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NEXTGEN NRG  
PRODUCT CATALOGUE - ISSUE 1

ALTERNATIVE POWER SUPPLIER



PRODUCT CATALOGUE ISSUE 1



# Table of Contents



Company Introduction.....	2
Electricity Prices are Increasing .....	6
The Multi-Input Power System (MPS) Solution .....	8
Research and Development.....	12
How the MPS works .....	14
News Coverage .....	16
Residential MPS (Single Phase) .....	18
Commercial MPS (Three Phase) .....	20
Solar Panels.....	25
Wind Turbine .....	32
Water Turbine .....	34
Generators .....	36
1MW MPS + 1MW Genset.....	38
Batteries .....	40
MPS Briefcase .....	45
Mobile MPS .....	48
Solar Input MPS .....	50
Solar Fridge and Freezer.....	53
Solar Air Conditioning .....	56
Solar Fans .....	58
Solar Exhaust Fans .....	60
Micro MPS .....	62
SMPS Solar Inverter.....	64
Water Pumps .....	66
Solar Streetlight .....	70
MPS APS Prepayment System.....	72
McDonald's Project .....	76
Solar Starlight.....	78
Vanuatu Project .....	80
Caltex Project .....	82
Residential MPS Project.....	83





# Company Introduction

## WHO IS NEXTGEN NRG?

NEXTGEN NRG is an alternative power supplier — a global designer, manufacturer and marketer of sustainable energy solutions, based on Australia's Gold Coast. Here at NEXTGEN NRG, we aim to reduce the consumption of on-grid energy and the costs associated with it, by creating environmentally friendly, cost-efficient products.

Our core innovation, the Multi-Input Power System (MPS), is a renewable energy system allowing users to generate, store and consume their own clean, free energy from solar, wind and hydro sources, simultaneously. We also offer nimble, portable solutions such as the Mobile MPS unit & the MPS Briefcase.

High quality scroll wind turbines, solar panels and batteries are readily available from NEXTGEN NRG, along with solar air conditioners, fans, refrigeration and lighting. Our products are compatible with many forms of solar, hydro, wind and genset power alternatives, ensuring that the company and its customers can explore and adopt new green energy innovations from any market.

## THE SUSTAINABILITY MISSION

In the world today, over one billion people still don't have access to electricity, with many more suffering from poor quality, unreliable services. Modern energy services are critical to the economic development of communities, living standards

and individual wellbeing.

In developed nations, sustainability often means buying a more efficient light bulb or putting solar panels on the roof. The fate of the global sustainability, however, is ultimately tied to the worldwide population that currently does not have access to electricity.

Today, because of pollution largely attributed to burning coal and oil, the temperature of the globe is beginning to change, and the oceans are becoming more acidic.

Even small temperature alterations can translate into large changes for the earth's natural environment and climate.

Such changes threaten life as we know it, putting the survival of entire ecosystems at risk.



# NEXTGEN NRG

www.nextgennrg.com



# Power Provider



**GREEN NRG CO**  
Alternative Power Supplier





The human population is causing the problem, but we can also create the solution. In the coming years, the international community needs to devise how to reduce energy usage, whilst delivering electricity for the first time to a major chunk of the population.

Renewable energy is a key factor in the effort to reduce climate change, hence the global sustainable energy sector is beginning to boom. Technological advances and falling costs are motivating large capacity additions and growth in clean energy jobs and investment.

Battery storage technology has received widespread attention in recent years, as a method to bear greater levels of electricity generation from renewable sources,

particularly from solar and wind technologies.

### OUR VISION

We envision a future where renewable power systems are common in every household, and remote, developing, underprivileged and natural disaster affected communities are empowered by green energy.

We believe that as battery technology improves, becomes more mainstream and costs continue to fall, battery storage will become an increasingly attractive option for storing energy in the home, business and community.

### OUR FOUNDER

NEXTGEN NRG's founder, Anthony Aucone, has over 27 years of industry experience, and has personally achieved over 23 design registrations and patents to his name.

In 1999, Anthony was the first in the world to globally release the NEXTGEN HID electronic ballast. After this he spent many years developing his LED lighting company, creating products such as the LEDTEK Starlight and sensor glass touch light.

In the past five years, Anthony turned his focus to the future of the industry – natural energy. Working with other highly skilled engineers, Anthony researched and developed his next big innovation: the MPS, and established NEXTGEN NRG in union with parent company, LEDTEK Global.



Anthony is incredibly passionate about converting homes and businesses around the world to green energy alternatives, and empowering underprivileged and remote communities through the provision of practical, sustainable power solutions.

> NEXTGEN NRG's head office (above), is located on Australia's Gold Coast.



NEXTGEN NRG's Founder: Anthony Aucone

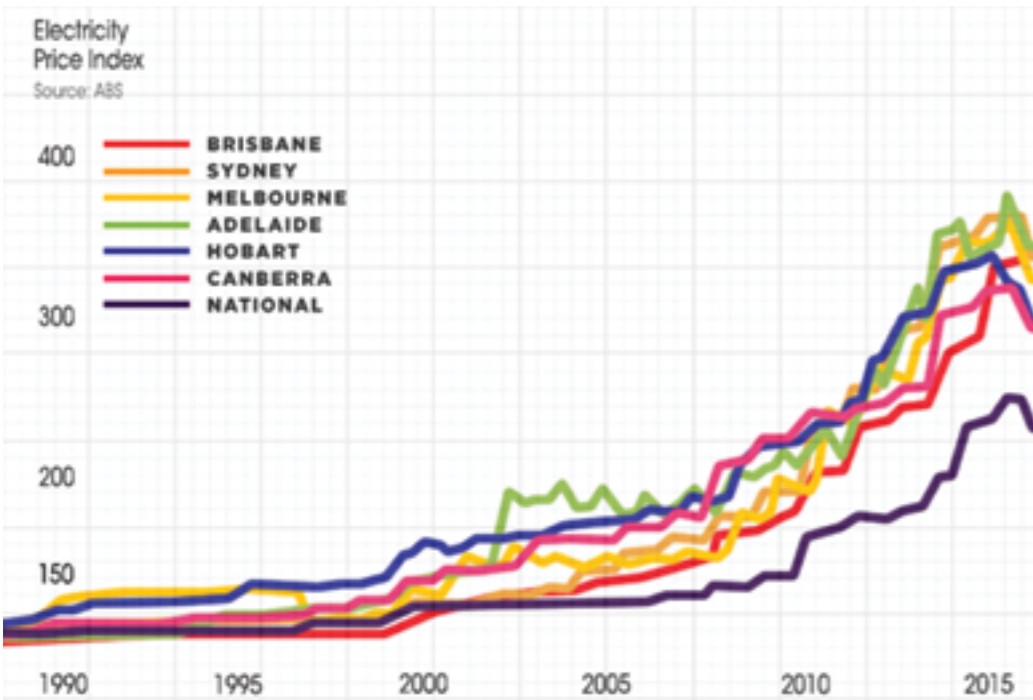






# Power Bills Increasing

History shows that the price of electricity is increasing at an exponential rate without any signs of slowing. Key factors continue to increase electricity costs:

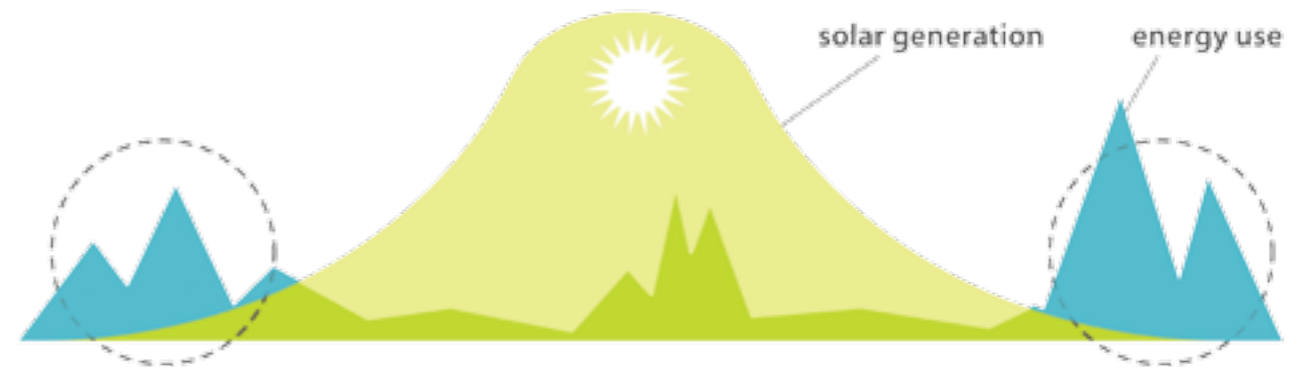
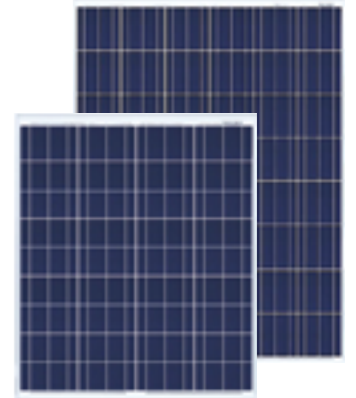


- Renewable energy targets and government legislation
- Peak power demands have bigger "swings", as renewable energy is produced off-peak
- Transporting energy and wholesale costs typically account for three-quarters of the bill
- Blackouts/ Brownouts are occurring more often

## LOW ROI ON SOLAR

Although solar power has been quickly adopted in Australia, home owners aren't getting a great return on investment (ROI). With solar being the predominant energy source, most power is being produced during the day when electricity is cheaper and not required.

- Most electricity consumption in the home is during peak hours when rates are the most expensive
- Electricity prices are rising but "feed in tariffs" are minimal
- Feed in tariffs are being dramatically slashed and abolished in some cases



## So you have solar panels, but what about the **night time?**

Feed in tariffs are largely being abolished - so use your own power instead!

Our **MPS** (Multi-Input Power System) can help you!







# Multi-Input Power System MPS We are Global Green Power Suppliers

## THE MPS SOLUTION

The Multi-Input Power System is a renewable energy generation and storage solution which enables users to generate, store and consume their own clean, free energy.

The system supports multiple renewable energy inputs, and can be programmed to use grid or generator power as an automatic backup

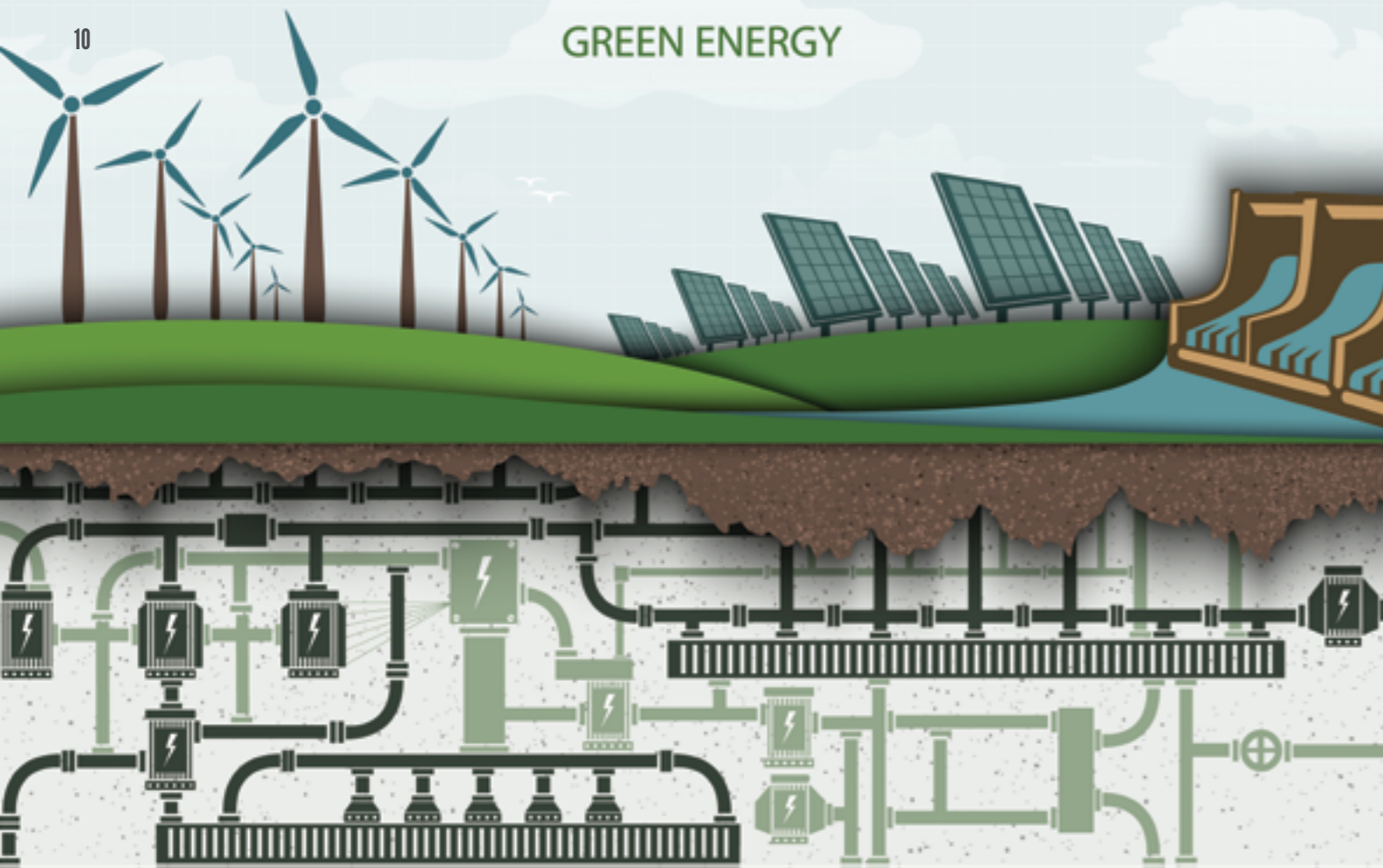
- Various emerging battery technologies are supported by the system, meaning that new technology can be incorporated as it is released
- The MPS is scalable, available in different sizes to suit individual or commercial power needs
- The system is portable and can be moved between homes if relocating



*Australian design.  
Independently tested by Griffith University.*







AVERAGE POWER CONSUMPTION FOR 3KW MPS

Home appliances	Smart phone/tablet	Computer	TV	Lamp
Power	9 W	200 W	70 W	20 W
Time	300 times	15 h	45 h	150 h

Home appliances	Fan	Printer	Electric blanket	Audio equipment
Power	60 W	250 W	60-150 W	200 W
Time	48 h	12 h	18-48h	15 h

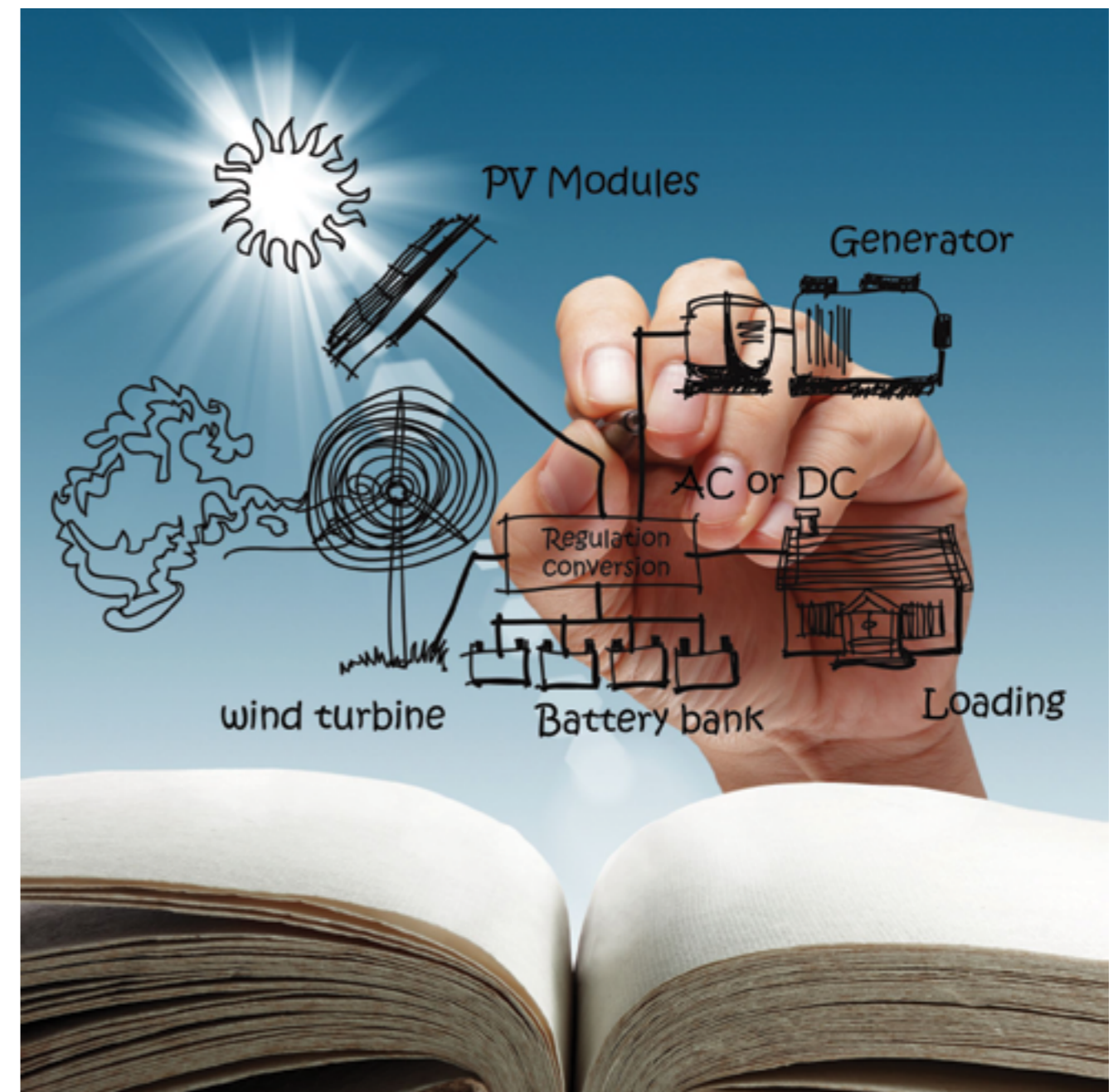
**NEXTGEN NRG's founder Anthony Aucone states:**

*"Most other renewable energy storage systems are standard charge-and-discharge systems that rely on grid power first. The Multi-Input Power System is a true off-the-grid unit that can use grid power or a generator for its back up if needed.*

*We anticipate strong demand from customers who may or may not already have solar panels and want to zero their power bills, as well as residents and businesses located in places where grid power is difficult, expensive to connect or just simply too expensive.*

*We have created an electronic brain to operate and deliver power to the consumer and make sure power is delivered clean and without black outs.*

*The system can use any battery the customer prefers, including all of the new-age power sources on the market now...there are no boundaries."*







# Research and Development

## RESEARCH & DEVELOPMENT

NEXTGEN NRG's MPS and our complete range of products are designed, developed, tested and continually improved by highly skilled engineers in the company's own research and development department.

Having our own research and development department enables us to create innovative, unique products in-house — to realise and fully customise product ideas efficiently and effectively, to exceptionally high standards.

Here at NEXTGEN NRG, we place an emphasis

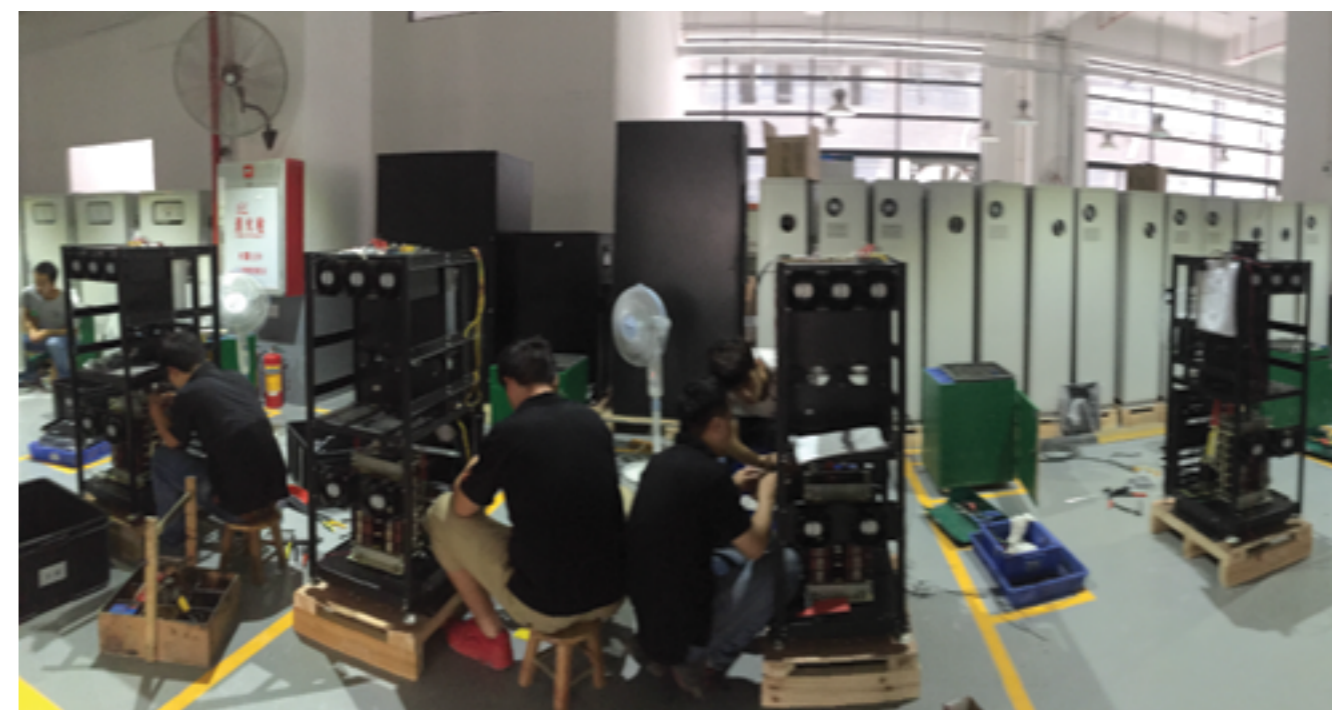
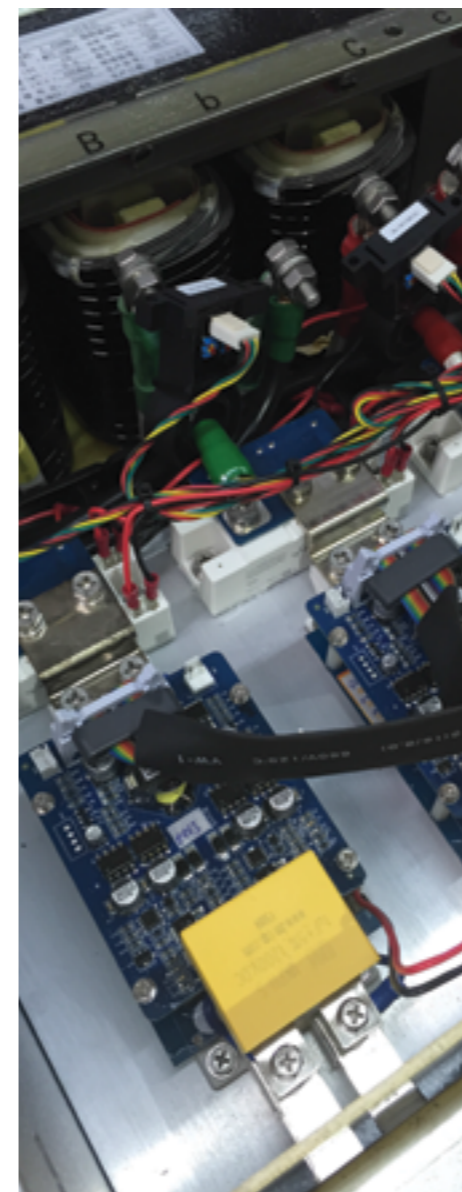
on customer quality requirements, technical specifications and the application of proper controls, striving to produce all product parts accurately and with precision the first time, every time. Manufacturing our own products affords us a high attention to detail and allows strict quality control measures to be implemented and monitored.

## QUALITY CONTROL

A high quality standard is achieved and maintained by the company's strong infrastructure and measuring instruments, which are calibrated daily. NEXTGEN NRG's commitment to

quality is emphasised by the fact that our MPS unit is certified to ISO 9001: 2008. With the most advanced measuring instruments and most experienced craftsman, NEXTGEN NRG has the ability to provide its customers with the most economic, efficient and high calibre products.

NEXTGEN NRG seeks design registration for all of its products, and ensures that products pass all relevant safety approval tests for the applicable markets that they are offered in.







# Multi-Input Power System (MPS)

NEXTGEN NRG designs and manufactures the Multi-Input Power System (MPS), a renewable energy generation and storage system which enables users to generate, store and consume their own clean, free energy. The system allows homes and businesses to take their electricity needs entirely off the grid.

The MPS is groundbreaking as it permits up to three simultaneous natural inputs (solar, wind and hydro) with a single inverter – no additional controllers or complicated wiring required. It represents a major breakthrough in controllable unit technology and is a genuine first-in-the-world solution, positioning Australia at the leading edge of green energy innovation.

The Multi-Input Power System comes as a complete kit, with the inverter, solar panels, and batteries included. Sizes range from 2KW residential systems to 320KW commercial systems.

If natural energy stores are low, the MPS can also charge from the grid at night, storing power in off-peak periods to save the user money.

The system achieves incredible efficiency as it has the capability to intelligently control both input and output currents, depending on specific energy needs.

The MPS is completely portable, can be retrofitted to existing solar panels, and has a short return on investment timeframe.



## INPUT CHOICES FOR MPS







# News Coverage

## NBN NEWS

NBN Television, Gold Coast news, featured NEXTGEN NRG's MPS Briefcase, "an innovation designed to create a greener future", after the company exhibited at Griffith University's Climate Change for Good conference.

As seen on the Channel 9 news coverage, the climate change minister, Steven Miles, and the director of the Griffith University's Climate Change Response program, Brendan Mackey, discussed the MPS Briefcase.

They were impressed with the invention, discussing its benefits, implications for renewable energy and potential uses in the field, such as for aid and disaster relief efforts.



## TODAY TONIGHT

Today Tonight Adelaide is an Australian current affairs television program produced by the Seven Network.

Today Tonight Adelaide did a feature story on our company's Multi-Input Power Systems, and their ability to take consumers off-grid, freeing them from the expenses and the footprint associated with traditional, unsustainable power providers.







# MPS for Residential

## Single Phase from 2kW Up to 20kW



### MPS FOR RESIDENTIAL

Power your home with a single phase Multi-Input Power System (MPS).

The system is available as a complete kit with solar panels, batteries, wind turbines and generators - you choose!

SINGLE PHASE MPS					
Mode	MPS-2KW11	MPS-5KW11	MPS-10KW11	MPS-15KW11	MPS-20KW11
Power	2000w	5000w	10kW	15kW	20kW
Input Output	1 phase+N+G 8A	1 phase+N+G 20A	1 phase+N+G 40A	1 phase+N+G 60A	1 phase+N+G 80A
System voltage (VDC)	48VDC	48VDC	192VDC	192VDC	192VDC
Solar energy input voltage range (VDC)	75-150VDC	75-150VDC	230-320VDC	230-320VDC	230-320VDC
Maximum input current of solar energy (A)	30A	40A*2	60A	60A	150A
Solar power (max)	3KW	6KW	13KW	13KW	33KW
Battery capacity (standby time 2 hours)	200AH	200AH	250AH	250AH	250AH
Wind turbine voltage grade	Pending	Pending	No	No	No
Maximum power of wind turbine	Pending	Pending	No	No	No
Mains input range	165-265VAC	165-265VAC	230±20%	230±20%	230±20%
Input frequency range	45-65Hz	45-65Hz	50Hz±5%	50Hz±5%	50Hz±5%
Mains charging current	20A	36A	10A (Max)	15A (Max)	20A (Max)
Inverter output voltage	240VAC	240VAC	230±2%	230±2%	230±2%
Inverter output frequency	50Hz	50Hz	50Hz±5%	50Hz±5%	50Hz±5%
Inverter output waveform	Pure sine wave	Pure sine wave	Pure sine wave	Pure sine wave	Pure sine wave
Mains voltage stabilizing function	No	No	No	No	No
Working mode	AC first / DC first / SAVER	AC first / DC first / SAVER	Solar inverting output / battery inverting output / grid bypass output	Solar inverting output / battery inverting output / grid bypass output	Solar inverting output / battery inverting output / grid bypass output
Transfer time	<5ms	<5ms	≤10ms	≤10ms	≤10ms
Inverter output waveform distortion/THD	<5%	<5%	≤5%	≤5%	≤5%
Transfer efficiency (linear load)	>80%	>80%	≥85%	≥85%	≥85%





# MPS for Commercial

## Three Phase from 25kW Up to 1MW

### THREE PHASE MPS

Power your business with a three phase Multi-Input Power System (MPS).

Standard sizes ranging from 25KW to 320KW, each system can come as a complete kit with solar panels, batteries, wind turbines and generators - you choose!

For large projects we can customise the system up to 1 megawatt (MW).



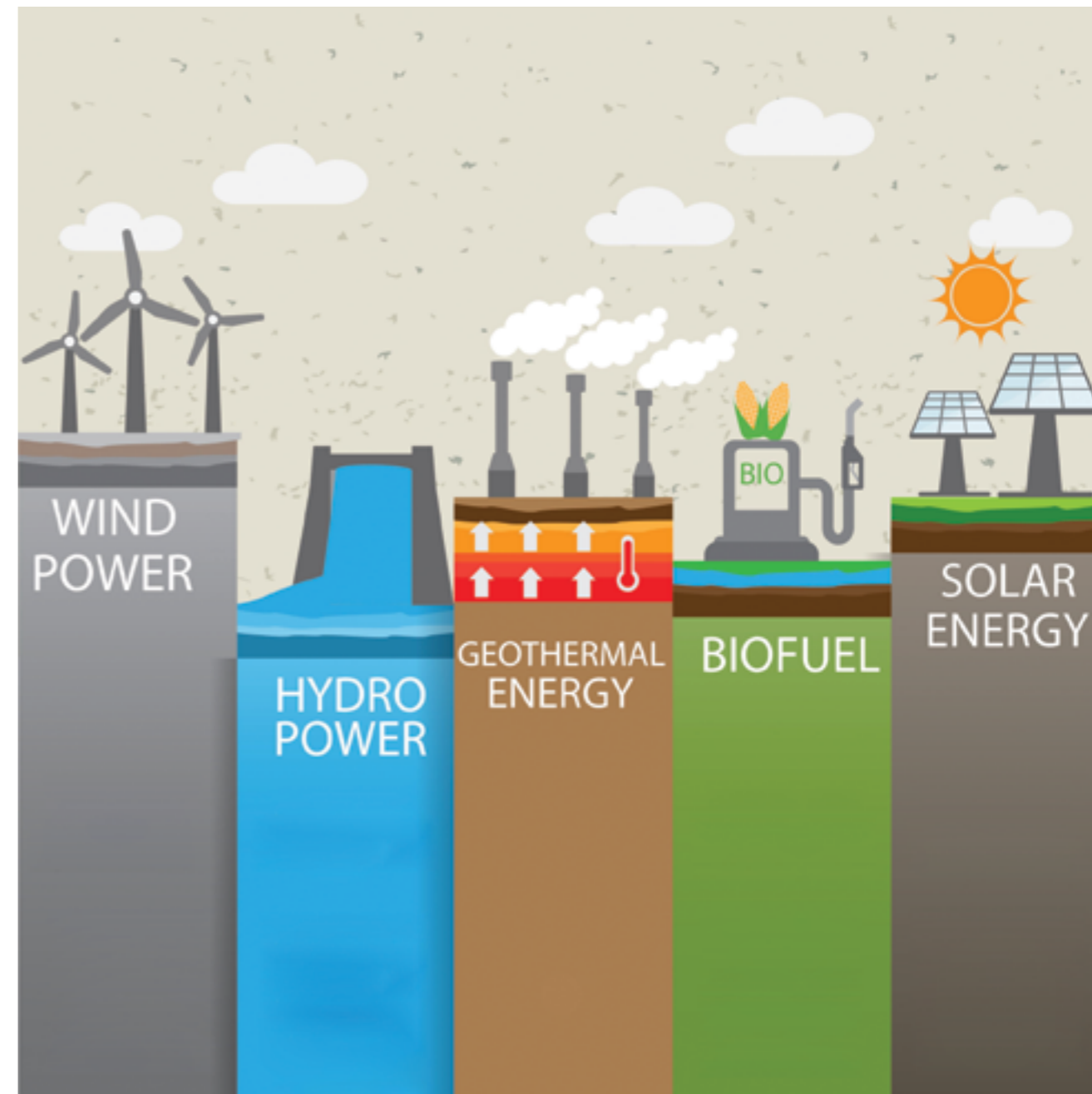
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THREE PHASE MPS				
Mode	MPS-25KW33	MPS-45KW33	MPS-65KW33	MPS-85KW33
Power	25kW	45kW	65kW	85kW
Input Output	3 phase +N+G 100A	3 phase +N+G 185A	3 phase +N+G 270A	3 phase +N+G 350A
System voltage	384VDC	384VDC	384VDC	384VDC
Solar energy input voltage range	450-650VDC	450-650VDC	450-650VDC	450-650 VDC
Maximum input current of solar energy	100A	150A	200A	300A
Solar power (max)	43KW	65KW	96KW	131KW
Battery capacity (standby 2 hours)	200AH	250AH	250AH	250AH
Wind turbine voltage grade	No	No	No	No
Maximum power of wind turbine	No	No	No	No
Mains input range	230/400VAC±20%	230/400VAC±20%	230/400VAC±20%	230/400VAC±20%
Input frequency range	50Hz±5%	50Hz±5%	50Hz±5%	50Hz±5%
Mains charging current	15A (Max)	20A (Max)	30A (Max)	40A (Max)
Inverter output voltage	230/400VAC±2%	230/400VAC±2%	230/400VAC±2%	230/400VAC±2%
Inverter output frequency	50Hz±5%	50Hz±5%	50Hz±5%	50Hz±5%
Inverter output waveform	Pure sine wave	Pure sine wave	Pure sine wave	Pure sine wave
Mains voltage stabilizing function	No	No	No	No
Working mode	Solar inverting output / battery inverting output / grid bypass output	Solar inverting output / battery inverting output / grid bypass output	Solar inverting output / battery inverting output / grid bypass output	Solar inverting output / battery inverting output / grid bypass output
Transfer time	≤10ms	≤10ms	≤10ms	≤10ms
Inverter output waveform distortion/THD	≤5%	≤5%	≤5%	≤5%
Transfer efficiency (linear load)	≥88%	≥88%	≥89%	≥90%



**THREE PHASE MPS**

Mode	MPS-105KW33	MPS-150KW33	MPS-200KW33	MPS-250KW33	MPS-320KW33
Power	105kW	150kW	200kW	250kW	320kW
Input Output	3 phase +N+G 435A	3 phase +N+G 625A	3 phase +N+G 830A	3 phase +N+G3 1040A	3 phase +N+G 1330A
System voltage	384VDC	384VDC	384VDC	384VDC	384VDC
Solar energy input voltage range	450-650VDC	450-650VDC	450-650VDC	450-650VDC	450-650VDC
Maximum input current of solar energy	350A	500A	600A	800A	1000A
Solar power (max)	153KW	219KW	262.8KW	350W	438KW
Battery capacity (standby 2 hours)	800AH	1200AH	1600AH	2000AH	2500AH
Wind turbine voltage grade	No	No	No	No	No
Maximum power of wind turbine	No	No	No	No	No
Mains input range	230/400VAC ±20%	230/400VAC ±20%	230/400VAC ±20%	230/400VAC ±20%	230/400VAC ±20%
Input frequency range	50Hz±5%	50Hz±5%	50Hz±5%	50Hz±5%	50Hz±5%
Mains charging current	50A (Max)	75A (Max)	100A (Max)	120A (Max)	160A (Max)
Inverter output voltage	230/400VAC ±2%	230/400VAC ±2%	230/400VAC ±2%	230/400VAC ±2%	230/400VAC ±2%
Inverter output frequency	50Hz±5%	50Hz±5%	50Hz±5%	50Hz±5%	50Hz±5%
Inverter output waveform	Pure sine wave	Pure sine wave	Pure sine wave	Pure sine wave	Pure sine wave
Mains voltage stabilizing function	No	No	No	No	No
Working mode	Solar inverting output / battery inverting output / grid bypass output	Solar inverting output / battery inverting output / grid bypass output	Solar inverting output / battery inverting output / grid bypass output	Solar inverting output / battery inverting output / grid bypass output	Solar inverting output / battery inverting output / grid bypass output
Transfer time	≤10ms	≤10ms	≤10ms	≤10ms	≤10ms
Inverter output waveform distortion/THD	≤5%	≤5%	≤5%	≤5%	≤5%
Transfer efficiency (linear load)	≥90%	≥90%	≥90%	≥90%	≥90%



**NEXTGEN NRG**

[www.nextgennrg.com](http://www.nextgennrg.com)







**Choose your input**



**Solar Panels**



**Monocrystalline 60 Cell**  
**NRG-M6-60**

High conversion efficiency  
High module efficiency to guarantee power output.

Easy Installation and Handling  
For various applications

Outstanding low irradiation performance  
Excellent module efficiency even in the weak light conditions, such as morning or cloudy.

Excellent loading capability  
2400Pa wind loads, 5400Pa snow loads.

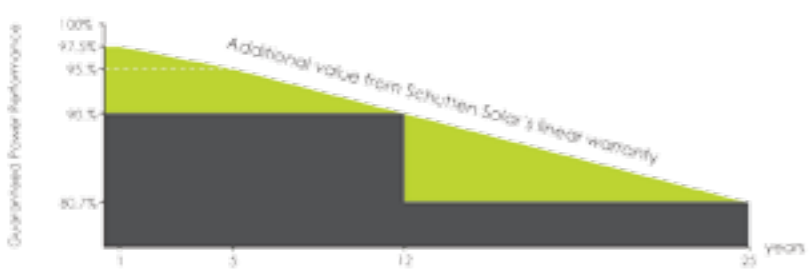
0 to +5W positive tolerance  
Detailed information in Electrical Specifications

Durability against extreme environmental  
High salt mist and ammonia resistance certified by TUV NORD



**4 Busbar Solar Cell:**  
adopts new technology to improve the efficiency of modules, offers a better aesthetic appearance, perfect for rooftop installation.

**LINEAR PERFORMANCE WARRANTY**



**12 YEARS** Guarantee on product material and workmanship  
**25 YEARS** Linear power output warranty

**CERTIFICATES**

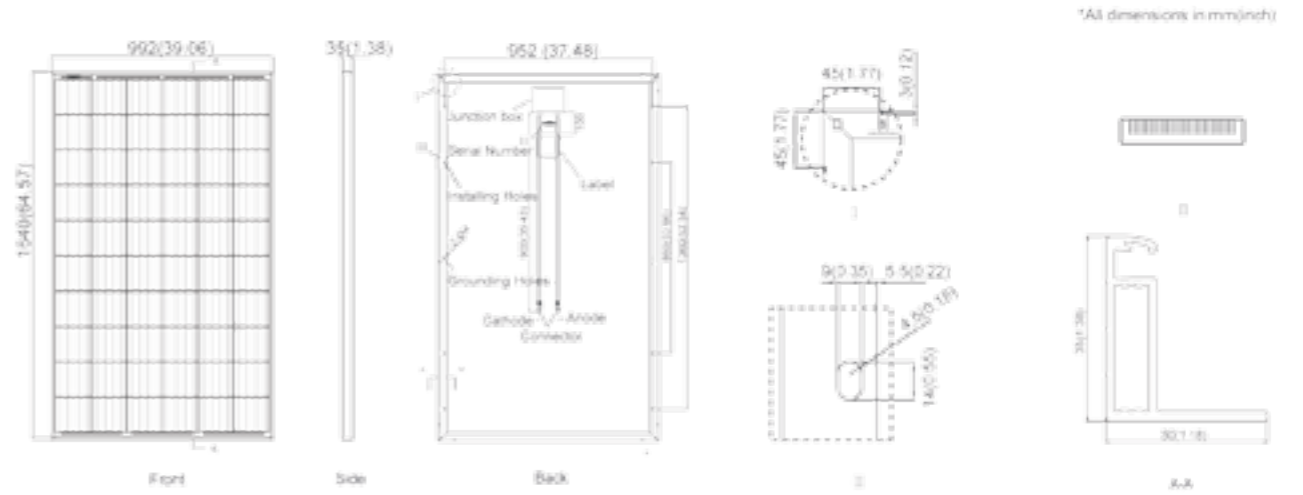


**Electrical Characteristics**

Module Type	NRG-M6-245/60	NRG-M6-250/60	NRG-M6-255/60	NRG-M6-260/60	NRG-M6-265/60
	STC	STC	STC	STC	STC
Maximum Power (Pmax)	245Wp	250Wp	255Wp	260Wp	265Wp
Maximum Power Voltage (Vmp)	29.46V	29.94V	30.12V	30.54V	30.96V
Maximum Power Current (Imp)	8.32A	8.35A	8.47A	8.52A	8.55A
Open-circuit Voltage (Voc)	36.24V	36.83V	37.05V	37.56V	38.08V
Short-circuit Current (Isc)	8.90A	8.94A	9.06A	9.11A	9.16A
Module Efficiency STC (%)	15.09%	15.40%	15.71%	16.01%	16.32%
Operating Temperature(°C)	-40°C~+85°C			Temperature coefficients of Pmax	
Maximum system voltage	1000VDC (IEC)			Temperature coefficients of Voc	
Maximum series fuse rating	15A			Temperature coefficients of Isc	
Power tolerance	(0, +5)			Nominal operating cell temperature (NOCT)	
					45±2°C

STC Irradiance 1000W/m<sup>2</sup> Cell Temperature 25°C AM=1.3

**Engineering Drawings**



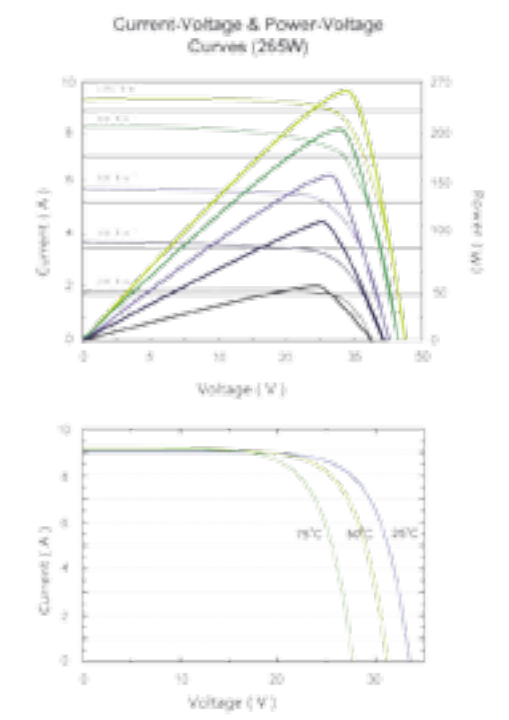
**Mechanical Characteristics**

Cell Type	Mono-crystalline 156×156mm (6 inch)
No. of cells	60 (6×10)
Dimensions	1640×992×35mm (64.56×39.05×1.37 inch)
Weight	19.0 kg (41.88 lbs.)
Front Glass	3.2mm, High Transmission, Low Iron, Tempered Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP67 Rated
Output Cables	4.0mm, Length: 900mm
Connector	MC4 Compatible
Maximum Snow Load	550Kg/㎡
Maximum Wind Load	200Km/h
Hailstone Impact Test	80Km/h for 25mm ice ball

**Packaging Configuration**

Container	20' GP	40' HQ
Pieces Per Pallet	29 / 25 / 19	29 / 5
Pallets Per Container	6 / 6 / 1	28 / 14
Pieces Per Container	343	882

**Current-Voltage & Power-Voltage Curve**





# NEXTGEN NRG Monocrystalline 72 Cell

## NRG-M6-72

www.nextgennrg.com

**High conversion efficiency**  
High module efficiency to guarantee power output.

**Easy Installation and Handling**  
For various applications

**Outstanding low irradiation performance**  
Excellent module efficiency even in the weak light conditions, such as morning or cloudy.

**Excellent loading capability**  
2400Pa wind loads, 5400Pa snow loads.

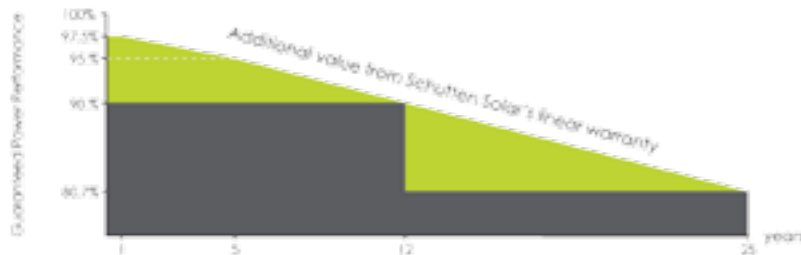
**0 to +5W positive tolerance**  
Detailed information in Electrical Specifications

**Durability against extreme environmental**  
High salt mist and ammonia resistance certified by TUV NORD



**4 Busbar Solar Cell:**  
adopts new technology to improve the efficiency of modules, offers a better aesthetic appearance, perfect for rooftop installation.

### LINEAR PERFORMANCE WARRANTY



**12 YEARS** Guarantee on product material and workmanship  
**25 YEARS** Linear power output warranty

### CERTIFICATES

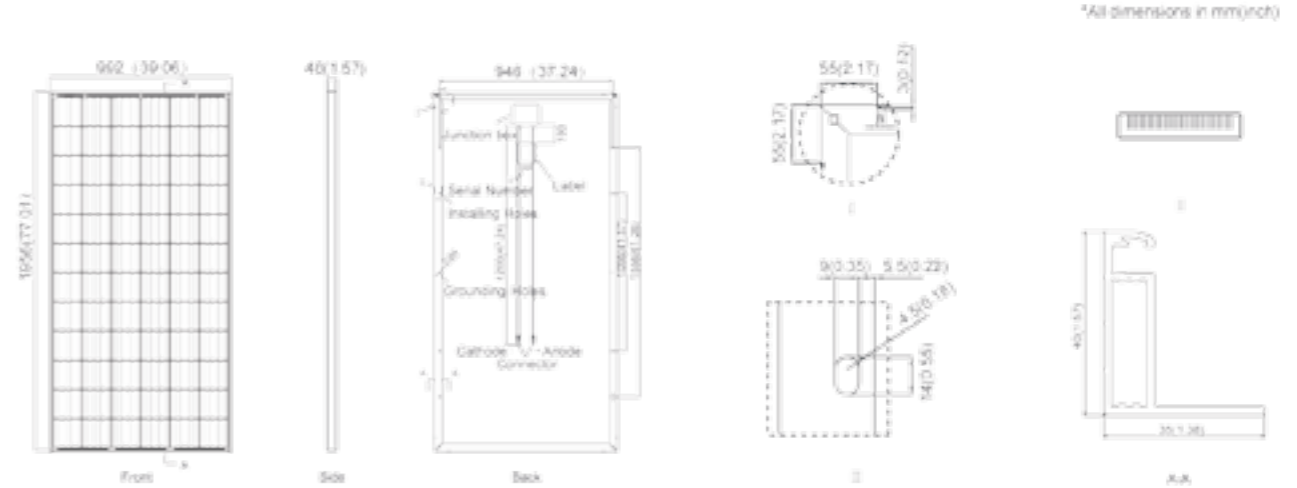


### Electrical Characteristics

Module Type	NRG-M6-310/72	NRG-M6-315/72	NRG-M6-320/72	NRG-M6-325/72	NRG-M6-330/72
	STC	STC	STC	STC	STC
Maximum Power (Pmax)	310Wp	315Wp	320Wp	325Wp	330Wp
Maximum Power Voltage (Vmp)	36.63V	36.72V	37.22V	37.73V	38.16V
Maximum Power Current (Imp)	8.47A	8.58A	8.60A	8.61A	8.65A
Open-circuit Voltage (Voc)	45.06V	45.17V	45.79V	46.41V	46.94V
Short-circuit Current (Isc)	9.06A	9.18A	9.20A	9.22A	9.25A
Module Efficiency STC (%)	15.98%	16.23%	16.49%	16.75%	17.01%
Operating Temperature(°C)	-40°C~+85°C		Temperature coefficients of Pmax		-0.41%/°C
Maximum system voltage	1000VDC (IEC)		Temperature coefficients of Voc		-0.33%/°C
Maximum series fuse rating	15A		Temperature coefficients of Isc		+0.03%/°C
Power tolerance	(0, +5)		Nominal operating cell temperature (NOCT)		45±2°C

STC: ☀️ Irradiance 1000W/m²   🌡️ Cell Temperature 25°C   ☁️ AM=1.5

### Engineering Drawings



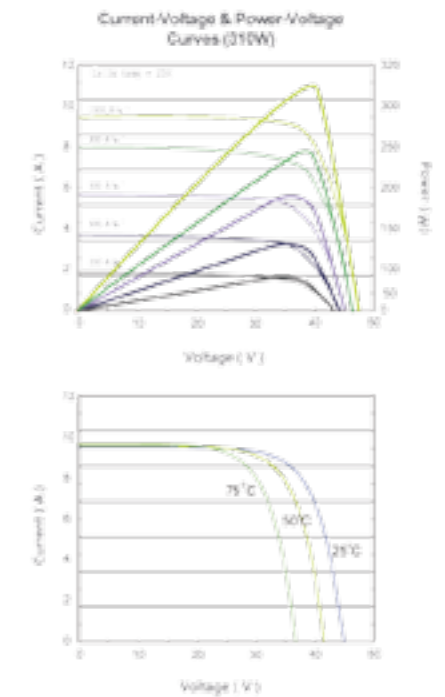
### Mechanical Characteristics

Cell Type	Mono-crystalline 156x156mm (6 inch)
No. of cells	72 (6x12)
Dimensions	1956x992x40mm (77.01x39.05x1.57 inch)
Weight	24.5 kg (54.0 lbs.)
Front Glass	3.2mm, High Transmission, Low Iron, Tempered Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP67 Rated
Output Cables	4.0mm, Length: 1200mm
Connector	MC4 Compatible
Maximum Snow Load	550Kg/㎡
Maximum Wind Load	200Km/h
Hailstone Impact Test	80Km/h for 25mm ice ball

### Packaging Configuration

Container	20' GP	40' HQ
Pieces Per Pallet	26 / 22 / 16	26 / 4
Pallets Per Container	5 / 5 / 1	24 / 12
Pieces Per Container	256	672

### Current-Voltage & Power-Voltage Curve



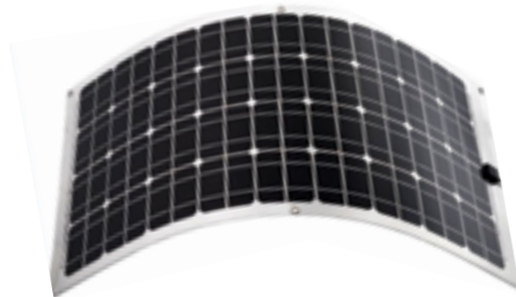


### MONOCRYSTALLINE PANELS

Module Type	NRG-M6-250/60	NRG-M6-255/60	NRG-M6-260/60	NRG-M6-265/60	NRG-M6-270/60	NRG-M6-300/72	NRG-M6-310/72	NRG-M6-315/72	NRG-M6-320/72	NRG-M6-330/72
Maximum Power (Pmax)	250Wp	255Wp	260Wp	265Wp	270Wp	300Wp	310Wp	315Wp	320Wp	330Wp
Maximum Power Voltage (Vmp)	29.94V	30.12V	30.54V	30.96V	31.32V	35.84V	36.63V	36.72V	37.22V	38.16V
Maximum Power Current (Imp)	8.35A	8.47A	8.52A	8.56A	8.62A	8.37A	8.47A	8.58A	8.60A	8.65A
Open-circuit Voltage (Voc)	36.83V	37.05V	37.56V	38.08V	38.52V	44.92V	45.06V	45.17V	45.79V	46.94V
Short-circuit Current (Isc)	8.94A	9.06A	9.11A	9.16A	9.22A	8.98A	9.06A	9.18A	9.20A	9.25A
Module Efficiency STC (%)	15.40%	15.71%	16.01%	16.32%	16.60%	15.66%	15.98%	16.23%	16.49%	17.01%



Monocrystalline Panels



Flexible Panels

### FLEXIBLE SOLAR PANELS

Model	20W	35W	50W	100W	120W	140W
Size (mm)	310x530x3mm	560x445x3mm	560x625x3mm	560x1200x3mm	560x1365x3mm	560x1490x3mm
Efficiency	20.4%	20.8%	20.4%	20.4%	20.4%	20.4%
Voc (V)	20.8	20.8	20.8	20.8	24.0	26.4
Vmp (V)	17.6	17.6	17.6	17.6	20.0	22.0
Ism (A)	1.23	2.15	3.07	6.14	6.48	6.87
Imp (A)	1.14	1.99	2.84	5.68	6.0	6.4
Weight	0.55kg	0.88kg	1.35kg	2.45kg	2.67kg	3.00kg



### THROUGH SUNSHINE SOLAR PANELS

Light Transmittance	40%
Maximum Power	210W
Maximum Power Point Voltage	30.5V
Current of Max Power Point	7.21A
Open Circuit Voltage	37.3V
Short Circuit Current	7.56A
Power of Tolerance	±3W
System Voltage	1000V
Current Temperature Coefficient	0.02%/°C
Voltage Temperature Coefficient	-0.20%/°C
The Temperature Coefficient	-0.19%/°C





# Scroll Wind Turbine

## SCROLL WIND TURBINE

Great locations for NEXTGEN NRG's scroll wind turbines include coastal areas, open flatlands, ridgelines and hilltops.

The turbine is vertical access, advantageous when the wind comes from more than one direction or is turbulent, as it does not need to be pointed into the wind to work. The generator and gearbox are at the base, more accessible for maintenance.



SCROLL WIND TURBINE	
Rated output power	1.5 KW
Max output power	1.8 KW
Rated voltage	180 Vac
Rated wind speed	11m/s
Survival wind speed	65m/s
Start-up wind speed	1.5m/s
Cut-in wind speed	2m/s
Rated rotational speed	180 rpm
Max rotational speed	200 rpm
Number of blades	1
Rotor diameter	1.5 m
Blade length/material	1.8m/FRP
Generator	Disk generator
Total weight	110kg
Tower	10m (optional)

- Turbine**
- 200W
- 50W
- 100W
- 300W
- 400W
- 500W
- 1000W

### 1) High chemical durability to impact of water, salts, alkalis and acids

Unlike metal, CBF is not affected by corrosion. Unlike fiber glass, CBF is not affected by acids, CBF possess high corrosion and chemical durability qualities towards corrosive mediums, such as salts and acids solutions and especially, alkalis.

### 2) High thermal resistance

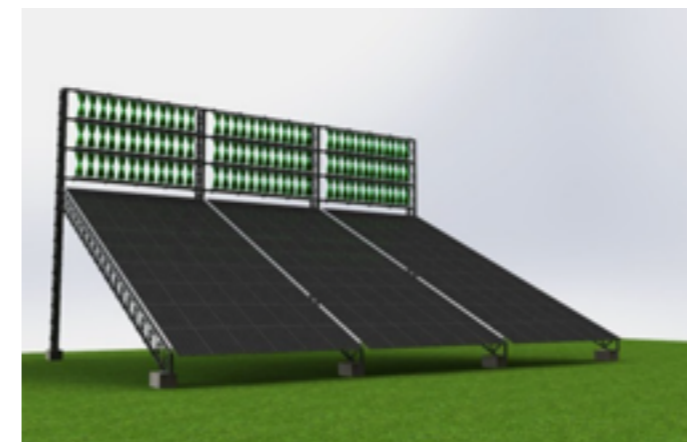
A range of temperature for CBF long-time application is 200-600C. Short-term impact of temperatures - up to 700C. Single impact of temperatures - up to 1000C.

### 3) Compatibility of CBF with other materials

High compatibility of CBF with other materials (metals, plastic, glues) during producing process. Materials made on CBF basis can be processed with application on different "cold" technologies, such as molding, winding, pultrusion, sputtering, etc. See article "about prospects of application of materials from basalt fibers".

### 4) Higher tensile strength than steel

Basalt is incredibly strong, flexible, yet extremely light which was ideal material of choice for the Wind Turbine. Making us the lightest vertical axis wind turbine in the world. CBF is used by NASA!





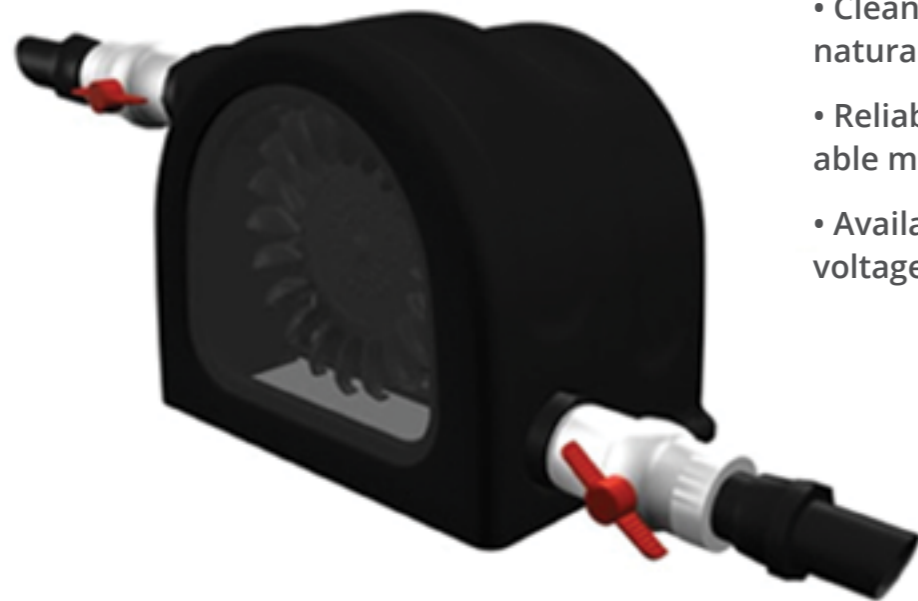


# MPS Water Turbine

A water turbine is a rotary engine that takes energy from moving water.

Water turbines were developed in the nineteenth century and were widely used for industrial power prior to electrical grids. Now they are mostly used for electric power generation. They harness a clean and renewable energy source.

**Water turbines are one potential green input for our MPS systems!**



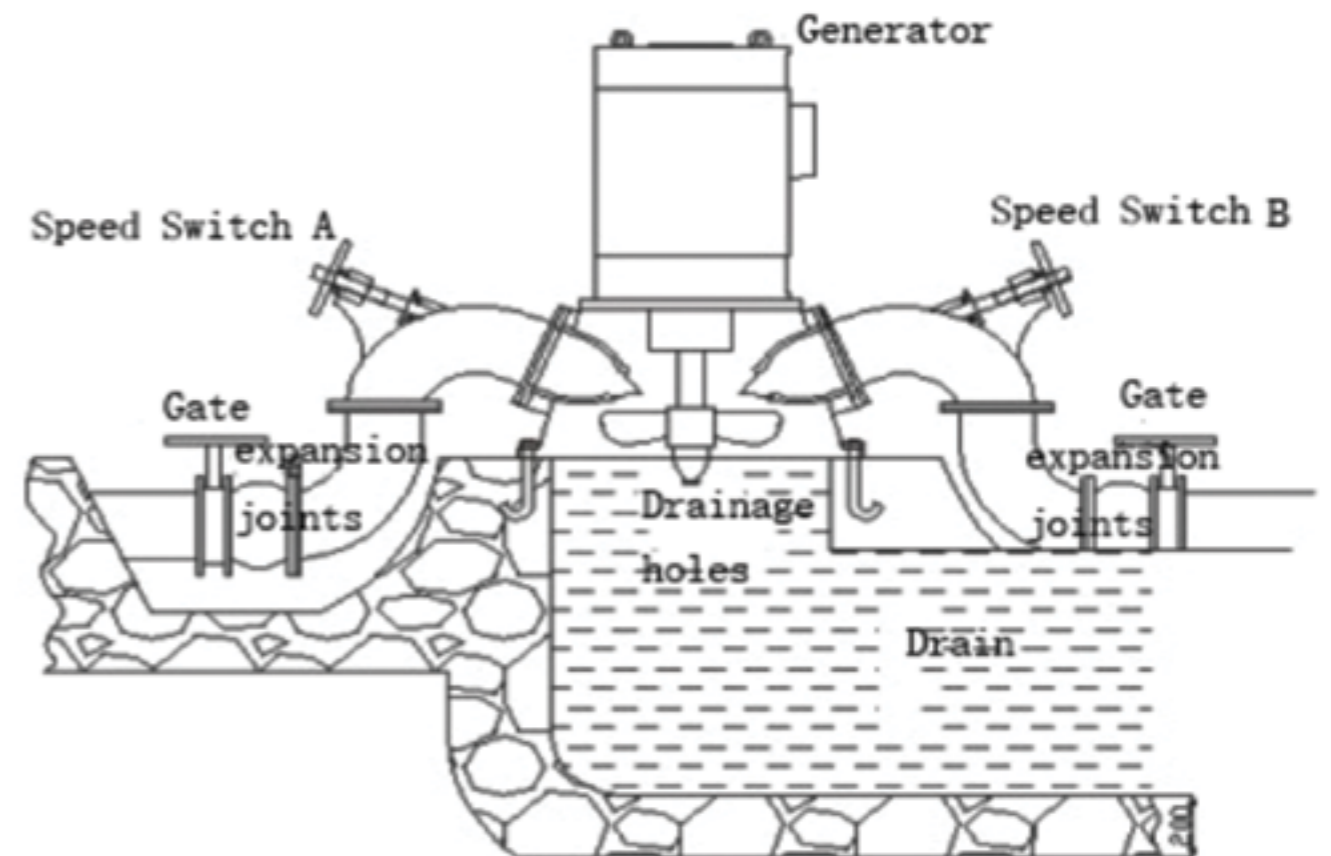
- Clean, renewable energy from naturally falling water
- Reliable, secure power, sustainable manufacturing
- Available in a wide range of voltages

MPS WATER TURBINE	
Designer head	5-180m
Traffic	0.0054-0.609m/s
The output	0.6-851 kw
Design speed	145-1920r/min
The power of generator	0.3-800kw
Rated speed	500-1500r/min
Driving mode	Straight league, between the united
Diameter	75-350mm



## FEATURES OF MPS WATER TURBINE

1. Horizontal unit has the advantages of a simple structure, easy maintenance, reduce plant height and reduce the excavation depth.
2. Vertical unit has a small plant size plane, one can install multiple nozzles (currently up to six nozzles can be installed) on the wheel, high specific speed, the same capacity unit size is relatively small and weighs lightly.







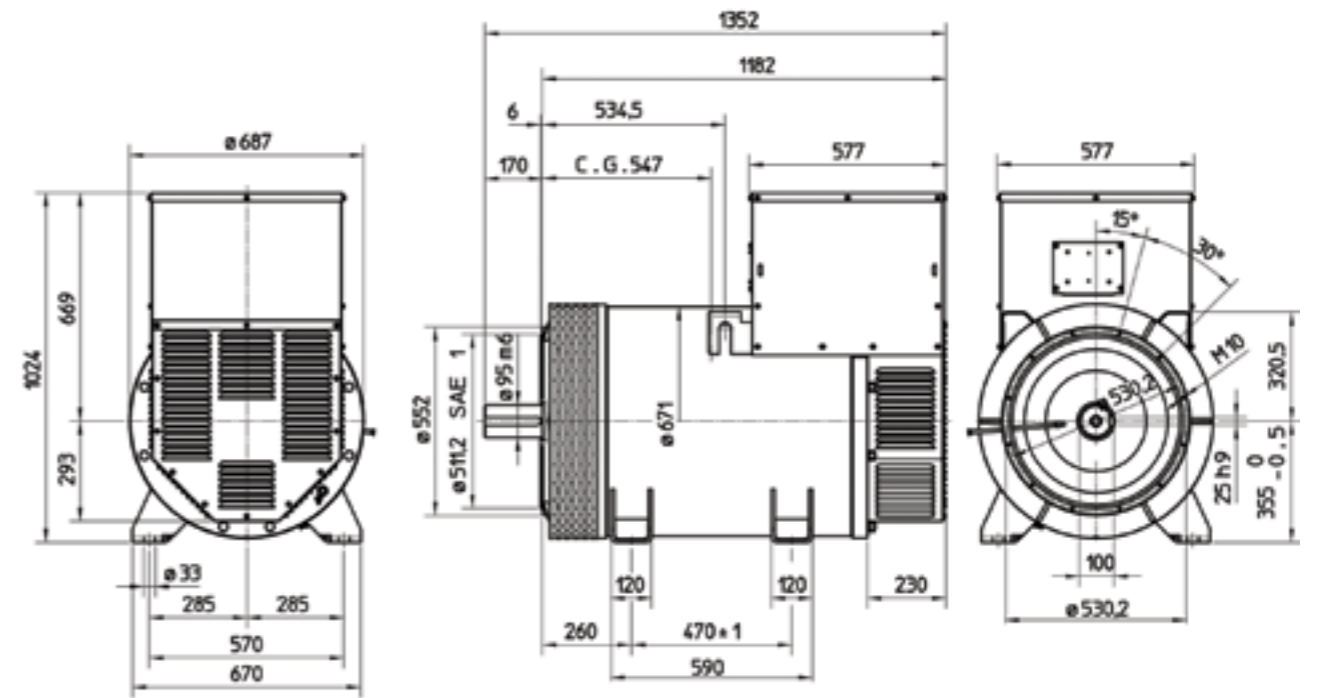
# Generators

5KW GENERATOR	
Item	NRG-EX6500ATS
AC Rated Output	5 KW
AC Max Output	5.5 KW
AC Voltage	240V
Frequency	50hz
DC Voltage	12V
DC Amperage	8.3A
Engine Model	EX390
Max. Output (HP)	13
Generator Type	Single Phase, Syn- synchronization, Brush
Displacement (cc)	389
Start Model	Electric Start
Fuel Tank Capacity (L)	25
Oil Capacity (L)	1.1
Ignition	T.C.I.
Packing Dimensions	690x530x570mm
N.W./G.W. (KGS)	95/100



One of the MPS inputs that you can utilize is a generator. This is most useful as backup power to feed into the MPS once you have exhausted all renewable power sources.

We can offer many generator sizes, from 5kW all the way up to 1MW!



0.5 MW GENERATOR ELECTRICAL CHARACTERISTICS (CAN OFFER UP TO 1MW)								
Frequency Hz	50				60			
Voltage (parallel star) V	380	400	415	440	415	440	460	480
Rated power class H kVA	680	680	680	630	720	780	816	816
kW	544	544	544	504	576	624	653	653
Rated power class F kVA	630	630	630	585	665	720	756	756
kW	504	504	504	468	532	576	605	605
Regulation with DER1	±1% with any power factor and speed variations between -5% +30%							
Insulation class	H							
Execution	Brushless							
Stator winding	12 ends							
Rotor	With damping cage							





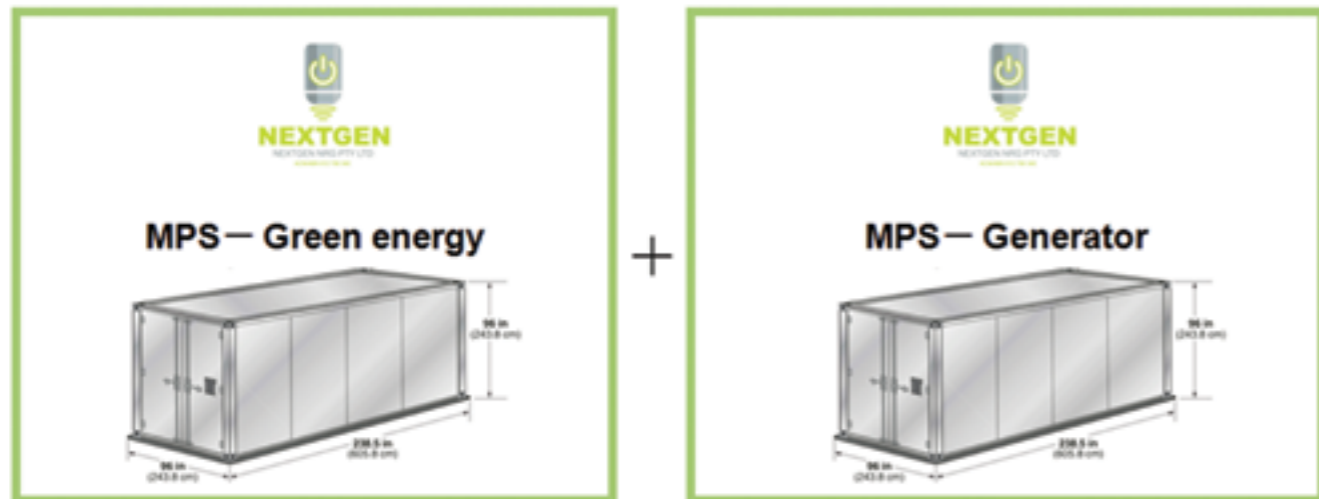


# 1MW MPS + 1MW Genset Green Energy Farm

## 1 + 1 MW MPS

In addition to the collection of natural energy - solar energy, we will use a 1 Mega Watt diesel generator as a backup which will consist of 2 x 530Kw Gen

Each high frequency controller is 40KVA modular design totaling 520KVA modular cabinet  
+  
100A MPPT solar charger controller and each unit needs 20 pieces MPPT  
+  
Removable modules for NO DOWN time and easy maintenance



### 1MW MPS ISOLATION TRANSFORMER

The isolation transformer at the output provides galvanic isolation.

The MPS advantage of the galvanic isolation transformer is that it eliminates the Electrical Pollutions (electrical noise or instant peaks) that might appear at the phase, neutral or earth line.

For example, on a rainy day if lightning hits at the input, the electrical noise will not be able to pass through the output voltage. As a result the load remains safe.

MPS systems along with isolation transformer are more suitable for industrial application.



### MPS ECO MODE OPTION

Eco-mode is a low-cost MPS operational mode, which provides high efficiency (98 %). If the bypass exists in the desired voltage range and the harmonic distortion is not so high, the loads can be fed from bypass instead of from inverter output. As soon as the bypass failure occurs, without any interruption the inverter output starts feeding the load. The user can also manually adjust the MPS to either Normal or Eco Mode.

### MPS GENERATOR

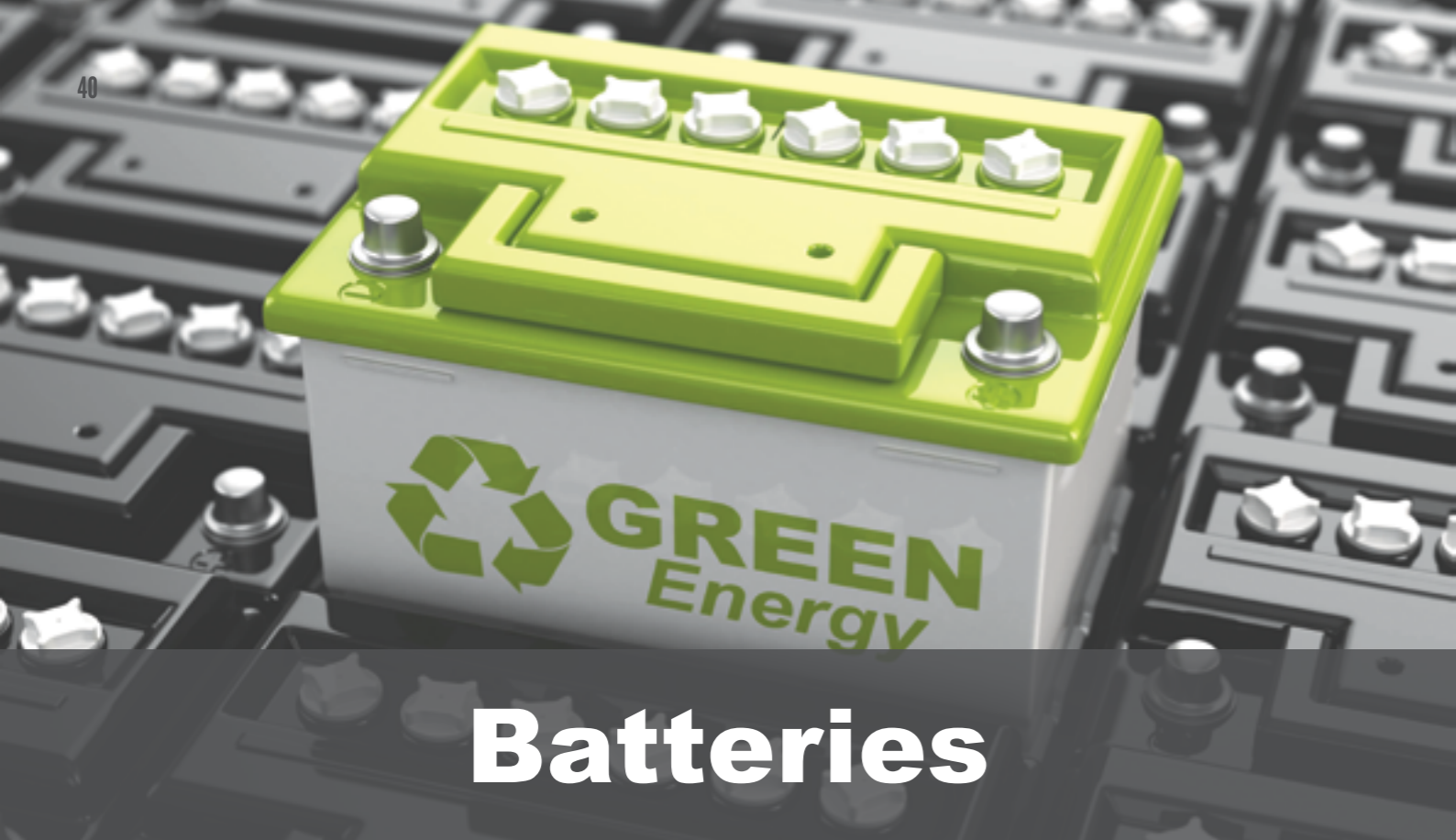
For your better understanding of synchronization cabinet, see the below pictures for your reference.

There would be two cabinets, each cabinet includes:

- 1) DSE 8610 controller
- 2) ABB switch gear:  
T7S 1000M PR231/P-LSI R1000 FF 3P M 220/250V
- 3) The size of each cabinet:  
600 x 600 x 1800 mm (length x width x height)







# Batteries

## BATTERY RANGE

NEXTGEN NRG offers a range of high quality batteries, including gel, which have distinctive advantages over AGM batteries, such as super thermal stability, high deep discharge capability and great recovery from deep discharge.

-  Nanometre SiO<sub>2</sub> and H<sub>2</sub>SO<sub>4</sub> gelled electrolyte technology
-  Not restricted for air transport: complies with IATA/ICAO Special Provision A67
-  Long service life, float or cyclic applications
-  Wide operating temperature range
-  Can be mounted in any orientation without leakage
-  Easy to install and maintenance free operation

STANDARDS AND USES	
IEC 60896-21/22	JIS C8704
YD/T1360	BS6290 Part 4
GB/T19638	CE
Applications	Renewable energy systems
	Emergency power Systems
	Solar & wind
	Telecom control equipment
	UPS systems
	Communication equipment
	BTS stations
	Mobile power applications e.g. golf carts & forklifts

## HIGH TEMPERATURE LONG LIFE GEL BATTERY



The high temperature long life (HTL) series uses the newly developed nano gel electrolyte with super-C additive plus heavy duty plates inside.

The HTL series has a long service life and can provide optimum, reliable service under extreme conditions such as high temp (able to operate at 60°C) and frequent power failure. This series is suited for tropical areas in outdoor applications such as Telecom BTS and off-grid PV stations.

HIGH TEMPERATURE LONG LIFE GEL BATTERY			
Nominal Voltage	12V (6 cells)	12V (6 cells)	
Nominal Capacity @25°C (20h rate)	200Ah (@10A, 10.8V)	250Ah (@12.5A, 10.8V)	
10h rate (10.8V)	180Ah (18A)	226Ah (22.6A)	
5h rate (10.5V)	31.8Ah (31.8A)	191Ah (38.2A)	
1h rate (9.6V)	115.5Ah (115.5A)	138.2Ah (138.6A)	
Internal resistance full charge @25°C	≤3.4mΩ	≤3.0mΩ	
Ambient Temp Discharge & Charge	-25°C~60°C	-25°C~60°C	
Ambient Temp Storage	-25°C~45°C	-25°C~45°C	
Max. Discharge Current @25°C	900A(5s)	1060A(5s)	
Capacity Affected by Temp (10h)			
40/25/0/-15°C	108/100/90/70%	108/100/90/70%	
Self-Discharge @25°C per month	3%	3%	
Charge constant voltage @25°C Standby use (voltage: 13.6-13.8V)	Initial charging current <40A	Initial charging current <48A	
Charge constant voltage @25°C Cycle use (voltage: 14.4-14.9V)	Initial charging current <40A	Initial charging current <48A	
Dimensions (mm)	532L x 206W x 215H	520L x 269W x 203H	
Weight	58.6kg	71.3kg	
BATTERY CONSTRUCTION			
Electrolyte	Silicon gel	Separator	PVC
Positive Plate	Thick high Sn low Ca grid w/special paste	Safety Valve	Flame Si-Rubber & aging resistancer
Negative Plate	Balanced Pb-Ca grid	Terminal	Female Copper Insert M8
Pillar Seal	2 layers epoxy resin	Container & Cover	ABS



### FRONT TERMINAL GEL BATTERY



The FL type front terminal battery has a long lasting service life and front access connections for easy installation and maintenance, and is ideally suitable for telecom equipment, renewable energy systems and other severe environments.

- Wide operating temperature range
- High power density & low self discharge
- Front access terminal with standard width for 19" and 23" ETSI racks
- Nano gel electrolyte

FRONT TERMINAL GEL BATTERY		
Nominal Voltage	12V (6 cells per unit)	
Design Floating Life @25°C	12 years	
Nominal Capacity @25°C (10h rate @20.0A, 10.8V)	200Ah	
Capacity	20h rate (10.6A, 10.8V) 5h rate (33.4A, 10.5V) 1h rate (121.2A, 9.6V)	212Ah 167.0Ah 121.2Ah
Internal Resistance	Full Charged Battery @25°C	≤2.9mΩ
Ambient Temperature	Discharge & Charge / Storage	-15°C ~ 60°C / -15°C ~ 45°C
Max Discharge Current @25°C	960A(5s)	
Capacity Effected by Temp (10h capacity)	40°C / 25°C / 0°C / -15°C	108% / 100% / 90% / 70%
Self-Discharge @25°C per month	3%	
Charge (Constant Voltage) @25°C	Standby Use	Initial charging current <38A. V 13.6-13.8V
	Cycle Use	Initial charging current <38A. V 14.4-14.9V

BATTERY CONSTRUCTION			
Dimensions	560Lx125Wx316H ±1 mm	Terminal	Female Copper Insert M6
Weight	56±3% kg	Separator	PVC
Positive Plate	Thick high Sn low Ca grid	Electrolyte	Silicon gel
Negative Plate	Balanced Pb-Ca grid	Pillar Seal	Two layers epoxy resin seal
Container & Cover	ABS (UL94-VO optional)	Safety Valve	Flame Si-Rubber and aging resistancer

### BLACK GEL BATTERY



NEXTGEN NRG's black gel batteries can be mounted in any orientation, and are especially suited for mobile power applications, such as golf carts, forklifts etc. They can be used in float or cyclic applications, operated without maintenance, and have a low self-discharge.

- Nanometre SiO<sub>2</sub> & H<sub>2</sub>SO<sub>4</sub> gelled electrolyte technology
- Not restricted for air travel (IATA/ICAO Special Prov A67)
- Case /cover available in flame retardant ABS
- Lead, calcium tin alloy grid for high power density

BLACK GEL BATTERY		
Nominal Voltage	12V (6 cells)	12V (6 cells)
Nominal Capacity @25°C	10h rate (10.8V) 5h rate (10.5V) 1h rate (9.6V)	200Ah (20A) 176Ah (35.2A) 124Ah (124A)
Internal resistance full charge @ 25°C	4.5mOhms	2.0mOhms
Self-discharge capacity decline p/m @20°C	Approx 2%	Approx 3%
Operating temp range discharge/storage	-20°C~60°C	-20°C~60°C
Operating temp range charge	-10°C~60°C	-10°C~60°C
Max. Discharge Current @25°C	1000A(5s)	1250A(5s)
Short Circuit Current	3000A	3000A
Constant Voltage Charge	25°C	25°C
Cycle Use	14.4-14.7V	2.30-2.35VPC
Maximum charging current	60A	75.0A
Temperature compensation	-20mV/°C	-30mV/°C
Standby Use	13.6-13.8V	2.23-2.27VPC
Temperature compensation	-30mV/°C	-20mV/°C
Dimensions (mm) / Weight (kg)	522x240x219 / 58.5	520x268x220 / 70.5

BATTERY CONSTRUCTION			
Electrolyte	Gel	Terminal	Copper
Safety Valve	Rubber	Separator	PVC
Negative Plate	Lead	Positive Plate	Lead dioxide
Cover	ABS	Container	ABS





# Green Products



## Mini Power System Briefcase

### MPS BRIEFCASE

The MPS Briefcase combines highly efficient solar panels, a solar charger, a power inverter and a lithium polymer battery in a robust, waterproof case, creating an easy-to-use, 'plug and play' portable power system.

The system is specifically designed for mobile, off-grid applications, where space and weight limitations are present. Multiple devices can be powered simultaneously from the briefcase, such as a TV, computer, mobile phone and lighting.

There is a LED light on the side of the briefcase, which acts as a SOS Morse code beacon in the event of an emergency.



150W MPS BRIEFCASE	
Solar Panel	2x 10W monocrystalline panels, operating temp -4.4°C to 85°C
Inverter	150W AC 220V 50Hz
Battery	11.1V 16Ah lithium polymer
Controller	12V 8A (rated current)
LED	3W lighting with SOS feature
Output	220VAC - 150W max / 12VDC power plugs - 5A max 5VDC USB outputs - 2A max
Input	220VAC input / solar input - 23VDC 70W max
Colour	Black or Brown/Green





350W MPS BRIEFCASE	
Solar Panel	50W 18V Monocrystalline
Inverter	350W AC100V-240V Pure sine wave
Battery	12V 48A Lithium polymer
Controller	12V 8A
LED	3W lighting with SOS feature
Output	Universal power point / AC220V/100V: 1pcs / DC12V: 2pcs / 5V USB: 4pcs
Input	DC12-24V input (solar) / AC input
Colour	Black

With the larger 350W unit weighing only 10.6kg, these briefcases are perfect for travelling, camping, visiting remote areas, disaster relief situations and everyday power needs. The briefcases are air travel friendly, the battery suitable for flight when carried as hand luggage. The briefcase can also be charged from the grid before travelling if there is no sunshine.

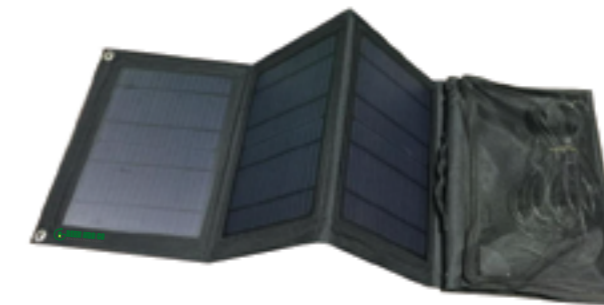
Average working times for the 350W MPS Briefcase are as follows:

Sample Item	Power Load	Quantity	Cumulative Daily Working Hours	Daily Power Consumption	Continued Working Days
CFL bulb	15W	2	4	120Wh	4 days
LED bulb	3W	4	4	48Wh	10 days
LCD TV (28")	60W	1	3	180Wh	2.7 days
Laptop	60W	1	2	120Wh	4 days
Inkjet printer	30W	1	0.5	15Wh	32 days
Radio	3W	1	6	18Wh	27 days
Cell phone	2.5W	2	8	40Wh	12 days

500W MPS BRIEFCASE	
Product Code	NRG-LTG-PH002
Load Power	500W
Inverter	AC 240V/50Hz pure sine wave
Battery	12V 50Ah lithium-ion polymer
Charging Options	Solar panels, AC outlet, car socket
Output	AC 230V x1 DC 12V x2 USB 5V x2 Cigarette lighter x1 Engine start x1
Charging Time	10-12h 50W solar panel
Colour	Black



The 500W MPS Briefcase does not come with built-in solar panels, but it can be charged via solar panels, AC wall outlets and car sockets.



MINI SOLAR PANELS	
Solar Panel	18V/50W x5 folding monocrystalline
Transformation	18%
Output Voltage	5V+18V
Output Current	2.7A
Cable	10M*AWG DC5521 output cable
Open Size	1560*400mm
Folding Size	400*270*40mm
Colour	Black

The Mini Solar Panels do not come with a battery system.

Devices can be powered directly from the panels whilst they are charging in the sun.

Alternatively, the panels can be attached as an energy source to a battery storage system.





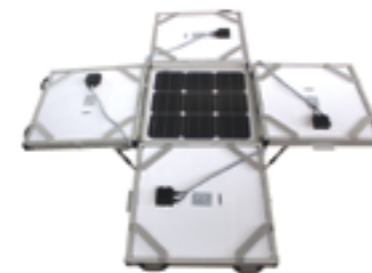
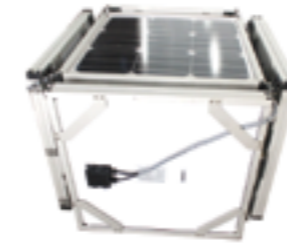
# Mobile Mini Power System

## MOBILE MPS

The Mobile Mini Power System is a portable green energy storage solution, allowing the user to generate, store and consume their own clean, free solar energy, whenever and wherever they need it.

The mobile unit is fitted with sturdy wheels and solar panels, which fold in and out for easy storage and transportation. The battery and control system is located inside the cube, with an easy-to-open glass door.

It is a great solution for mobile energy needs, for example, to power outdoor working, camping and farming sites.



## MOBILE MINI POWER SYSTEM

PV power (poly)	1395W
Inverter power	3200W
Battery	8pcs 6V 225Ah
Battery capacity	10800W (48V 225Ah)
Dimensions closed	127*127*120H cm
Dimensions opened	256*313*227H cm
Weight	515kg
Optional tweaks	21.6KWH enhanced battery; DC output 5V 12V 24V 48V; AC output 110V 60Hz; Remote monitor control system; Recharge from wind

## SOLAR BATTERY

Capacity	225Ah @ 10hr-rate to 1.8V per cell @ 25°C
Operating temperature range	Discharge: -20°C~60°C Charge: 0°C~50°C Storage: -20°C~60°C
Max charging current	67.5A
Internal resistance	Approx 1.7m
Weight	Approx 32kg (±2%)
Self discharge	The value regulated lead acid battery can be stored for more than 6 months at 25°C. Charge battery before use.

## SOLAR PANEL

Panel cell type	Poly, 156*156mm, 36pcs (6x6)
Glass	3.2mm high transmission, low iron, tempered glass
Frame	Anodized aluminum alloy
Junction box	IP65 700mm (IP66 400mm)
Dimensions	986*986*4mm
Weight	8kg





# Solar Input Mini Power Systems

## SOLAR INPUT MPS

Solar-Input Mini Power Systems generate energy from the sun, storing the energy inside batteries for later use.

The kits are great for powering campsites, caravans and a range of outdoor activities, such as sports, outdoor picnics and cinema set ups!

The smallest solar MPS kits are 20W, with the ability to power: four 3W LED bulbs and small electronic devices.

The largest solar MPS kits are 500W, able to power: six 5W LED bulbs, two fans, a TV, laptop, and multiple electronic devices.



20W SOLAR MPS	
Solar Panel	1 x poly crystalline 20W
LED bulbs	4 x 3W
Cables	4 x 5m with on/off switch
Working time	12h,15h with full battery
Charging time	8h, 6h with strong sun
Lead acid battery	1 x 12AH/12V
PWM charge controller	1 x 5A/12V
USB/DC output	1 x 5V 600mA / 4 x 12V
USB cable	1 x 10 in 1 cable



50W SOLAR MPS	
Solar Panel	1 x poly crystalline 50W
LED bulbs	4 x 5W
Cables	4 x 5m with on/off switch
USB cable	1 x 10 in 1 cable
Working time	10h,12h with full battery
Charging time	8h, 6h with strong sunshine
Lead acid battery	1 x 33AH/12V
PWM charge controller	1 x 10A/12V
DC output	8 x 12V
USB output 1	1 x 5V 1A
USB output 2	1 x 5V 2A max
Laptop Power Output	12V/3A-16V/3A-19V/3A

100W SOLAR MPS	
Solar Panel	1 x poly crystalline 100W
LED bulbs	4 x 5W
Cables	4 x 5m with on/off switch
USB cable	1 x 10 in 1 cable
Lead acid battery	1 x 55AH/12V
PWM charge controller	1 x 20A/12V
DC output	6 x 12V
AC output	220V/110V 50/60Hz
USB output	1 x 5V
Inverter	Pure sine wave 12V/300W
Cigarette lighter	2 x DC12V
Mounting structure	Ground mounting type





200W SOLAR MPS	
Solar Panel	2 x poly crystalline 100W
LED bulbs	6 x 5W
Cables	6 x 5m with on/off switch
USB cable	1 x 10 in 1 cable
Lead acid battery	1 x 120AH/12V
PWM charge controller	1 x 30A/12V
DC output	6 x 12V
AC output	220V/110V 50/60Hz
USB output	1 x 5V
Inverter	Pure sine wave 12V/350W
Cigarette lighter	3 x DC12V
Laptop Power Output	12V/3A-16V/3A-19V/3A

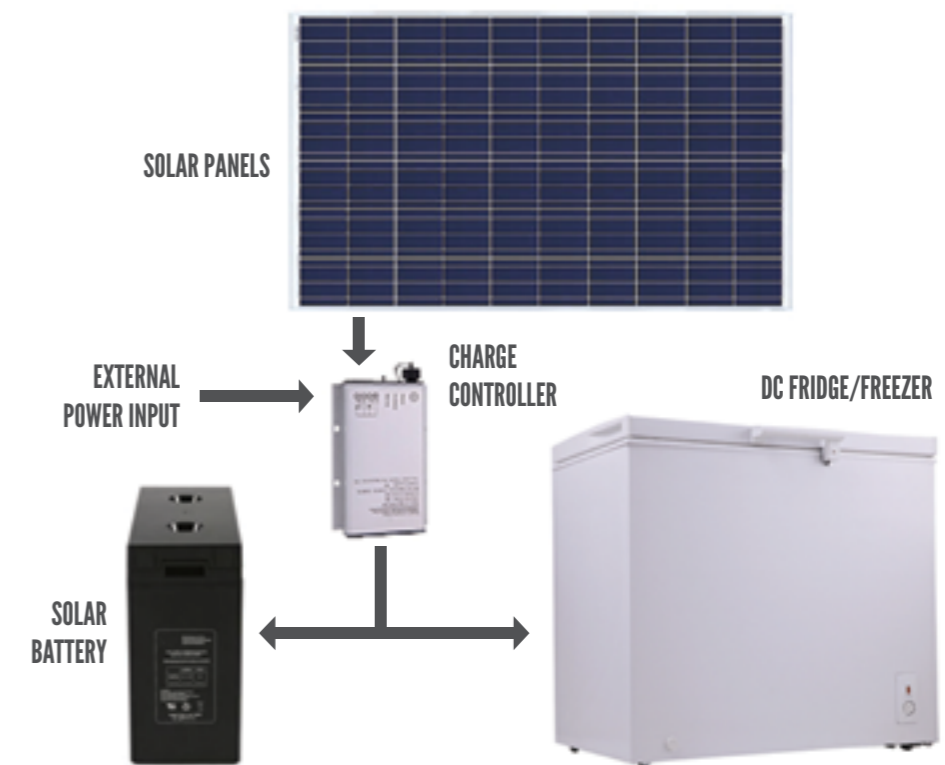
500W SOLAR MPS	
Solar Panel	2 x poly crystalline 250W
LED bulbs	6 x 5W
Cables	6 x 5m with on/off switch
USB cable	1 x 10 in 1 cable
Lead acid battery	1 x 160AH/24V
PWM charge controller	1 x 30A/12V
DC output	6 x 12V
AC output	220V/110V 50/60Hz
USB output	1 x 5V
Inverter	Pure sine wave 24V/500W
Cigarette lighter	3 x DC12V
Mounting structure	Ground mounting type



# Solar Fridge & Freezer

## SOLAR REFRIGERATION

NEXTGEN NRG's fridges and freezers are completely solar powered. Energy saving and portable, these appliances are perfect to reduce power costs in residential or commercial spaces, or to meet cooling and freezing needs in remote areas without a power supply.







93L FRIDGE	
Product Type	Solar Fridge
Net Capacity	93L
Power Supply	DC 12V & AC 220V
Temperature	0~10°C fridge
Coolant	R600a, CFC free
Isolation	C-pentane, CFC free
Power Consumption	0.39KWH/days
Solar Panel	Poly 150W 18V *2
Battery	150Ah 12V *1PC
Controller	20A 12V/24V
Size	480x500x 840mm
Weight	22kg

118L FRIDGE	
Product Type	Solar Fridge/freezer
Net Capacity	118L
Power Supply	DC 12V & AC 220V
Temperature	0~10°C fridge -15°C freezer
Coolant	R600a, CFC free
Isolation	C-pentane, CFC free
Power Consumption	0.45KWH/days
Solar Panel	Poly 150W 18V *2
Battery	150Ah 12V *1PC
Controller	20A 12V/24V
Size	480x530x 1160mm
Weight	33kg

182L FRIDGE	
Product Type	Solar Fridge/freezer
Net Capacity	182L
Power Supply	DC 12V & AC 220V
Temperature	0~10°C fridge -15°C freezer
Coolant	R600a, CFC free
Isolation	C-pentane, CFC free
Power Consumption	0.54KWH/days
Solar Panel	Poly 150W 18V *2
Battery	150Ah 12V *1PC
Controller	20A 12V/24V
Size	500x580x1400mm
Weight	39kg

200L FREEZER	
Product Type	Solar Freezer
Net Capacity	200L
Power Supply	DC 12V & AC 220V
Temperature	-15°C freezer
Coolant	R600a, CFC free
Isolation	C-pentane, CFC free
Power Consumption	0.60KWH/days
Solar Panel	Poly 150W 18V *2
Battery	150Ah 12V *1PC
Controller	20A 12V/24V
Size	905x545x845mm
Weight	36kg





# Solar Air Conditioning

## SOLAR AIR CONDITIONING

NEXTGEN NRG's 100% solar powered air conditioner has been designed to make the best possible use of photovoltaic solar panels — there are no losses associated

with converting DC power from the solar panels into AC power to run a standard air conditioner. Hence it requires fewer panels than that of a standard AC-powered air conditioner, running on solar panels through an inverter.

The system is suitable for residential, commercial and industrial uses; great for portable classrooms and offices, or remote facilities where conventional or generator power is costly and/or unreliable.



SOLAR AIRCONDITIONING RANGE				
Power	35W	52W	72W	120W
Power form	48V/DC	48V/DC	48V/DC	48V/DC
Rated cooling capacity	3500W (12000 BTU)	5200W (18000 BTU)	7200W (24000 BTU)	12000W (41000 BTU)
Rated heating capacity	3800W (12000 BTU)	5700W (19500 BTU)	7900W (2700 BTU)	14000W (48000 BTU)
Circulation input air	550m3/h	1100m3/h	1100m3/h	1800m3/h
Noise	Indoor unit ≤ 45 dB(A) Outdoor unit ≤ 50 dB(A)	Indoor unit ≤ 45 dB(A) Outdoor unit ≤ 55 dB(A)	Indoor unit ≤ 50 dB(A) Outdoor unit ≤ 58 dB(A)	Indoor unit ≤ 55 dB(A) Outdoor unit ≤ 65 dB(A)
Applying space	14-24m2	25-35m2	30-50m2	45-70m2
Energy efficiency grade	100% solar power	100% solar power	100% solar power	100% solar power
Input power	Cooling 1000W Heating 1100W	Cooling 1500W Heating 1550W	Cooling 1850W Heating 1900W	Cooling 3100W Heating 3200W
Rated power	Cooling 4.7A Heating 5.1A	Cooling 7.0 A Heating 7.2 A	Cooling 8.4 A Heating 8.6 A	Cooling 14.7A Heating 14.9 A
Pipe length	3.5m	4m	4m	5m
Indoor unit size (net/package)	835x275x180 mm/865x340 x265mm	1015x335x200 mm/1065x375 x255mm	1090x325x 245mm/1145 x375x305mm	1650x380x 270mm/1700 x420x325mm
Outdoor unit size (net/package)	790x260x540 mm/920x340 x600mm	930x330x600 mm/995x390x 650mm	845x300x685 mm/940x365x 745mm	950x355x 1240/1055x 420x1345mm
PV module package size	1602x812x50 mm	1602x812x50 mm	1602x812x50 mm	1602x812x50 mm
Indoor unit weight	11.2kg net/14.8kg package	14.5kg net/18.5kg package	18.5kg net/19kg package	40.0kg net/45.0kg package
Outdoor unit weight	35kg net/38kg package	51kg net/56kg package	61kg net/66kg package	100kg net/ 128kg package
PV module weight	16kg	16kg	16kg	16kg





# Solar Fans

## SOLAR FANS

NEXTGEN NRG offers a range of solar powered, portable DC fans, table mounted and standing. These environmentally friendly fans are a great solution for the campsite, backyard and office alike! If there is no sunshine available, the fans can also be charged from the grid.



SOLAR DC STANDING FAN	
Power rating	35W
Max height	120-125cm
Blade diameter	16 inches
LED	15pcs
Blade quantity	3
Wind speeds	1/1000rpm, 2/1150rpm, 3/1350rpm
Battery	6V 4.5Ah maintenance-free lead acid *2
Working hours	5h high speed, 10h low
Charging method	AC: 100V-240V or DC: solar panels
Charging hrs	6-8 hours
Weight	5.2kg



SOLAR DC STANDING FAN	
Power rating	35W
Max height	70-80 cm
Blade diameter	16 inches
LED	18pcs
Blade quantity	3
Wind speeds	1/1000rpm, 2/1150rpm, 3/1350rpm
Battery	6V 4.5Ah lead acid *2
Working hours	5h high speed, 10h low
Charging method	AC: 100V-240V or DC: solar panels
Charging hours needed	6-8 hours
Weight	5.2kg

SOLAR TABLE FAN	
Motor/Speed	12V full copper/ 3 speed control
High speed	1600RPM ± 10% strong airflow
Case material	ABS
Power method	DC 12V
Power rated	6W
Fan blade	150MM 10inch
Packing size	32.5*12.5*39cm
Carton size	66.5*39*40.5cm
Total weight	110 kg
Tower	10 m (optional)

SOLAR CEILING FANS		
NRG-2015030	Solar Ceiling Fan (20W FAN) no LED light	60 inch ABS fan blades (6" fan boom) 30 watt polycrystalline solar panel (495x415x25mm) Brushless DC motor 6m cable to connect fan & solar panel
NRG-2015031	Solar Ceiling Fan with LED Light (20W FAN 10W LED LIGHT) (incl. Power Adapter)	60 inch ABS fan blades (6" fan boom) 30 watt polycrystalline solar panel (495x415x25mm) Brushless DC motor 6m cable to connect fan & solar panel 10W LED light for lighting purpose AC/DC power adapter to support fan can run & LED light can work nonstop even in sunless periods Remote control to turn on/off the fan & LED light flexibly





# Solar Exhaust Fan

## SOLAR EXHAUST FAN

NEXTGEN NRG's professional solar exhaust fans utilize solar energy to let your roof breathe freely! Our environmentally friendly fans strengthen air circulation, extend the lifespan of roofing, remove heat, moisture and dust, and prevent wind and rain from flowing backward.

They also reduce the heat load on air-conditioning ducting to help you save money.

The fans have no operating power consumption costs, they come with free wiring, are easy to install and require minimal maintenance. They have a metal fan guard to prevent objects flying inside the house through the

ventilator. The fans feature a dual power AC/DC adapter kit, meaning they can switch to AC power automatically on a cloudy day. They will continue to run at night (unless switched off with the easy access manual power switch).

**Contact us to find out which other sizes we have!**



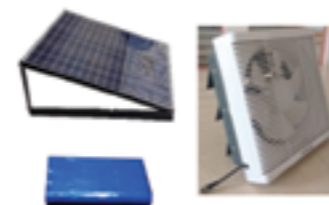
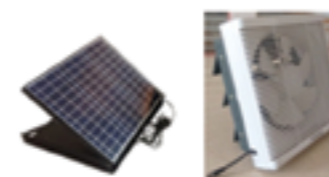
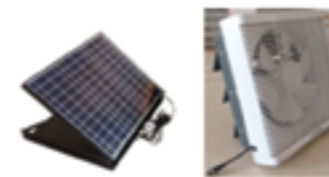
12W SQUARE SOLAR EXHAUST FAN	
Solar panel	12W polycrystalline
Fan blade	12 inch aluminum
Motor	Brush/brushless DC
Build	Square shroud cover
Size	530x530x250mm
Gross weight	16kg



25W SQUARE SOLAR EXHAUST FAN	
Solar panel	25W polycrystalline
Fan blade	14 inch aluminum
Motor	Brush/brushless DC
Build	Square shroud cover
Size / Weight	530x530x250mm/17.2kg

30W CIRCLE SOLAR EXHAUST FAN	
Solar panel	30W polycrystalline
Fan blade	14 inch aluminum
Motor	Brush/brushless DC
Build	Round shroud cover, solar panels connected by 2m cable
Size/Weight	530x530x220mm/16.4kg

WALL EXHAUST FAN (AVAILABLE IN 8", 10" AND 12")	
NRG-2015009	Solar Powered Wall Exhaust Fan 12" 30 watt polycrystalline solar panel (495x415x25mm) 12 inch ABS plastic fan blades (fan size: 390x390x145mm) Brushless DC motor ABS plastic louver and galvanized steel with anti-corrosive coating shutter, with 6m cable to connect fan host & solar panel
	12" Solar Powered Wall Exhaust Fan with Power Adapter 30 watt polycrystalline solar panel (495x415x25mm) 12 inch ABS plastic fan blades (fan size: 390x390x145mm) Brushless DC motor, ABS plastic louver and galvanized steel with anti-corrosive coating shutter 3m AC/DC Power Adapter so solar fan works nonstop in sunless periods 6m cable to connect fan blower & solar panel
NRG-2016023	12" Solar Powered Wall Exhaust Fan with Battery 60 watt polycrystalline solar panel (495x782x30mm) 30w to support motor runs directly at daytime 30w to charge 12V 9.6Ah battery at daytime for supporting motor runs nonstop in sunless periods
	12 inch ABS plastic fan blades (fan size: 390x390x145mm) Brushless DC motor ABS plastic louver and galvanized steel with anti-corrosive coating shutter 6m cable to connect fan blower & solar panel







# Micro Mini Power System

Seeking only solar input to power and backup heavy appliances, such as air conditioners and computers? Our Micro Mini Power System is the product for you.



## MICRO MINI POWER SYSTEM

The MMPS has solar inverter power charging, and provides reliable power to electronic household devices.

It is suitable for a range of loads, including air conditioners, PCs, POS systems, industrial devices and tools.

The MMPS can be utilized as solar back-up power, to ensure the air conditioning, computers etc. run smoothly in the event of a power outage.



MICRO MINI POWER SYSTEM	
System	12V/24V/48V DC -100DC max PV input
Current	Lower idle current (<10W), motor compatible, energy saving under no load condition
Efficiency	30-60% ^ than normal controller charging
Perfect protection circuit	Low/high voltage, short circuit, overload & temperature protect
High overload capacity	Can burden a larger motor load and connect an inductive load
Output	Pure sine wave
Communication	RS232 communication abilities
Front panel features	LED indicators & adjustable switch selector - LCD display optional
Compatibility	Lead-Acid, Gel or AGM batteries
Battery charger	30A/60A
Three-stage charging	Large current charging, absorption and floating charge
Backup power	Backup power supply w/quick switch





# SMPS Solar Inverter

On a budget and only seeking solar power input? Our quality SMPS solar inverter is perfect to convert your solar energy and power all of your household appliances.



## SMPS SOLAR INVERTER

SMPS (switch mode power supply) series solar inverter has power charging efficiency 30%~60% higher than traditional controller charging.

This inverter has automatic system identification, a three-stage charging mode, can charge variety of batteries, an intelligent control discharging mode, and RS232 communication.

This inverter can provide reliable sine wave power to important electronic devices, and can be utilized in residential or commercial applications.

It is suitable for all kinds of loads, such as a ship, heavy truck, industrial device, air-conditioner, TV, POS system, refrigerator, washing machine, PC and power tool (optional 1KW to 6KW). SNS series can start a larger motor load with its high overload capacity. Once started, all inverter functions are completely automatic.

This inverter is suitable for home and special environments. This series is characteristic with stable performance, large charging current and high charging efficiency – it can charge a full battery quickly. Output is true pure sine wave.



## SMPS SOLAR INVERTER

General Specification	NS	
Input Wave Form	Sine wave (Utility or Generator)	
Nominal Voltage	120VAC	230VAC
Low Voltage Trip	90v± 4%	184v/154v± 4%
Low Voltage Re-engage	100v± 4%	194v/164± 4%
High Voltage Trip	140v± 4%	253v± 4%
High Voltage Re-engage	135v± 4%	243v± 4%
Max Input AC Voltage	150VAC	270VAC
Nominal Input Frequency	50Hz or 60Hz (Auto Detect)	
Low Frequency Trip	47Hz for 50Hz, 57Hz for 60Hz	
High Frequency Trip	55Hz for 50Hz, 65Hz for 60Hz	
Output Wave Form	(Bypass Mode) Same as input	
Overload Protection	Circuit Breaker	
Short Circuit Protection	Circuit Breaker	
Transfer Switch Rating	30 amp or 40 amp	
Efficiency On Line Transfer Mode	95%+	
Line Transfer Time	10ms Typical	
Bypass Without Battery Connected	Yes	
Max Bypass Current	30 amp or 40 amp	
Bypass Over Load Current	35 amp or 45 amp: Alarm	





## Solar Water Pump To Help Communities in Need



- Kit Sizes Available**
- 624W
  - 720W
  - 132W
  - 864W
  - 264W
  - 1008W
  - 432W
  - 1152W
  - 576W
  - 1296W

### SOLAR WATER PUMP KIT

#### 132W System Basic Information

Solar panel rated output power: 360W

Solar DC pump: 132W

System working time: sunshine time

#### Solar Panel

Type: mono solar panel (poly optional)

Max power: 120w

Vmp: 17.2V

Voc: 21.6V

Imp: 5.8A

Weight: 9KG

Size: 1061\*670\*35mm

Life time: 5 years (CE TUV)

Connection: connect in parallel

QTY: 3pcs

#### Solar DC Pump

Model: 45L-132W

Pump capacity: 132W/12VDC

Water flow: 50L/min

Intake size: 76mm

Outlet size: 25mm

Max Head: 10M

Diameter of Pump: 300\*76mm

Rotation speed: 3000/rpm

Protection class: IP68

Pump materials: galvanized head/plastic head

QTY: 1pc

#### Solar panel ground rack

Wind load: 55m/s

Snow load: 1.5kn/m2

Structure: Anodized Aluminum + stainless steel,  
Angle adjustable (other type of rack can be cus-  
tomized as per client's requirement)

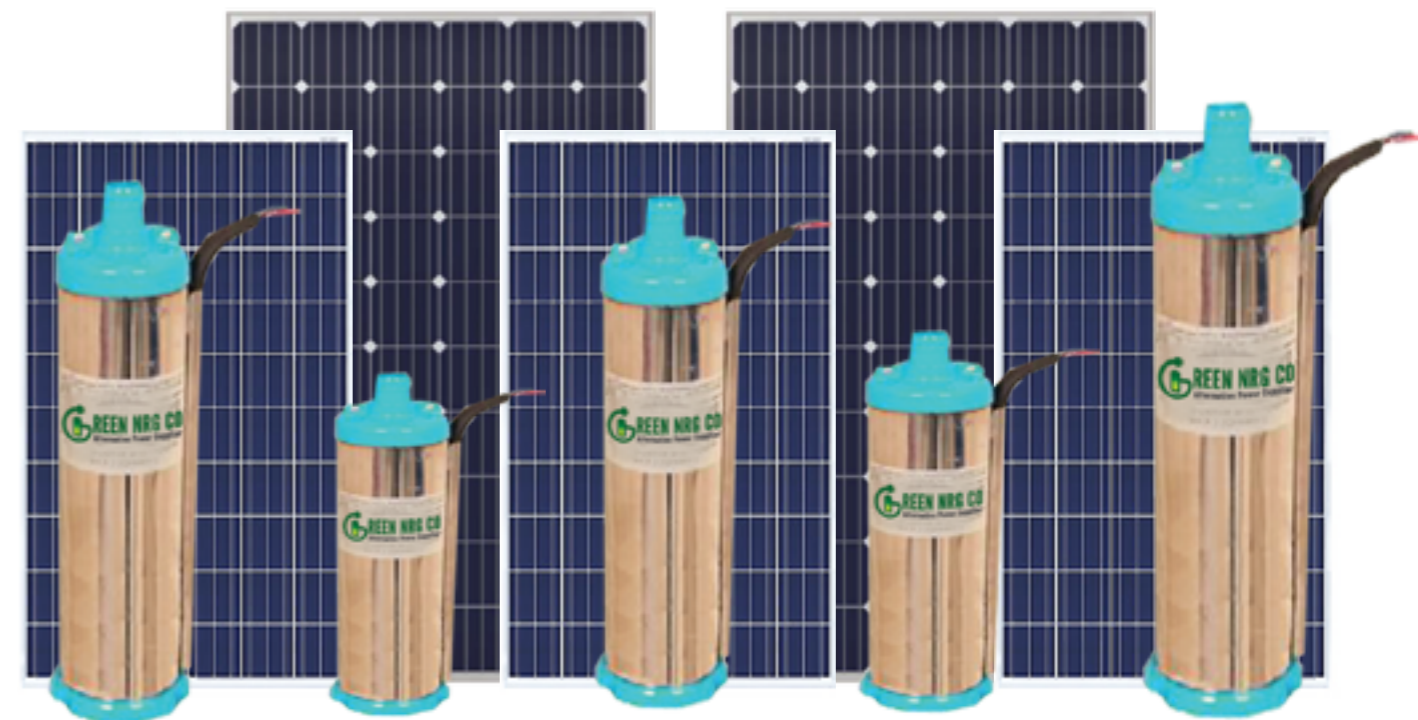
QTY: 1set

#### Cables

4mm<sup>2</sup>

International standard, with specification suit-  
able for solar pump system,

QTY: 100m





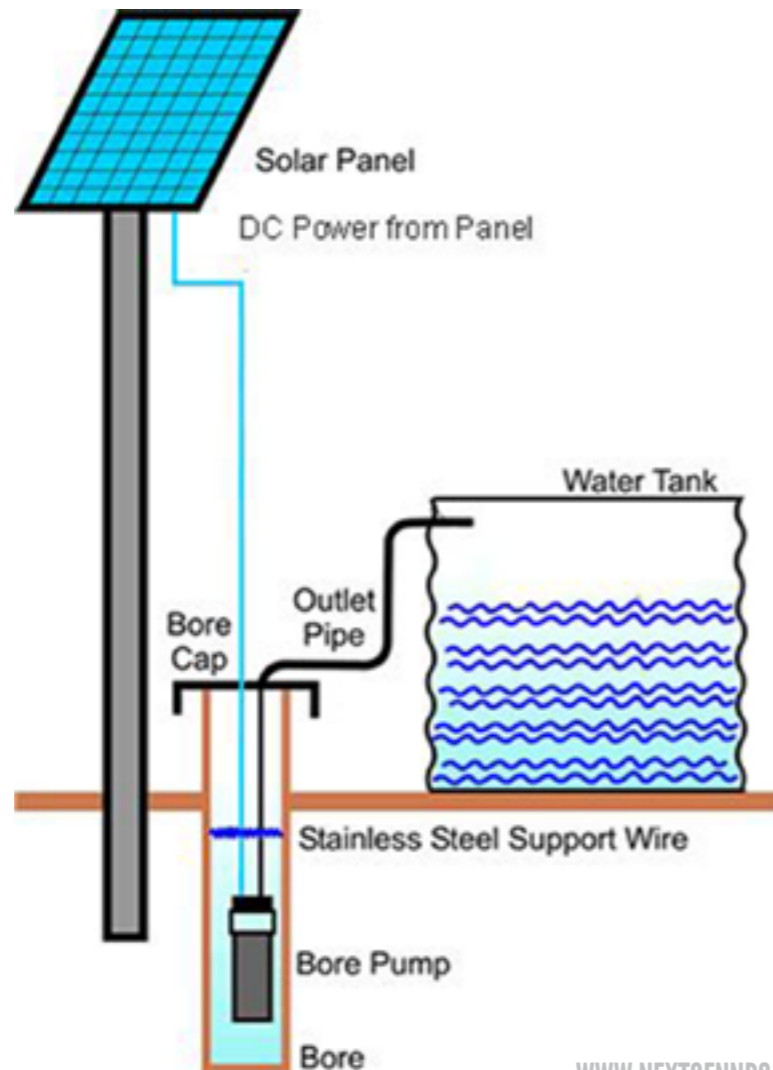


# Solar Water Pump

## SOLAR WATER PUMP

NEXTGEN NRG's solar pumps have a wide working voltage, and a built-in MPPT controller which can make the best use of solar energy.

Over-voltage protection/ under-voltage protection is also built-in, meaning that the pump will stop working automatically when the voltage is too high or too low. It will detect the voltage every 10 minutes, and it will start to work automatically when the voltage is within the working voltage range of the pump. The pump can be directly connected to solar panels without controller in sunshine.



**Impeller:** Centrifugal (plastic)  
**Flow:** 3m<sup>3</sup>/h

Model	Wide Working Voltage (V)	Power (W)	Head (M)	Outlet (MM)	Outlet Diameter (MM)	Cable Length (M)
NRG-M123T-10	12V (10-22V)	132w	10m	25mm	90*300	2m
NRG-M123T-20		264w	20m	25mm	90*450	5m
NRG-M123T-30		396w	30m	25mm	90*600	5m
NRG-M243T-10	24V (18-45V)	192w	10m	25mm	90*300	2m
NRG-M243T-20		384w	20m	25mm	90*450	5m
NRG-M243T-30		576w	30m	25mm	90*600	5m
NRG-M243T-40		768w	40m	25mm	90*760	5m
NRG-M243T-50		960w	50m	25mm	90*910	5m
NRG-M243T-60		1152w	60m	25mm	90*1060	5m
NRG-M243T-70		1344w	70m	25mm	90*1210	5m
NRG-M243T-80		1536w	80m	25mm	90*1360	5m
NRG-M243T-90		1728w	90m	25mm	90*1520	5m
NRG-M243T-100		1920w	100m	25mm	90*1670	5m



**Impeller:** Centrifugal (plastic)  
**Flow:** 5m<sup>3</sup>/h

Model	Wide Working Voltage (V)	Power (W)	Head (M)	Outlet (MM)	Outlet Diameter (MM)	Cable Length (M)
NRG-M125T-8	12V (10-22V)	168w	8m	32mm	96*290	2m
NRG-M125T-15		336w	15m	32mm	96*460	5m
NRG-M245T-10	24V (18-45V)	216w	10m	32mm	96*290	2m
NRG-M245T-20		432w	20m	32mm	96*460	5m
NRG-M245T-30		648w	30m	32mm	96*630	5m
NRG-M245T-40		864w	40m	32mm	96*800	5m
NRG-M245T-50		1080w	50m	32mm	96*980	5m



**Impeller:** Screw  
**Flow:** 2m<sup>3</sup>/h

Model	Wide Working Voltage (V)	Power (W)	Head (M)	Outlet (MM)	Outlet Diameter (MM)	Cable Length (M)
NRG-S122T-30	12v (10-22v)	200w	30m	25mm	76mm	5m
NRG-S242T-40	24v (18-45v)	200w	40m	25mm	76mm	5m



**Impeller:** Centrifugal (plastic)  
**Flow:** 10m<sup>3</sup>/h

Model	Wide Working Voltage (V)	Power (W)	Head (M)	Outlet (MM)	Outlet Diameter (MM)	Cable Length (M)
NRG-M4810T-10	48V(38-96v)	480W	10m	62mm	160*450	2m
NRG-M4810T-20	48V(38-96v)	960W	20m	62mm	160*500	5m



# Solar Streetlight

## SOLAR STREETLIGHT

The solar streetlight is an Australian designed and developed renewable energy solution, providing street light from the sun, and available in various wattages to suit different customer requirements.



10W SOLAR STREETLIGHT	
Solar panel	9W 9V poly crystalline
Lifetime	15+ years
Battery	LiFePO4 6.0AH 6.4V
Battery lifetime	5-6 years
LED max power	10W 1000 lumens (with reflector 1w=100 lumens)
LED chip brand	Epistar
LED lifetime	>50,000 hours
LED viewing angle	120°
LED colour temperature	Pure/cool white 4000-6000K
PIR sensor	7-9m detection angle: 140°
Charge time	8h normally, 6h peak sunshine
Product design	Australian designed and developed



24W SOLAR STREETLIGHT	
Solar panel	24W 16V poly crystalline
Lifetime	10+ years
Battery	LiFePO4 12AH 12.8V
Battery lifetime	5-6 years
LED max power	1500 lumens max
LED power	8W 800 lumens (with reflector 1w=100 lumens)
LED chip brand	Epistar
LED lifetime	>50,000 hours
LED viewing angle	120°
LED colour temperature	Pure/cool white 4000-6000K
PIR sensor	10-12m detection angle: 140°
Charge time	8h normally, 6h peak sunshine
Product design	Australian designed and developed



50-120W SOLAR STREETLIGHT	
Solar panel	Available in 50W 60W 80W 100W 120W poly-crystalline
Lifetime	15+ years
Battery	LiFePO4 15AH 19.2V
Battery lifetime	5-6 years
LED power	30W 3000 lumens / 50W 5000 lumens / 60W 7200 lumens max (range from 40W to 60W, 1W = 120 lumens)
LED chip brand	US Bridgelux
LED lifetime	> 50,000 hours
LED viewing angle	120°
LED colour temperature	Pure/cool white 4000-6000K
PIR sensor	10-12m detection angle: 140°
Product design	Australian designed and developed
Charge time	8h normally, 6h peak sunshine





# MPS-APS

## Advanced Prepayment System

The MPS Advanced Payment System is a great tool for landlords, building managers and owners to secure payments from residents using the property's MPS generated power! The MPS-APS provides an incentive for owners to install a MPS system, as they can easily charge the power to tenants through the prepaid cards.



### MPS-APS

MPS-APS is an advanced prepayment system that complies with the latest international standards. It is suitable in holiday parks, apartment blocks, university housing - a great solution for anywhere with scattered residents, tenants and guests and central power.

It assists landlords, managers, and building owners with a Multi-Input Power System installed, to secure payments from residents who use the power.

#### Features:

- Able to measure reverse current
- IR communication
- Over load protection
- Low credit alarm

#### Standards:

- IEC62052-11
- IEC62053-21
- IEC62055-41
- IEC62056-21

MPS-APS	
Voltage	230V
Current	60A
Accuracy class	1.0
Frequency	50Hz
Impulse constant	1000imp/kWh
Connection model	Direct type
Power consumption	≤1W ≤7VA
Display mode	MPS-LCD 6+2
Size	100.5*36.5*65mm

### PRODUCT SELLING POINTS

1. SIMT IEC62052-11;62053-21 type approved certificate
2. Unique security key in each meter for high crack protection
3. Internal relay to switch off automatically when balance is zero
4. Low balance credit alarm
5. Over load protection
6. Open cover detection
7. Competitive price for meter, free cost for cloud software solution

### SYSTEM SELLING POINTS

1. Cloud solution; access to reload software whenever wherever
2. Secure communication due to additional hardware encryption and E-bank technology
3. No need for vending stations or separate recharge units. Simply use a smart phone, tablet or PC. In case of no internet use SMS test code to retrieve a recharge token
4. Easy operation; activate reload function by pressing one key
5. Unique user name for each vendor
6. Free cloud software and technical support for long

### vending process:







**NEXTGEN NRG**

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**GREEN NRG CO**

Alternative Power Supplier

# GLOBAL GREEN PROJECTS







## McDonald's Power Supplier

### BENOWA MCDONALD'S PROJECT

Benowa McDonald's, located on Australia's Gold Coast, is the first McDonald's to go green with solar. NEXTGEN NRG recently installed 124 solar panels and a commercial scale 25KW Multi-Input Power System at the restaurant.

The key feature of the MPS is how the system distributes power between storage and usage, making sure the batteries aren't depleted quickly by power hungry appliances. The MPS system has the ability to control all of the input and output load currents.

The MPS units can be scaled up or down to meet

residential or commercial needs. When utilized commercially, the MPS reduces peak demand, lowering the cost that businesses pay per kilowatt hour.

McDonald's franchisee Joe Condon expects to save 30-40% of power costs on the original main.

Joe Condon is not concerned about running out of renewable power stores in his restaurant, as the MPS is set up to ensure that power outages do not occur. He discusses the ease of working with this MPS feature, *"if we run out of power in the gel batteries before the sun's up again the next morning, it seamlessly, automatically transposes over into mains power"*.

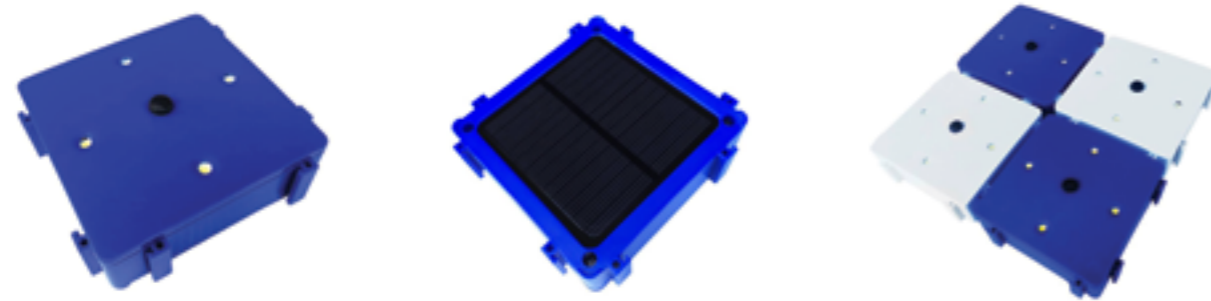
This automatic transition ability creates peace of mind when running a business. It removes the uncertainty and risk that is experienced when utilizing traditional forms of renewable power solutions, such as solar panels alone.







# Solar Starlight



## SOLAR STARLIGHT

NEXTGEN NRG's solar starlight is a 1W solar lamp, which is lightweight, long-lasting and eco friendly. The starlight was created for lighting outdoor activities, such as camping, hiking and boating, and to illuminate the daily lives of rural and developing communities without power. The starlight is waterproof and can be used in extreme weather; and will hold its charge for up to six months. The Australian designed product can be hung with the wire provided or suctioned to windows, and multiple lamps can be joined together.

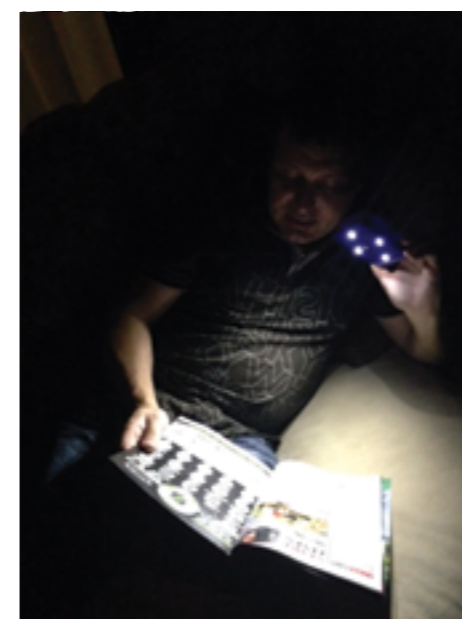
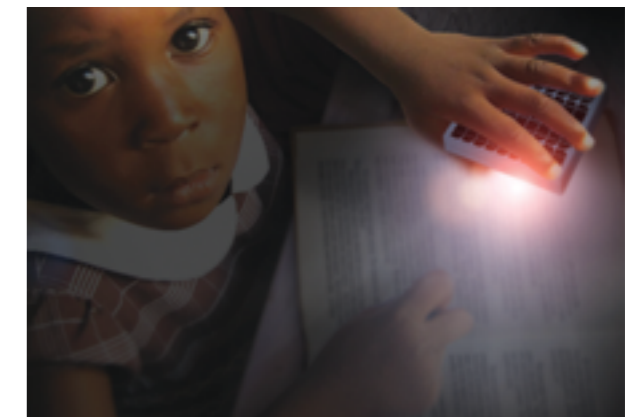
> Charitable foundations distribute our Starlights to those in need around the world, from Fijian communities to the homeless in Switzerland!

SOLAR STARLIGHT	
Working Voltage	3.2V
Working Current	65mA
Output	1W
Lumen per Watt	85Lm
Hours to Cell Charge	3-4 h
Light Hours per Charge	12-14 h
Battery Life	650-700 full charges
Battery Type	Nicd 700m Ah
Dimensions	109x109 x32mm
IP Rating	-0.20%/°C



The starlight is a much safer and more practical option than candlelight or kerosene lamps, eliminating the risk of fire.

**1W Solar Starlight can help people in need!**



One small solar lamp can enable night time learning, working and socialising.





# Vanuatu Eco Village

## Power Supplier

### VANUATU CYCLONE RECOVERY PROJECT

The Enkatalie area on Tanna Island in Vanuatu was one of the hardest hit when Cyclone Pam struck in March 2015. Homes, businesses, infrastructure, vegetation and lives were destroyed by the natural disaster. The tragedy displayed the extreme vulnerability of local communities without cyclone shelters or modern sanitation and energy services.

From the devastation rose a new project created by the Vanuatu and Tafea provincial governments to rebuild and strengthen Tanna. The first stage of the project involved the building of community centres in 15 villages, each building designed to

withstand Category 5 cyclones and powered by NEXTGEN NRG's Multi-Input Power System.

Until now, the communities have not had access to electricity – following this project they now have access to a 24 hour source of renewable energy.

NEXTGEN NRG fitted the new cyclone resistant buildings with Multi-Input Power Systems, solar panels, LED lighting, solar fridges, air conditioning, and a scroll wind turbine.

Director of the Griffith Climate Change Response Program, Professor Brendan Mackey stated that "the aim of the project is to assist local communities in developing more resilient settlements

and enhanced livelihoods in ways that leapfrog old technologies and take advantage of emerging green building design and clean energy approaches."

Professor Mackey's vision is that the buildings will act as safe houses during cyclones, and be utilized as social spaces at other times, for example classrooms or health clinics.

To commemorate the opening of the community medical clinic, a tribal dance celebration was held, with 13 tribal chiefs, 1,000 local dancers and project partners, including NEXTGEN NRG, attending. The project would not have been possible without the support of an International Charitable Foundation.







# Caltex Petrol Stations Philippines Project

## CALTEX PETROL STATIONS MPS PROJECT

In the Philippines, Caltex petrol stations have begun to implement green energy technologies, as electricity is unreliable, dropping in and out regularly. Many Caltex petrol stations are now installing NEXTGEN NRG's MPS systems in order to provide customers with natural, reliable, 24/7 power.



# Residential MPS Australian Project

"Since we installed the system, we have noticed our bills going down, which makes us very happy."



"I think like everyone else we really noticed an increase in our electricity bills, and we were after a solution that would really help us reduce this. Choosing the Green NRG MPS was an easy decision. Not only has it reduced our power bills, it's environmentally friendly and has not taken up much space at all. And another benefit of the MPS is that we can take it with us when we move house. The batteries charge off the solar power during the day, and it supplies all of our general power and lighting, even at night." - Customer Testimonial