





HYBRID POWER SOLUTIONS

Commercial | Industrial | Residential



MPMC POWERTECH CORP.

MPMC GROUP OF COMPANIES











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Global leader in distributed hybrid solutions & off-grid systems



120 Countries

Products are exported to 120 countries



59 Types

Three categories of 59 types of products



 $15000^{\,\,\text{Sets}}$ Annual production capacity



80 Specialists
80 solution experts focused on different applications



126 Pater

7 invention patents, 108 utility model patents, 8 software copyrights and 3 appearance patents.

With lower carbon, greener, more reliable and more intelligent customized solutions!

MPMC POWERTECH CORP. (stock code: 832266) was established in Pudong New Area, Shanghai, 2008. MPMC focus on independent research&development, full process intelligent manufacturing, and global marketing&service, committed to high quality development and high-end brand positioning. MPMC specializes in the research&development, design, production and sales of diesel, natural gas generator sets, hybrid power systems, and battery energy storage systems, after years of industry development, the business scope has developed from the original single type of diesel generator set, traditional energy products to a power supply equipment integrator covering a variety of renewable green power generation units such as wind, solar, methanol, hydrogen, and diesel generator sets and energy storage systems, and is committed to providing global customers with lower carbon, greener and more environmentally friendly hybrid power solutions. Currently, MPMC's products have been exported to most countries or regions in Asia, Africa, Oceania, America and Europe, widely used in mobile power, construction, industry and commerce, oil and gas field, mining, railway, banking, telecom, municipal construction, emergency rescue and other fields, helping global users to use more green, low-carbon, intelligent and reliable main and standby hybrid power.



MPMC boasts of perfect quality control system



CE certificate











TLC certificate

ARCADIS cerfificate

ISO9001 Jality system certified

ISO14001 Quality system certified

ISO45001 Quality system certifie

High quality products created under strict quality control system

Strict standard on product testing and process inspection is formulated to ensure product quality. from the moment when materials arrive in the workshop to the time for delivery, all the essential processes are under inspection and control by professional inspectors. Products with defects are not allowed to move to the next procedure unless the problems are well settled. Through complete quality control system, all-round control is performed over the aspects from design to production, from personnel to equipment, from process and material to the working site, so as to satisfy the requirements of customers

In order to make sure that product performance and quality meet the demanding requirements of our customers, advanced testing center is established in MPMC for new product design and delivery inspection.the inspection contents are in line with ISO8528 standard and performance requirements in special industry and regions









DEDICATION

Product Portfolio







Power Bank & DG



Hybrid Microgrids



Hybrid Lighting Towers







SB Series

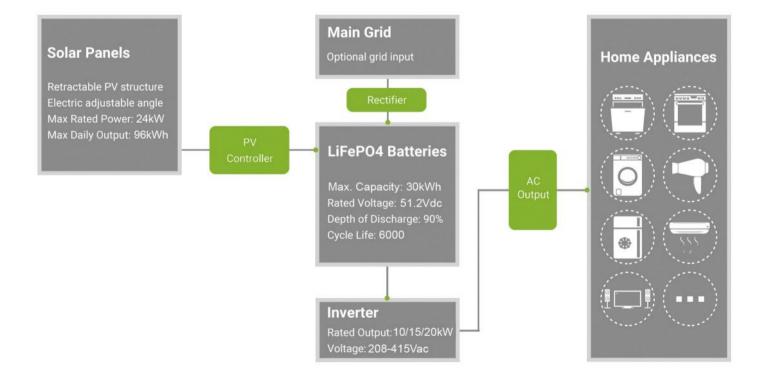
Hybrid SolutionsFor Residential & Commercial Independent Power

By optimizing the integration of solar power, and battery energy storage systems, MPMC Hybrid Energy Solutions SB Series has lower costs than conventional solar & batteries storage systems on the market. MPMC SB Series have the advantages of free installation, inattentive operation & maintenance, and greatly shortening the investment return period.

The system ensures power supply at night and in remote areas without main grid, saving at least 3,600 kWh of electricity every year. By expanding the capacity, other than saving on electric bills, excess electricity can also be sold into the grid.

Based on a typical use of household electrical appliances and the shift to more energy - saving appliances, taking account of actual service time of each electrical appliance, the estimated daily household power consumption is 9.58kWh and peak power is about 5940W. And system capacity can be expanded according to requirements.



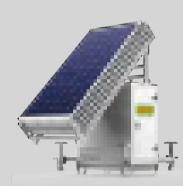




2021 Best Rechargable Solar Battery Power Integration Project











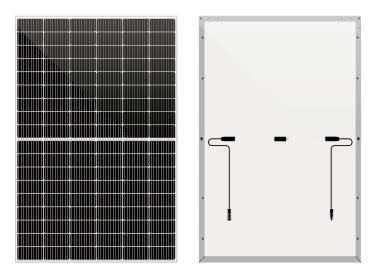
Specification

*Customization available

	NAO	DEL		CD 1EC	SB-10	SB-20				
	IVIO	DEL		SB-15S						
Rated	Voltage		50HZ	208~240Vac	380~415Vac	380~415Vac				
naisa renage			60HZ	208~240Vac	380~415Vac	380~415Vac				
	LFP	Capacity	Min.	20	10	20				
LFP Battery	Battery	kWh	Max.	30	30	30				
Energy	Dattery	Rack Vot.	Vdc	51.2	51.2					
Storage			Model	MIV-15S	MIV-10*2					
System	Inverters		kVA	15	10	20				
@50Hz/60Hz			Phase	1	1 3					
	Cooling System			Fan	Fan Fan Fan					
	Max. Rated		kW							
Generator Set @50Hz/60Hz	Power (Prime@ISO 8528)		kVA	Not Included						
	Fuel Tank		L							
Color Danal	Panel Power		W	500	500	500				
Solar Panel	Total	Power	W	21000	12000	24000				
	Loa	nding	L*W*H(mm)	2250*1650*2250	2250*825*2250	2250*1650*2250				
	Loadi	Loading Oty.		3	7	3				
Dimensions	Loadi	ng Qty.	40HC	7	14	7				
	Exp	oand	L*W*H(mm)	2250*47640*2250	2250*23820*2250	2250*47640*2250				
		Net.weigh	t (kG)	2970	2570 3270					



SPK 1.44~SPK 106 460~530Wp



The MC4 connector with diodie is standard with solar panel. The PV inverter is option

STC for solar panel



Light intensity≥1000 W/ m²



Temperature of the PV panel ≤25 °C



Atmospheric quality≤1.5



Specification

All data based on STC's data of the solar panel

MODEL	Panel Power	Panel Type	String Voltage (Running)	String Qty.	Total Array Power	Loading	Loading Qty.		Expand	Net. weight (kG)
	Wp		Vdc		kWp	L*W*H(mm)	20GP	40HC	L*W*H(mm)	
SPK-1.44	480	TOPCon	108	1	1.44	2044*1265*325	24	63	2044*3533*325	165
SPK-1.92	480	TOPCon	144	1	1.92	2275*2050*387	10	30	4543*2050*387	238
SPK-2.3	460	Perc	210	1	2.3	2238*1142*590	15	40	2238*3342*590	270
SPK-2.88	480	TOPCon	216	1	2.88	2450*2150*445	10	20	2450*6450*445	347
SPK-3.84	480	TOPCon	288	1	3.84	2450*2150*555	8	20	4900*6450*555	440
SPK-10	480	TOPCon	756	1	10.08	2250*1150*1250	5	20	2150*24150*100	1200
SPK-106	530	Perc	765	10	106	20HQ	N/A	2	2348600*2313*1487	TBA

GSB Series

Hybrid SolutionsFor Independent Power















Design Standard

MPMC Hybrid Power Station GSB® Series is a reliable resilient / prime energy solution mainly developed for independent power.

To live green while ensuring stable off-grid power source, GSB® Series integrates diesel generator set (gas generator set foroption), solar power, battery storage and hybrid solar inverter in one secure unit. It helps customers realizing solarself-consumption, rate arbitrage and more importantly, power independence.

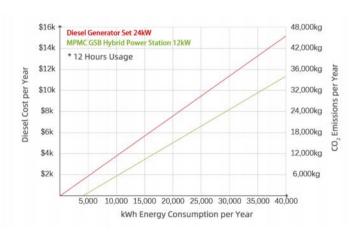
Features

- Integrated installation, convenient storage and transportation
- High return on investment and quick return
- Simple operation and easy maintenance
- Power and capacity can be expanded, meet different user needs
- Excellent cooling system for heat dissipation
- Beautiful design, retractable structure, excellentanti-attenuation performance and high efficiency of MPMC Solar Powered System
- Visualized smart control system to monitor operation status
- Reliable Lithium Iron Phosphate Battery Storage to ensure compact structure with high power density and long lifespan
- Accept customer customization, suitable for various scenarios

For household daily power consumption ≤15kWh per day, by adopting MPMC GSB® Series Hybrid Power Station as a 12-hours-usage electricity generation source, it costs only \$119.29 USD on fuel per year, while it costs \$2312 USD on fuel per year for a 24kW diesel generator sets.



Annual Emission Saving Up to











Specification

*Customization available

	MO	DEL		GSB-15S	GSB-30S	GSB-10	GSB-20	GSB-3	0	GSB-60	
Rated Voltage 50HZ 60HZ			208~2	380~4	115Vac	380~415Vac					
			60HZ	208~2	380~4	115Vac	400Vac/480Vac (480Vac@3P3V				
	LFP	Capacity	Min.	20	30	10	20	40	100		
LFP Battery		kWh	Max.	40	60	40		60	100		
Energy	Battery	Rack Vot.	Vdc	51.2	51.2	5	1.2	410~614	358		
Storage			Model	MIV-15S	MIV-15S*2	MIV-10	MIV-10*2	MPC-30	MPC-30	MPC-30*2	
System	Inve	Inverters k		15	30	10	20	30	30	60	
@50Hz/60Hz			Phase	1	1	3		3	3		
	Cooling System			Fan	Fan	Fan		Fan	HVAC		
C C - t	Max. Rated		kW	15	30	16		24	24	48	
Generator Set @50Hz/60Hz	Power		kVA	15	30	20		30	30	60	
@50HZ/60HZ	Fuel Tank		L	100	200	100		100	200		
Solar Panel	Panel	Power	W	460	460	460		460	460		
Solal Pallel	Total	Power	W	2300	2300	2300		2300	2300		
	Loading L*W*H(mm)		L*W*H(mm)	2950*1150*2250	3250*1150*2250	2950*1150*2250		3250*1150*2250	3900*1	3900*1150*2550	
	Loodi	Loading Qty.		4	2		4	2	N/A	N/A	
Dimensions	Loadi	ng ⊄ty.	40HC	8	6	8		6	6		
	Expand L*W*H		L*W*H(mm)	2950*5500*3350	3650*5500*3350	2950*5	500*3350	3650*5500*3350	3650*5500*3350 3900*5500		
		Net.weigh	it (kG)	3000	3400	3000	3100	3400	4100	4200	

GB Series

Hybrid SolutionsFor Greener Power Solutions











Design Standard

GB® is a new range of secure integrated hybrid power station. With diesel generator, Battery storage and Hybrid solar Inverter in one secure unit for option. GB® is mainly developed for lower emission, Reduce the dependence on Main Power and decrease the consumption cost.

Benefits

- Integrated installation, convenient storage and transportation
- High return on investment and quick return
- Simple operation and easy maintenance
- Power and Capacity can be expanded, meet different user needs
- Accept customer customization, suitable for various scenarios

Warranty

- Battery Performance: 6000 cycles(80% DOD) or 3 years after manufacture
- Generator: 18 months after manufacture or 1500 hours running time

Why we need battery storage system that costs much more than the traditional genset providing the same power?





















Specification

*Customization available

ation availat	/IC																									
			LFP Battery Energy Storage System @50Hz/60Hz							Generator Set @50Hz/60Hz		Dimensions														
Patod	/oltago	L	_FP Bat	tery					Ma																	
Rateu	voltage	Capacity kWh		Rack Vot.	Inverters		Cooling System	Rated Power (Prime @ISO 8528)		Fuel Tank Loading		Loading Qty.		Net. weight (kG)												
50HZ	60HZ	Min.	Мах.	Vdc	Model	kVA	Phase		kW	kVA	L	L*W*H(mm)	20GP	40HC												
200 4	151/20	10	40		MIV-10	10	2	Fa.:	14	20	100		4	0	2300											
300~4	FIDVAC	20	20		MIV-10*2	20	3	ган	10	20	100	2950*1150*1500	4	U	2400											
208~240Vac		20	40	31.2	MIV-15S	15	1	1 Fan	15	15	100		4	8	2300											
		30	60		MIV-15S*2	30			30	30	200	3250*1150*1600	2	6	2500											
GB-30 380~415Vac	400Vac/480Vac (480Vac@3P3W)	400Vac/480Vac			400Vac/480Vac	400Vac/480Vac	400Vac/480Vac	40	60	410~614		20	2	Fan	24	30	100	3250*1150*1500	2	4	2500					
		10	00	358	IVIPC-30	30	3	HVAC	24	30	200		2	0	3200											
200 41EV/20	400Vac/480Vac (480Vac@3P3W)	(480Vac@3P3W)	400Vac/480Vac	400Vac/480Vac	400Vac/480Vac	400Vac/480Vac	400Vac/480Vac	400Vac/480Vac	400Vac/480Vac	400Vac/480Vac	400Vac/480Vac	400Vac/480Vac	100	00	358	MDC 20*2 40	40	(0 3		10	40	200		2	6	3300
300~413Vac			200	00	716	IVIPC-30 Z	60	3		40		300	3900*1150*1900	1	3	4000										
380~415Vac	400Vac/480Vac (480Vac@3P3W)	20	00		MPC-30*3	90	3	HVAC	80	100	300		1	3	4200											
290. 415Vac	Vac 400Vac/480Vac (480Vac@3P3W)	400Vac/480Vac	20	00		MDC 20*4	120			100	125	300		1	3	4400										
360~413Vac		400		IVIFC-30 4 120	3		100	123	800	20GP	ı	2	6200													
400	Wac	40	400		MDC 100*2	200	2	111/40	1/0	200	800	20GP	1	2	9000											
400	vac	10	000		IVIFC-100 2	200	J	TIVAC	100	200	1000	40HC	N/A	1	16000											
380~415Vac	380~480Vac	10	000		MPC-500	500	3	HVAC	400	500	1000	40HC	N/A	1	23000											
	50HZ 380~4 208~2 380~415Vac 380~415Vac 380~415Vac 400	380~415Vac 208~240Vac 380~415Vac 400Vac/480Vac (480Vac@3P3W) 380~415Vac 400Vac/480Vac (480Vac@3P3W) 380~415Vac 400Vac/480Vac (480Vac@3P3W) 400Vac/480Vac (480Vac@3P3W) 400Vac	Rated Voltage Cap K\	Rated Voltage Capacity kWh	Rated Voltage Capacity kWh	LFP Battery Energy Storage System @50H	Storage System @50Hz/60 LFP Battery Rack Vot. Inverters Inverters Inverters Inverters Inverters Inverters Inverters	Storage System @50Hz/60Hz LFP Battery LFP Battery LFP Battery LFP Battery LTP Battery	Storage System @50Hz/60Hz Storage System @50Hz/60Hz	Storage System @50Hz/60Hz Capacity kWh Rack Vot. Inverters Cooling System Potential System Po	Storage System @50Hz/60Hz Generator @50Hz/60Hz	Storage System @50Hz/60Hz Generator Set @50Hz/60Hz	Rated Voltage Storage System @50Hz/60Hz Storage Syst	Rated Voltage LFP Battery Storage System @50Hz/60Hz Dimension Dimens	Rated Voltage LFP Battery Rack Vot. Rack Vot.											

Hybrid Microgrids

Battery Energy Storage System + DG + Solar





Composition of typical hybrid microgrids





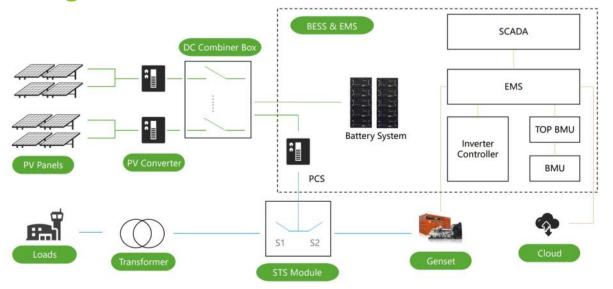


Battery Energy Storage System

Solar Panel

Diesel Generator

System Diagram



Operation Logic

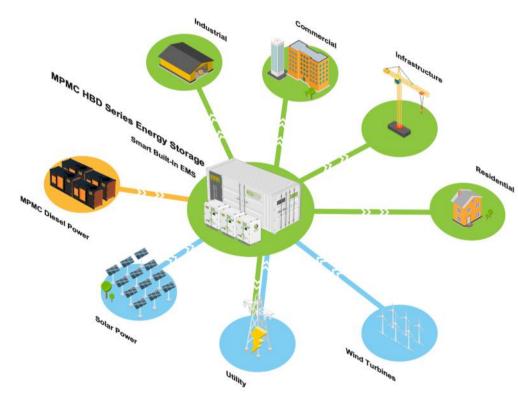
Basic Design: PV+BESS as prime power, diesel generators as backup power

With EMS and SCADA, the whole power plant realizes intelligent automatic management:

- 1. Stabilize the power supply by weather analyzing and forecasting, and adjust the power deployment
- 2. Analyze and manage the loads, working state of PV and the BESS, to maximize fuel efficiency of diesel generators
- 3. Independently and flexibly adjust the operating status and distribution of power generation and loads to maximize the operating efficiency
- 4. Have the ability to form a large power grid with other micro grid (HV power grid / LV power grid).



- -----Weather Forecast
- ----Realtime remote monitroing
- ----Remote Alarm & diagnosis
- ----Realtime reports
- ——SL3 network security
- ----StarLink for communication backup



Case Study





Off-Grid Solar-Battery-Gas Hybrid Project

Location: America

Products: 1*HBD-100-516 A series,

125kW Gas Generator. 90kW PV power PV Panels.





Location: Kenya Sites: Qty. 4 **Total Power Installation: 6MW Each Site:**

BESS: > 1MWh BESS, 80% DOD, 6000 lifecycles

PV Panels Diesel Generators 2 *500kw & 2 *250kw

SOLAR

LIGHTING TOWER

HSL Series

THE FULL AUTOMATIC SOLAR LIGHTING TOWERS IS EQUIPPED WITH 4*100W LAMPS / 4*150W LAMPS / 4*200W LAMPS.





Technical data

	HSL-1440	HSL-1920	HSL-2880	HSL-3840	HSL-1500B
Light coverage (average 5 luxes)	18000 m²			24100 m²	12000 m²
Light coverage (average 20 luxes)	4500 m²			6170 m²	3100 m²
Lamps	4 x 150W LE	D	4	x 200W LED	4 x 100W LED
Performance data					
Transport Efficiency	40'HC 8	40'HC 4	40'HC 4		40'HC 7
Mast Height	7.2m	9m		9m	7.5m
Lights	4 x 150W 200 Lm	/W LED	4 x 200	W 200 Lm/WLED	4 x 100W 200 Lm/W LED
Battery capacity	16.07	'kWh		32.14kWh	8 kWh
Brightness (25%)	106 h		80 h	160 h	80 h
Brightness (50%)	53 h		40 h	80 h	40 h
Brightness (75%)	36 h		26 h	52 h	26 h
Brightness (100%)	26 h		20 h	40 h	20 h
Charging	AC 100~2	40V 12A		AC 200~240V 15A	AC 200~240V 8.5A
Battery Charging Time (Shore power)	12	?h		9.5h	4.8h
Operating temperature (min/max)	-5°C~50°C				-5°C~50°C
Protection Class		IP5	4		IP54
Solar Panels					
Quantity	3	4	6	8	3
Wattage	3x480W	4x480W	6x480W	8x480W	1525W
Efficiency (1 hour of sun)	3.6 h	4.8 h	3.6 h	4.8 h	4 h
Battery					
Model		MF51314			MF25314
Туре		LiFeP	04		LiFePO4
Spec.	3	14Ah 51.2V	16.07kWh	ı	314AH 25.6V 8kWh
Cycle Life		600	0		6000
Mast					
Туре	Manual, Electric(Option), Hydraulic(Option)	Manu	Hydra ual(Option),	ulic, Electric(Option)	Hydraulic
Rotation		/			/
Maximum height	7.2m, 9m(Option)		9r 7.2m(0		7.5m
Maximum wind speed		100kr	n/h		100km/h
Enclosure and trailer					
Туре	Off-road with Parking hand break and Overrun device				On-road with Parking hand break and Overrun device
Maximal Moving Speed	25 km/h				80km/h
Base frame	Powder coating				Powder coating
Enclosure	Galvanized	steel canop	y and powd	er coating	Galvanized steel canopy and powder coating
Dimensions and weight					
Dimensions in transport Fix Towbar(LxWxH)	2267x1390x2558mm	2924x2150)x2474mm	2924x2150x2474mm	2267 x 1450 x 2254 mm
Deployed Dimensions (LxW x H)	3319x3263x7200mm	4538x3850)x7168mm	6840x3850x7168mm	3325x3139x7429mm
Weight	1140kg	1878kg	1958kg	2088kg	1200kg



Battery type: LiFePO4

HYBRID

LIGHTING TOWER

HBL Series

THE HYBRID LIGHTING TOWER IS EQUIPPED WITH 4*150W LED LAMPS / 4*250W LED LAMPS / 4*350W LED LAMPS





Technical data

	MLT4KL-1400DHBL	MLT4KL-1000DHBL	MLT4KL-600DHBL					
Light coverage (average 5 luxes)	36200m²	30380 m²	18200m²					
Light coverage (average 20 luxes)	9360m²	7750m²	4470m²					
Lamps	4 x 350W LED	4 x 250W LED	4 x 150W LED					
Mast	4 X 330W EED	Hydraulic	4 × 130 W LED					
Performance data		Trydradiic						
Transport Efficiency		40'HC 7						
Mast Height								
Lights	4 x 350W 170Lm/W LED	4 x 150W 200Lm/W LED						
Genset Output (PRP)	4 X 330 W 17 OLIN W LLD	4 x 250W 170Lm/W LED 6kW	3kW					
Battery capacity		16.07kWh LFP	JAVV					
Brightness power by Battery(25%)	45 h	64 h	106 h					
Brightness power by Battery(50%)	23 h	32 h	54 h					
Brightness power by Battery(75%)	15h	21 h	35 h					
Brightness power by Battery(100%)	12h	16 h	27 h					
Battery Charging Time	2211	3 h	6 h					
Operating temperature (min/max)		-10°C~50°C	0.11					
Protection Class		IP54(Bess),IP23(Gen Set)						
Engine		ii o k(bess)jii zs(deii oeej						
Туре		Diesel						
Model	Kubo	ta Z482-3B	Kubota Z482-B					
Net Continuous power		4.1kW						
Speed		1800rpm						
Coolant	3000rpm 1800rpm Water							
Number of cylinders	2							
Alternator								
Model	MD6.	0-48 MPMC	MD3.0-48 MPMC					
Rated output		6kVA	3kVA					
Insulation / Enclosure protection		H/23	•					
Fuel consumption								
Fuel Tank Capacity		100 L						
Automony	185 h	248 h	360 h					
Battery								
Model		MF51314						
Type		LiFePO4						
Spec.	314Ah 5	1.2V 16.07kWh	314Ah 25.6V 16.07kWh					
Cycle Life		6000						
Mast								
Type	Hydraulic							
Rotation	355°							
Maximum height	9m							
Maximum wind speed	100km/h							
Enclosure and trailer								
Type	On-road with Parking hand break and Overrun device							
Maximal Moving Speed	80km/h							
Base frame	Powder coating							
Enclosure		Galvanized steel canopy and powder coa	ating					
Dimensions and weight (L x W x H)			<u> </u>					
Dimensions (Towing)		3454x1756x2529mm						
Dimensions (Traction bar folding)		2270x2193x2529mm						
Dimensions (Deployed)	3454x2456x9552mm							



BATTERY + GENSET

CASE STUDY



Lifter

Rated power: 3*11kW Peak Power: 60kW Operation: 10h/day



Construction / Rental



10 hours/day with 75% of time running at low load, consuming 26,640L fuel per year.

GENSET HBD° BESS 65kW

54.1% Fuel & CO, 81%

Annual
Potential Saving

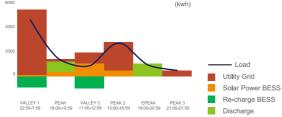
Genset charges the BESS for 1 hour twice a day; BESS supply power for the Lifter. Fuel consumption is reduced 12,240L per year.

Saving \$16,105/Year ROI in 2.6 Years



Self-Consumption

Arbitrage Solution



Location: South Australia

Valley: \$0.056 USD/kWh Peak: \$0.1335 USD/kWh EPeak: \$0.1787 USD/kWh

Saving \$164 USD/day, \$206,575 USD/year

Period of ROI 1.6 Years



Tower crane

Rated power: 45kW Peak Power: 133kW

Operation: 10h/day with 2h @100% load,

1h @ 75% load, 2h @ 50% load, 3h @ 25%, 2h @0% load.



EV Charging Solar + BESS

Construction / Rental





10 hours/day with 65% of time running at low load, consuming 164,250L fuel per year.



37.9% Fuel & CO₂



158kW

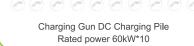
79%

Genset charges the BESS for 1.5 hour twice a day; BESS supply power for the tower crane as the prime power. Fuel consumption is reduced 59,040L per year.

Saving \$77,933/Year ROI in 1.6 Years







Location: Chile ONLY 2 hours to recharge

Valley: \$0.109 USD/kWh Peak: \$0.224 USD/kWh Shoulder: \$0.137 USD/kWh

Saving \$66,014 USD/year Period of ROI 2 Years

Hybrid Solutions

Integrated, reliable and customized renewable energy



Solar & Battery



Solar & Battery & Diesel/Gas Genset



Battery & Diesel/Gas Genset



Battery Power Bank (A series)



Battery Power Bank



Battery Power Bank (E series)



Genset & Battery Hybrid Lighting Tower

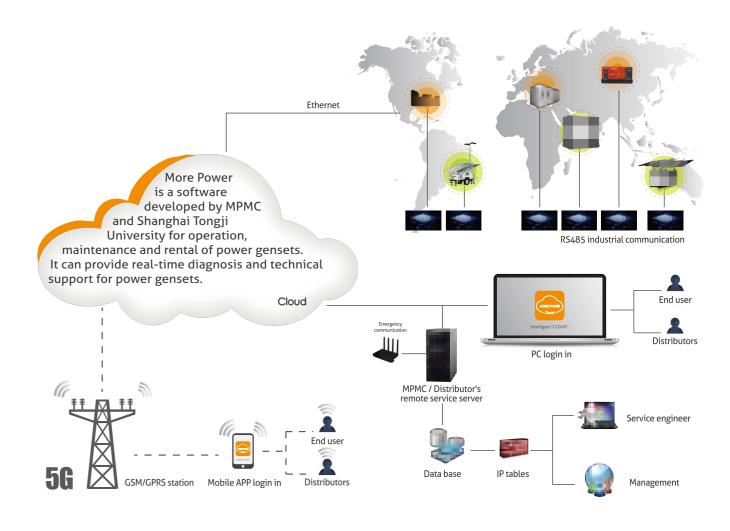


Solar & Battery Solar Lighting Tower



Hybrid Microgrids Solar & Battery & Diesel

Internet Intelligent "More Power" Remote Service System



- Support all the international branded controllers
- RS485 industrial communication
- GSM/GPRS network communication
- GPS satellite system

MPMC Cooperated with Tongli University and developed "More Power" cloud system which focused on the power solution systems health management for operation, maintenance and rental.

More Power system includes global intelligent remote control, hierarchical management, multi-language instant messaging.after-sales service, spare parts online orders and other types of data collection. It supports PC and mobile APP.

More Power can provide real-time diagnosis and timely technical support for customers in different countries and different industries.