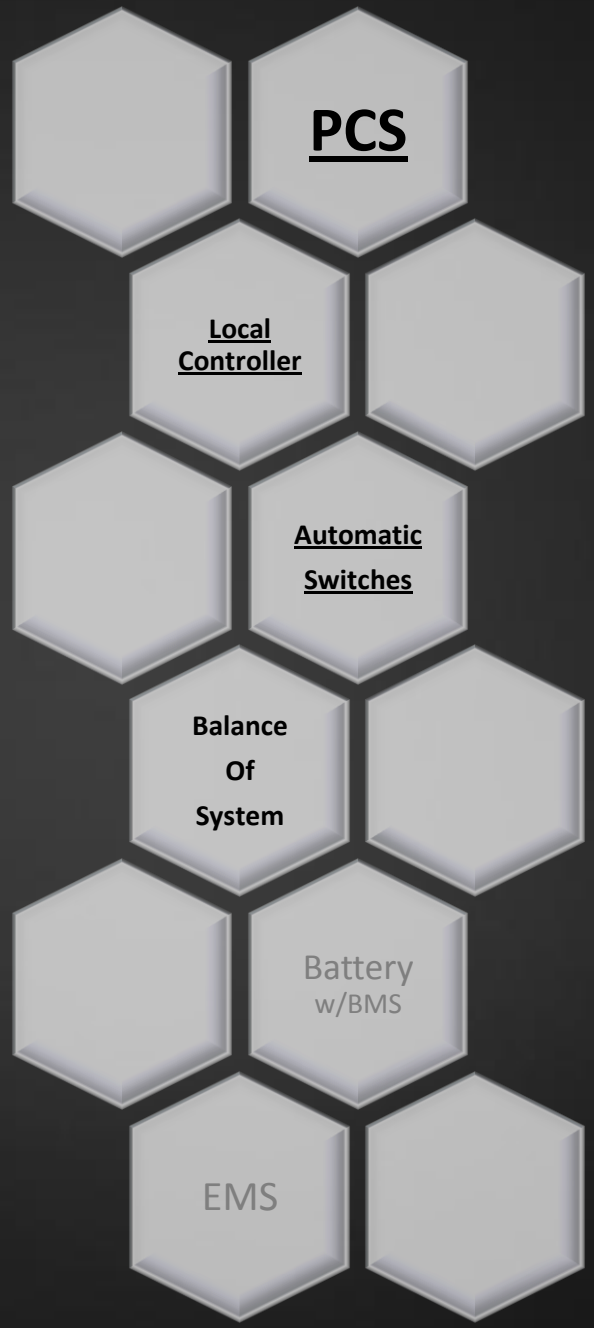

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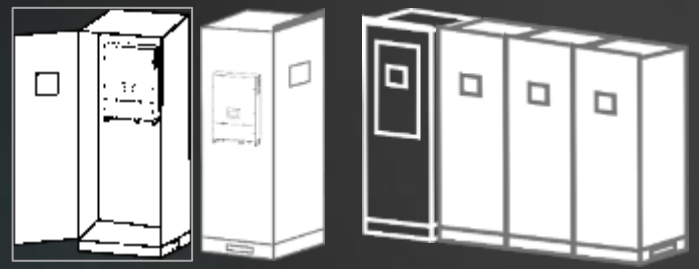
Certificates & Approved Lab

Global Compatible

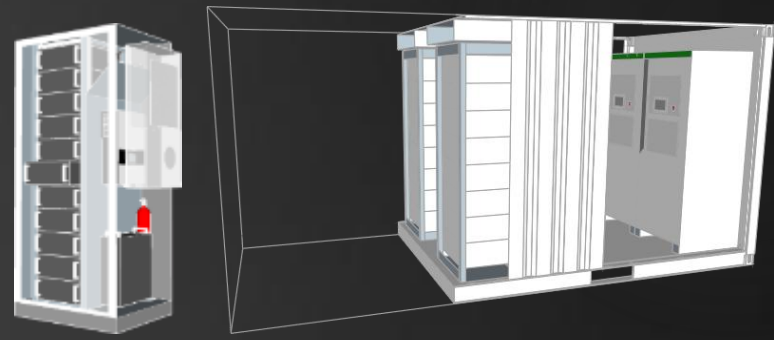
Modular Design

PCS

Indoor



Outdoor



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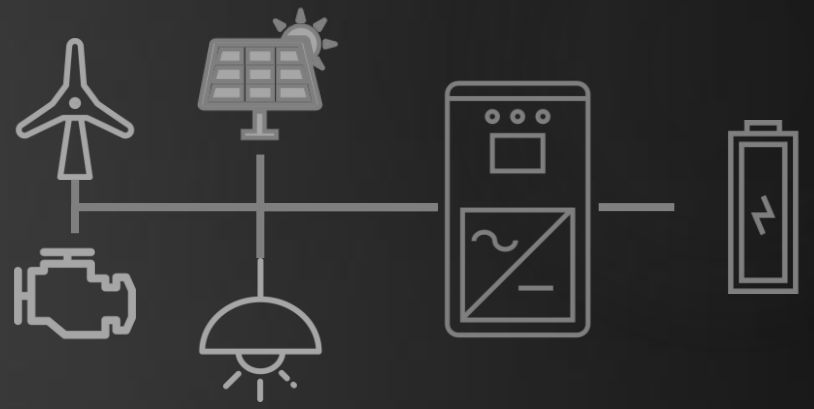
Grid-interactive

Grid-forming



Various types of batteries

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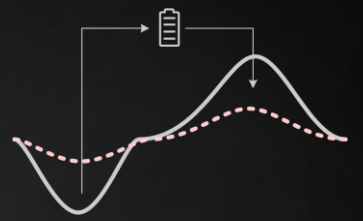
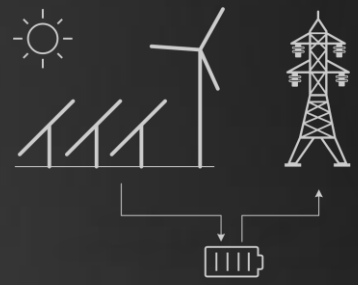
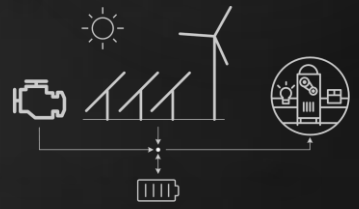
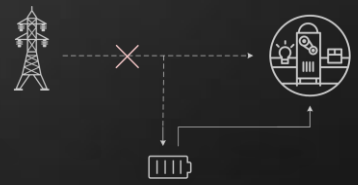
- Frequency Response
- Demand Response
- Micro-grid
- Power Distribution Expansion
- Grid Defection
- Backup Power









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1Mw

500kW

250kW

150kW

100kW

50kW

30kW

15kW

NA CE GB

600-900Vdc

PWS1-500KTL-EX

600-1000Vdc

PWS1-500KTL
-P-EX

NA CE

500-850Vdc

PWS1-250K-NA/EU

Storage-only PCS

NA CE

500-850Vdc

PWS1-150K-NA/EU

NA CE

500-850Vdc

PWS1-100K-NA/EU

NA CE

500-850Vdc

PWS1-50K-NA/EU

NA

250-750Vdc

PWS2-30K-NA/EU

NA

250-500/250-900Vdc

PCS-DC

CE VDE AU

PWS2-M-30K-EX

PV+Storage PCS

MEA

250-850Vdc

PWS1-125K-TH

AU

250-520Vdc

PWG2-100K-NA/EU

AU

250-520Vdc

PWG2-50K-NA/EU

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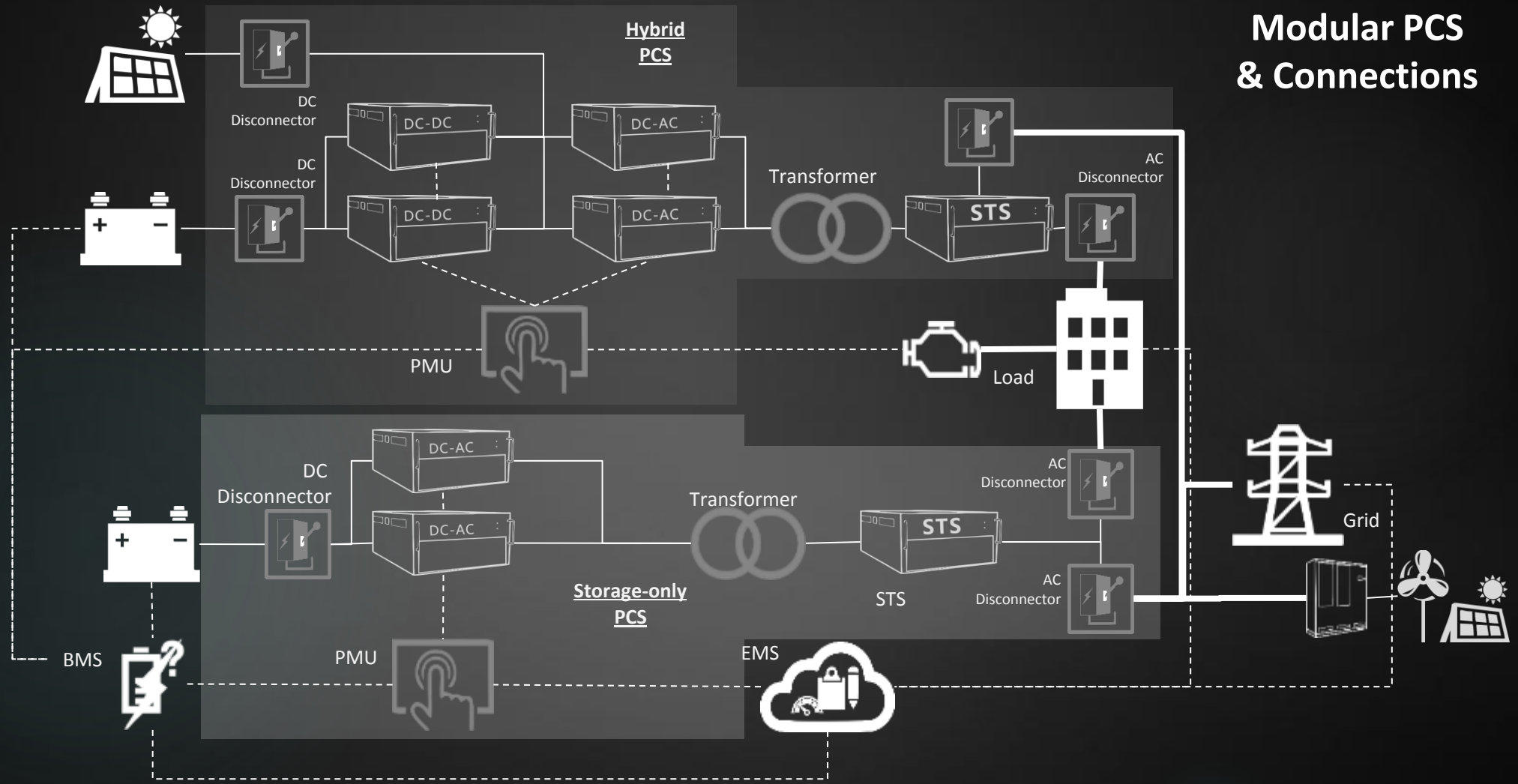
Modular PCS & Connections



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HECO Rule 14

CSA 2.22 IEC UL 1741SA

IEC 62477 **VDE 4105** IEC 62109

UL 508C G59 UL 9540

IEC 61000 CPUC Rule 21

IEEE 1547C AS/NZS 4777

Intertek TÜVRheinland

Certificates & Approved Lab

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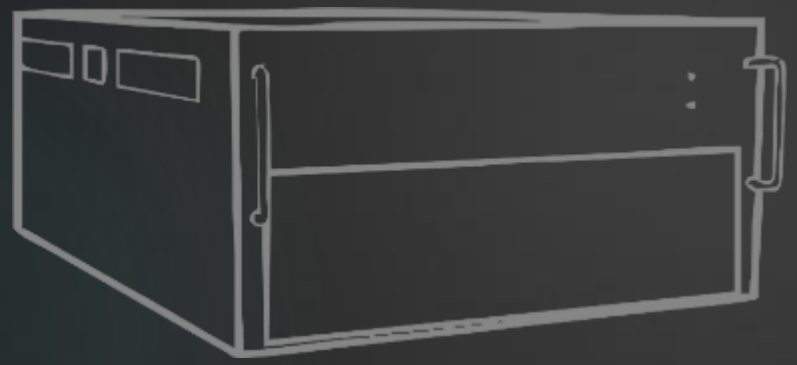
Modular Design



- Power Module Certified
- Easy to ship
- Easy to install
- Easy to maintain

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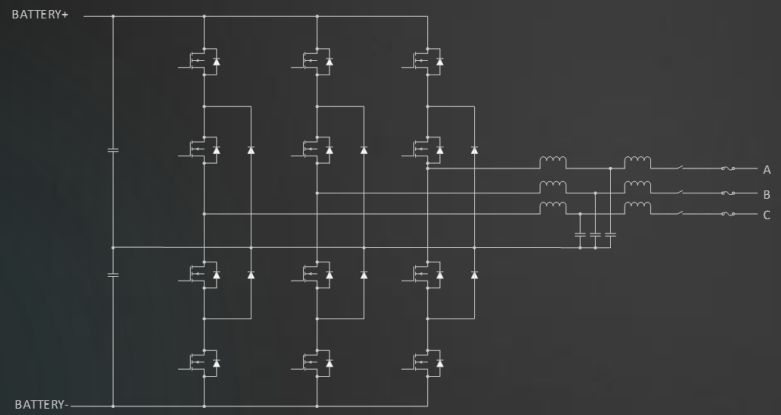
3-Level Topology

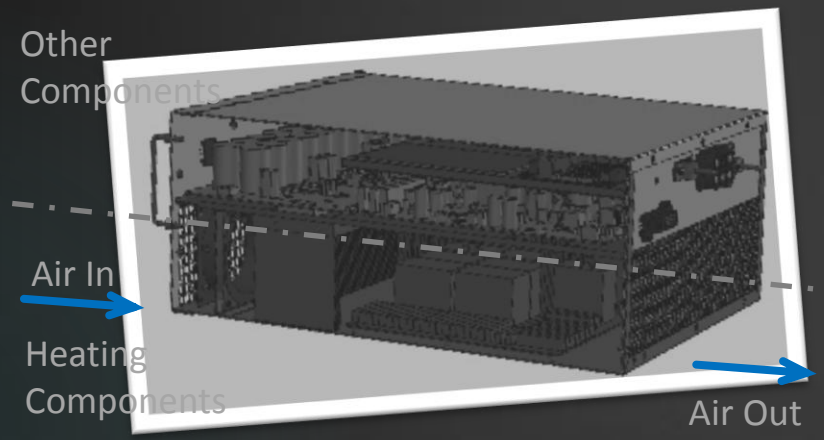


Lower switch loss,
Higher efficiency

Low harmonic & THD

Smaller, lighter

Forced Air Cooling



- Excellent stability
- No liquid leakage
- Improved cooling efficiency
- Independent cooling fans for transformer
- Independent cooling tunnel

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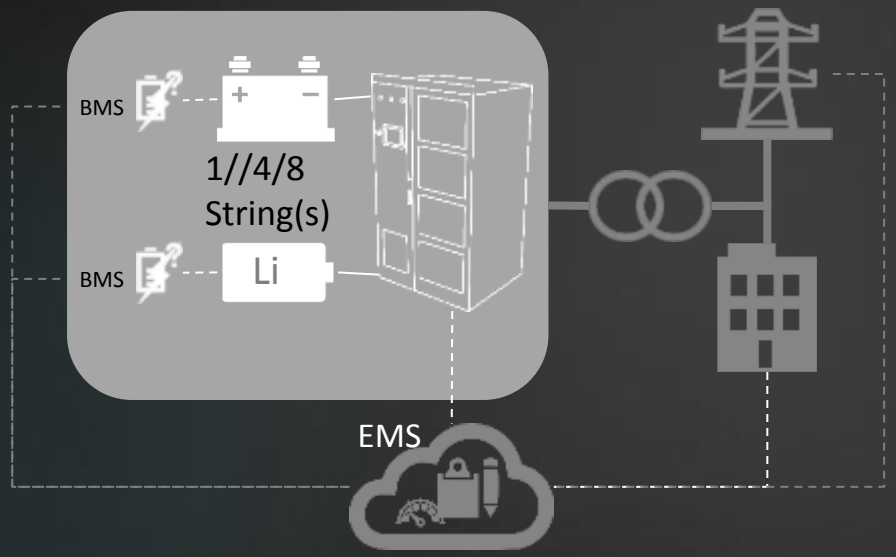
Multi-strings of Battery



- High compatibility
- Independent power module , independent energy
- Single PMU, simple controls
- Low BOS cost
- Longer battery life

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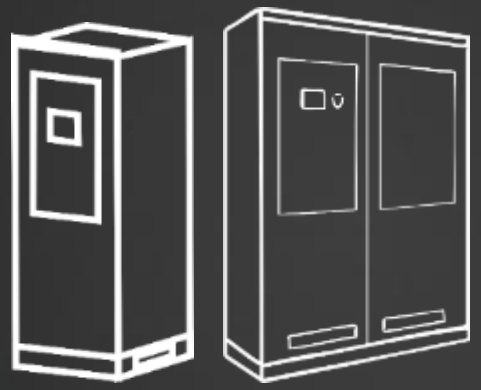
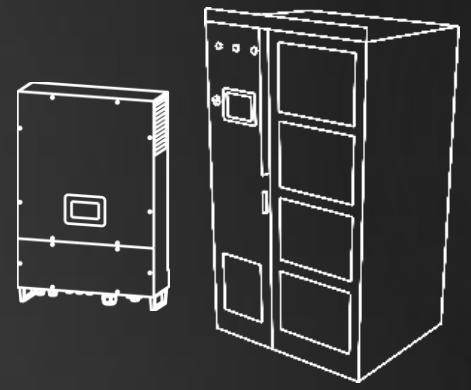
Built-in Transformer



- Galvanic isolation.
- Consistent quality.

Transformer-less



- Light & Compact
- Global Utility Conformity

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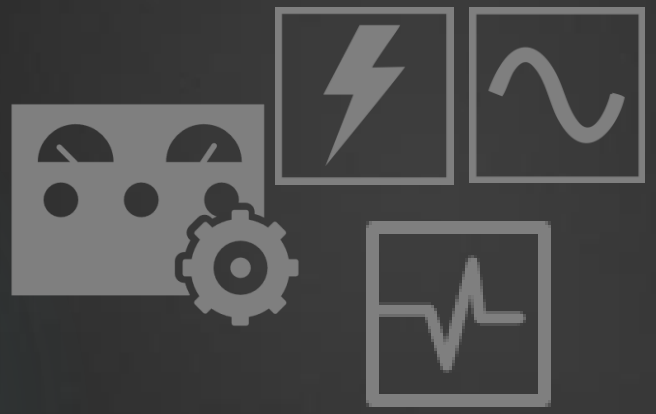
Grid Support & Grid Forming



- H/LVRT
- H/LFRT
- Ramp rates
- Fixed PF
- Volt/Watt
- Volt/Var
- Freq./Watt

Protection

- OTP
- AC OVP/UVP
- AC Phase Reverse
- OFP/UFP
- Anti-islanding (on/off)
- EPO
- Fan/Relay Failure
- OLP
- Configurable U/L AC V/F limit, EOD V

Virtual Synchronous Generator (VSG)

- In parallel @ off-grid
- Without sync cables
- Sync with grid/DG

Pre-engineered System

Power-on & Work

Plug & Play

Flexible & Standardized

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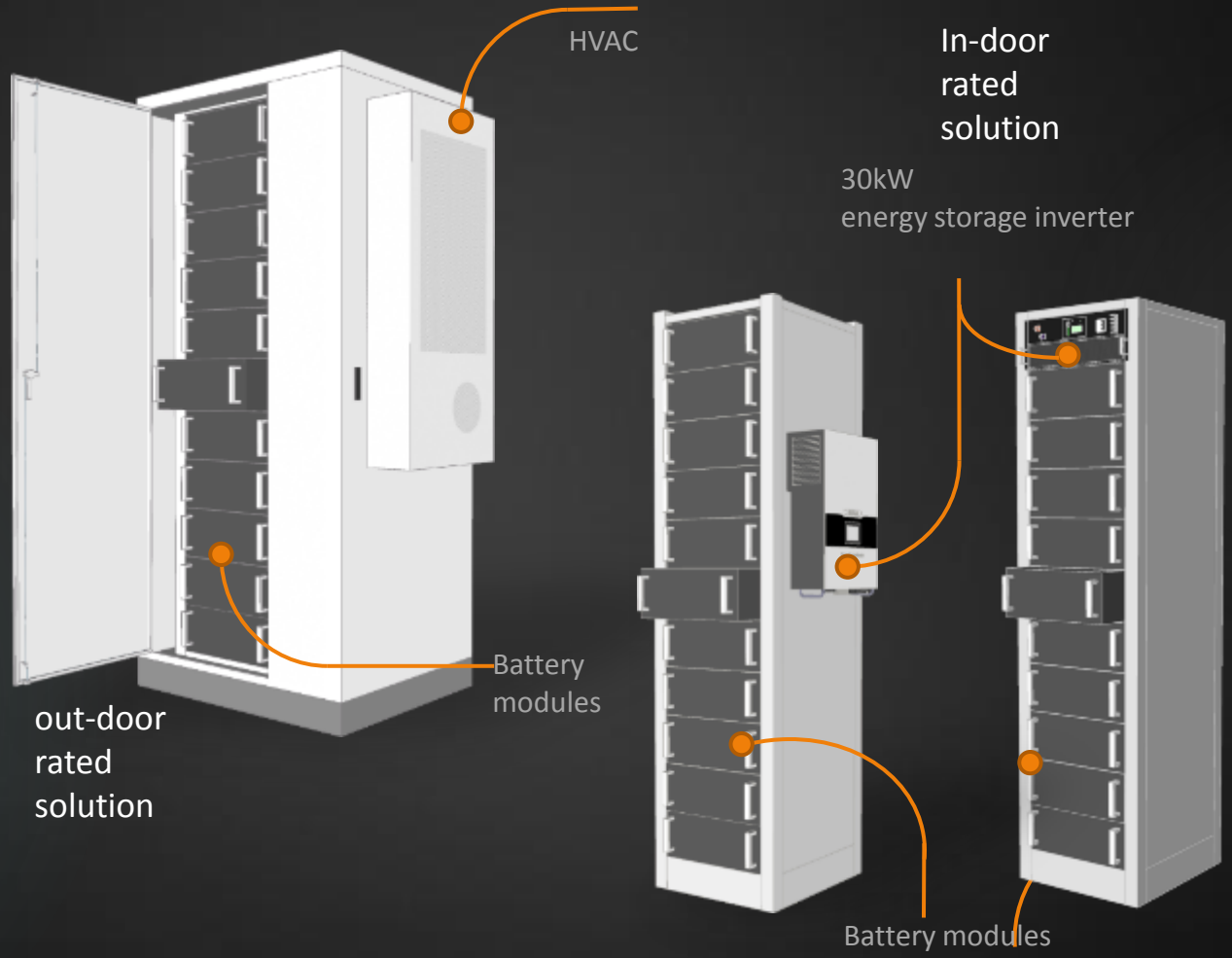
Up to 30 kW + Up to 100kWh



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- Out-door enclosure
- In-door standard 19 inch rack or customized enclosure

- Wall-mounted/Rack-mounted 30kW PCS
- Up to 6 units in parallel @ off-grid.
- 400Vac/480Vac/208Vac 3phases & 240Vac split-phase.

- Standard 19in battery system by LFP or NCM/NCA.

- Optional HVAC/Air Ventilation
- Optional Fire Fighting System

Sinexcel
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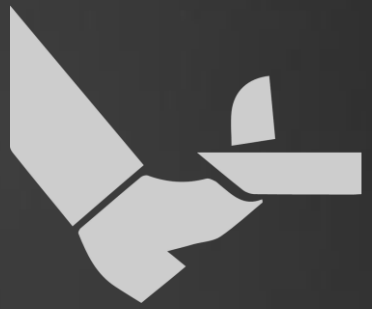
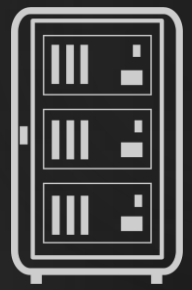
Easy to Configure

Compact & Small Footprint



Standard Battery Cabinet



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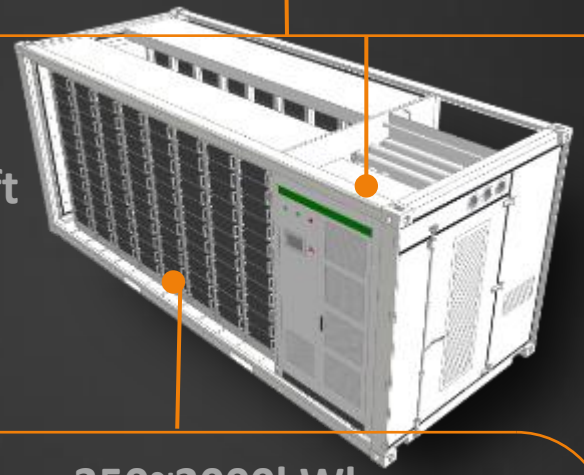
62.5-500kW

250kW

50~150kW

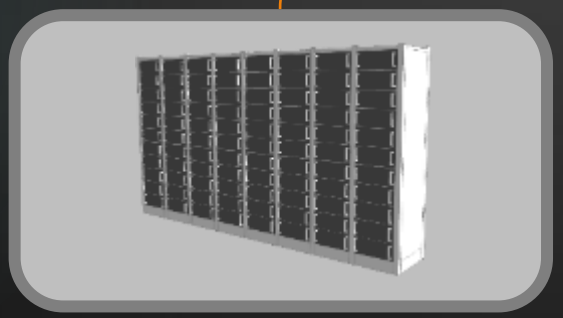


10/20/40ft
Container

Rack-mounted
battery

350~2000kWh

Shelf-mounted
battery



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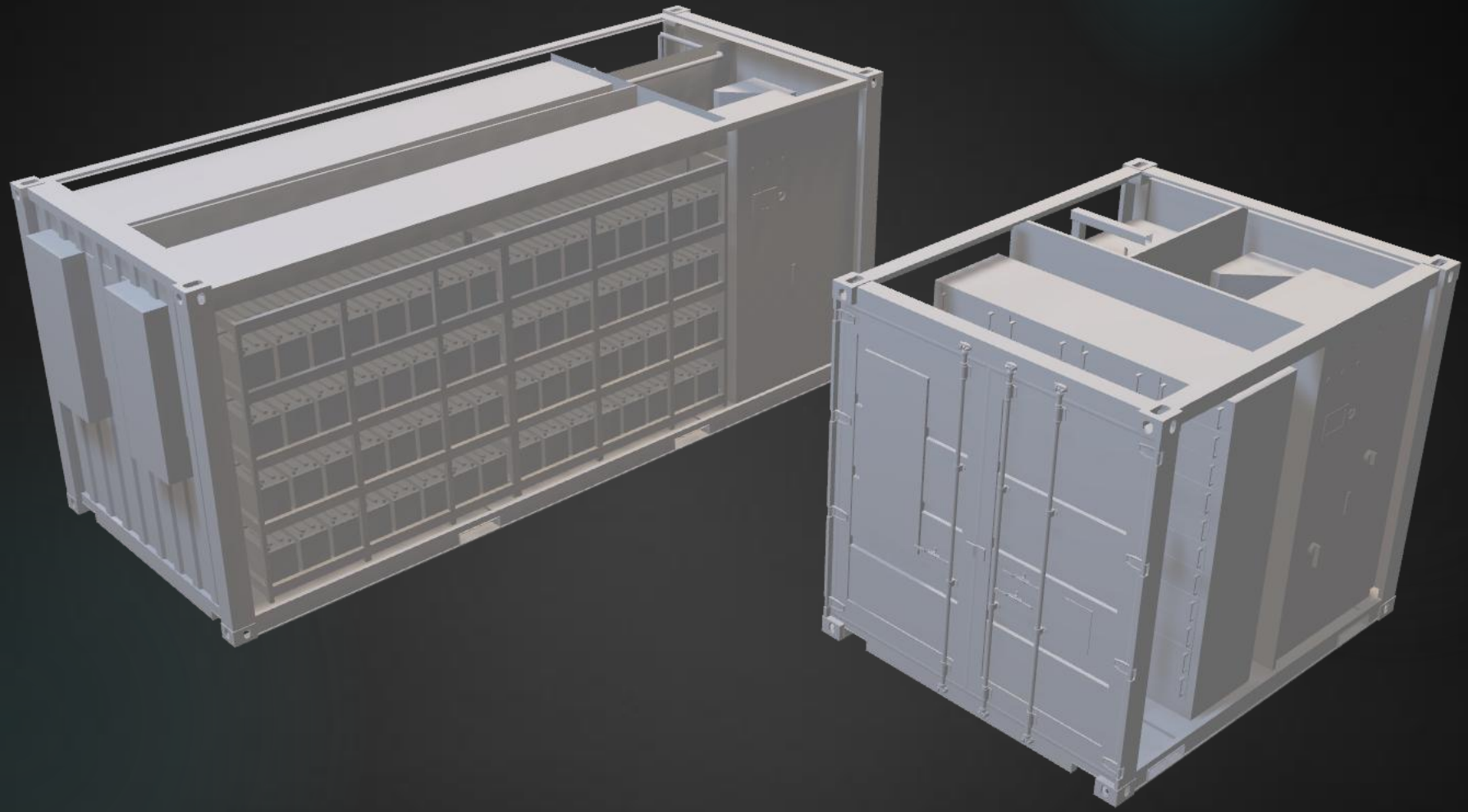

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- Intermodal shipping container
- 10ft/20ft/40ft standard ISO container.
- All-in-one design.

- Modular & NREL certified PCS
- Compact and similar formfactor
- P-Q & V-F mode
- Built-in or external transformer offers option for 400Vac/480Vac connection.

- Independent battery room
- Lithium-ion (LFP/NCM/NAM) or Lead-acid, or Nickle Iron, or Flow battery compatible.

- Pre-engineered with aux distribution, and optional HVAC or air ventilation and/or firefighting system.

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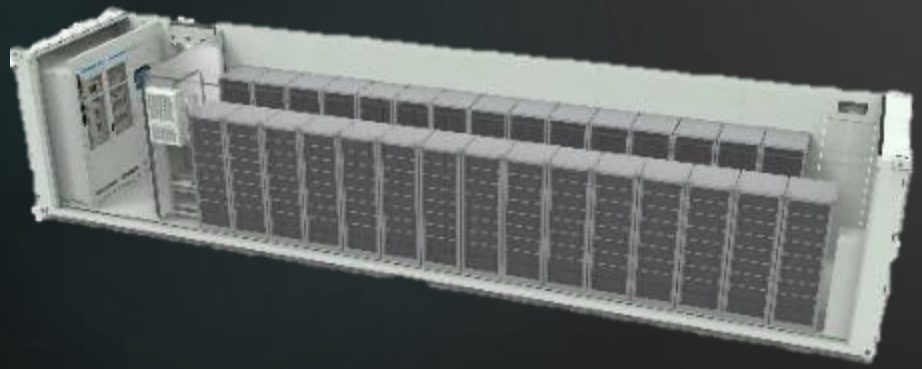
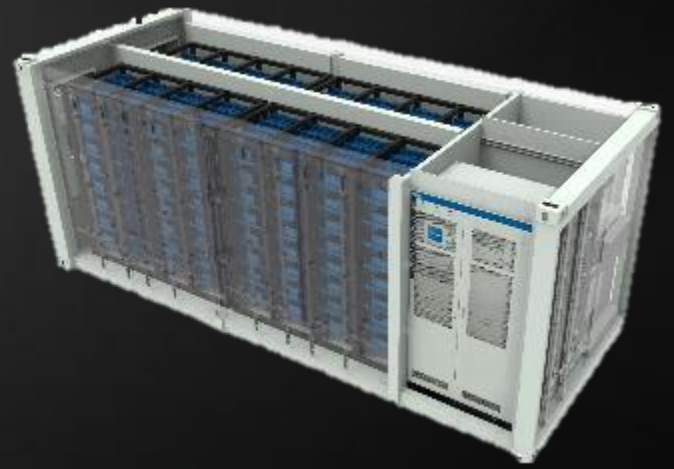
Flexible

Standardized

Compatibility



Walk-in or Non-walk-in
Maintenance Container



Track Records

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Luxi Island, China

2013

Peak shifting

500kW x 4 storage PCS

Grid & Wind & PV

Lead-carbon, 4MWh
Ultra-Cap, 30s*500kw

24h×7d

China State Grid owned 2MW Island Hybrid project funded by 863 PROJECT is used to support off-grid power and grid support.

Shanghai, China

2013.10

Peak-shifting, EV quick charging

125kW 4-string storage Inverter x 8

Grid

LFP, 40kWh x 40
LFP, 240kWh x 12

24h×7d

Swappable EV charging station is charging the EV battery pack and discharging in the night for peak-shifting.

Semau & Salura, Indonesia

2013.11

Micro-grid

450kW PV
150kW Storage Inverter

450kWp PV panel
100kW Diesel Gen

Lead-acid, 2.8MWh

24h×7d

In-door off-grid power supply to support daily electric in remote island

Yushu, China

2015.06

Micro-grid

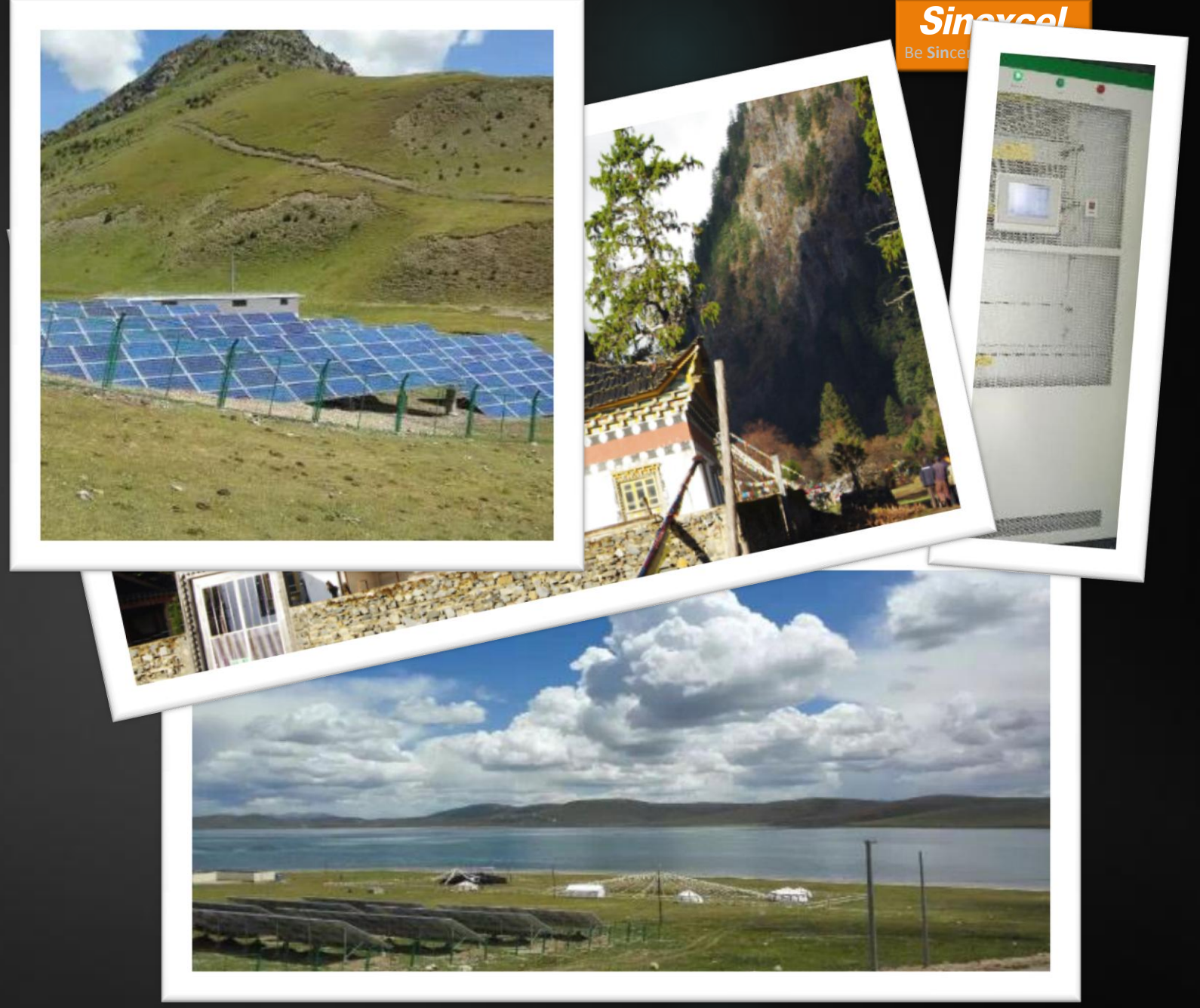
PWG2-50kW/100kW PCS
for 34 villages

40/80kWp PV panel

Lead-carbon, 40/80kWh

24h×7d

The PV micro-grid power supply is now supporting 34 remote village



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Hong Kong

2016.03

Demonstration for grid support

PWS2-50kW PCS

Grid

Supercapacitor

Laboratory Use

The Hong Kong Polytech University Lab is using this equipment for the government funded project on demonstration for grid support.

Petersburg, England

2016.05

Peak shifting

PWS1-150kW PCS

Grid+1MW PV panel

Lead-carbon, 1MWh

24h×7d

Container BES solution driven by Sinexcel to reduce the peak-hour electric bill and charged by external PV farm or grid.

BKK, Thailand

2016.10

Micro-grid

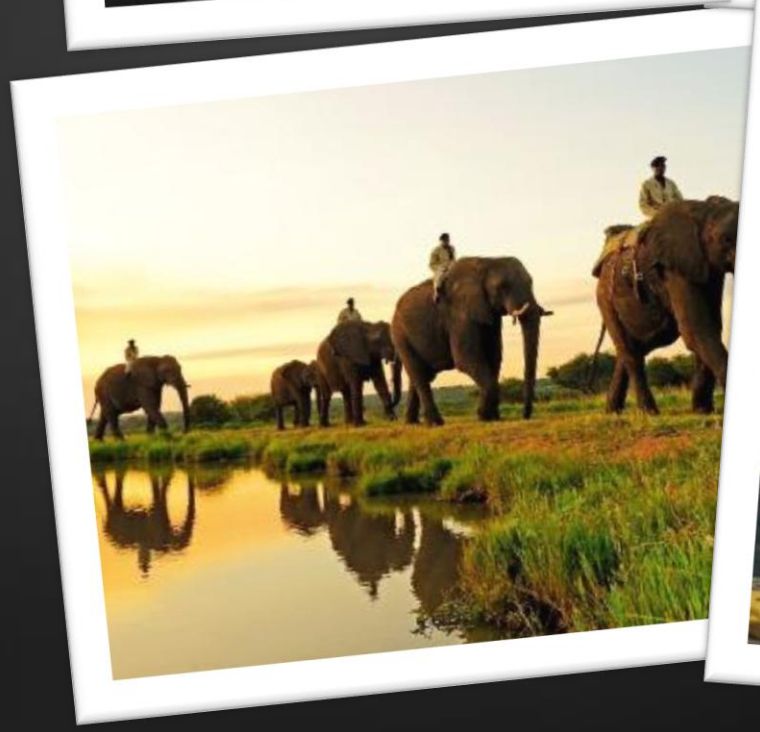
125kW Hybrid PCS

Grid & PV panel

LFP, 30kWh

24h×7d

Smart grid in building owned by MEA (Metropolitan Electricity Authority) in Thailand.



Xiangtan, China

2016.11

EV charging station w/ micro-grid

PWS1-250kW PCS + PWD-800KW STS

Grid & PV panel

LFP, 300kWh

24h×7d

Container BES & EV DC quick charger station driven by Sinexcel is used for PV energy maximization and less impact on grid.

Dongguan, China

2016.12

Grid simulation & Peak-shifting

PWS1-100kW PCS

Grid

LFP, 50kWh

24h×7d

10ft container BES driven by Sinexcel, w/ VSG(virtual synchronous generator) algorithm, made for China Southern Power Grid Co., makes the micro-grid to be with high robustness.

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California, USA

2017.04

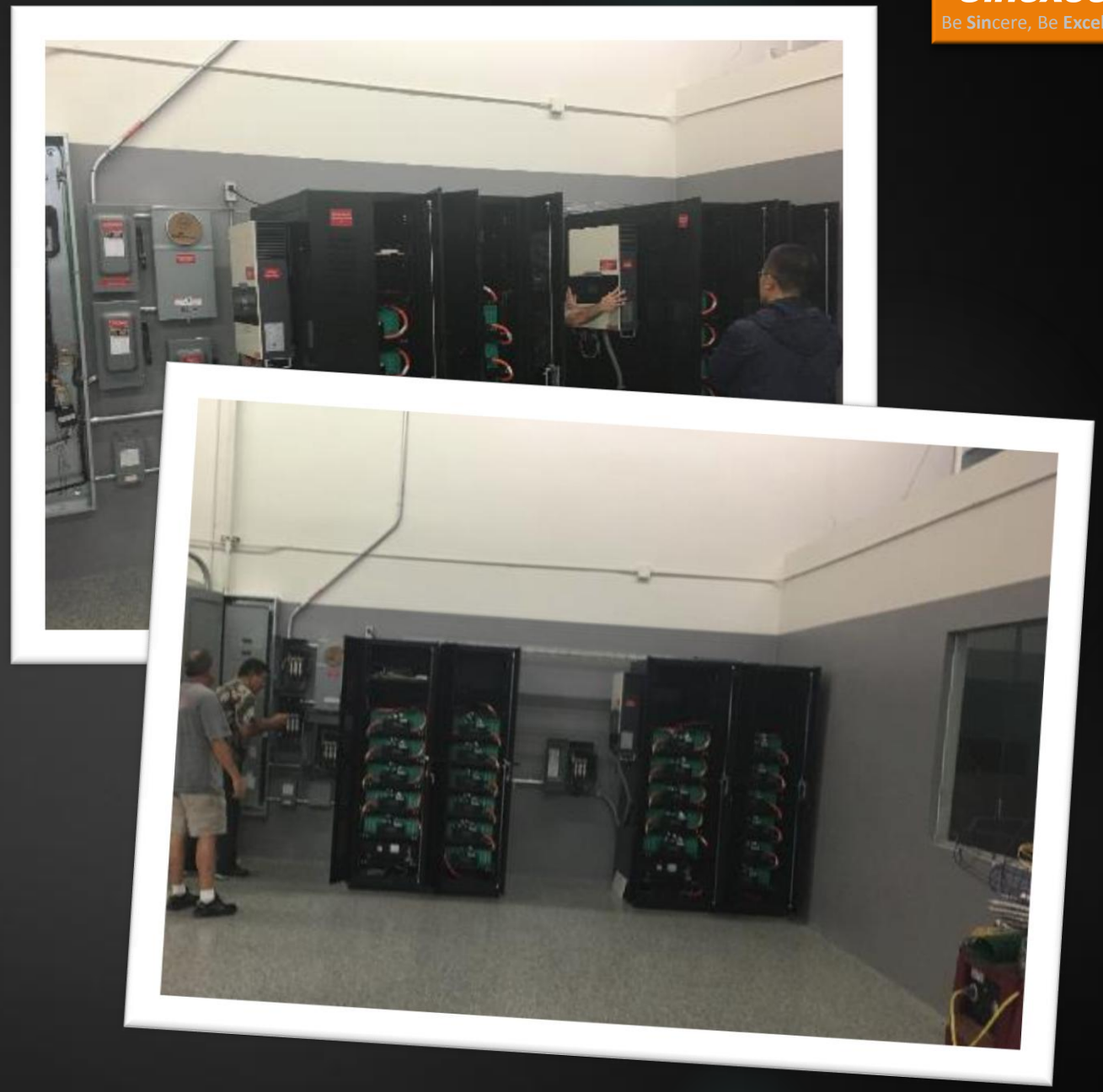
Demand charge management

PWS2-30kW +60kWh

Grid

LFP

24h×7d



30+ sites operating right now in CA by our partner in US. Demand charge management is reducing half of electricity bill of the final clients every month.
More sites are being commissioned

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Sendai, Japan

2017.10

Off-grid

PWS1-100KW
PWS1-50KW

PV+ DG

LFP

24h×7d

Illuminating a village with grid forming energy storage inverter, the generators acts as back up

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Lima, Peru

2017.12

Demand charge management + backup

PWS2-30kW +50kWh in 2 sites

Grid

LFP

24h×7d

2 sites operating right now in Lima, Peru by our partner in Latin America.

More sites are being commissioned

Cathedral City, California

2018.1

Demand charge management

PWS1-500kW +750kWh in container

Grid

LFP

24h×7d

Demand charge management for a cinema.

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Shenzhen, China

2018.5

Peak Shaving and Power quality improvement

4.375MW/9.247MWH

Grid

LFP

24h×7d

Grid power support application in peak hours and power quality improvement

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NeNan Province, China

2018.7

Peak Shaving and Power quality improvement

9.2MW/19.2MWH

Grid

LFP

24h×7d

Grid support application in peak hours in HeNan Provice.

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Xu Chang, China

2018.10

Peak Shaving and Power quality improvement

The same 9.2MW/19.2MWH

Grid

LFP

24h×7d

Grid power support application in peak hours in Xu Chang and also

Sinexcel
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Guangzhou,China

2018.12
Under construction

Peak Shaving and Power quality improvement

500kw/1MWH

Grid

LFP

24h×7d

Grid power support application in peak hours in Guangzhou and power quality improvement.

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THANK YOU

www.sinexcel.us