

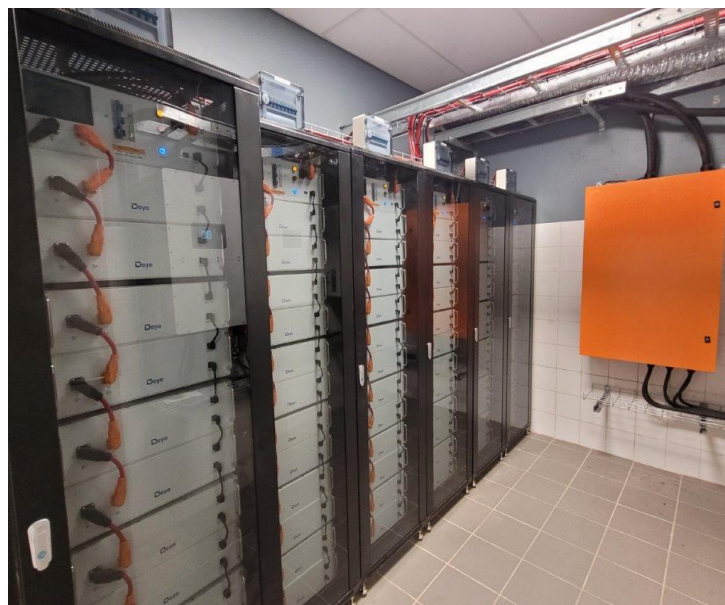
# HIGH VOLTAGE SOLAR HYBRID POWER SOLUTIONS

## Medium-Scale C&I SOLAR 30KW to 500KW Range

Energy Savings with Grid Independence and Generator Integration

**MARCH 2024**

**We design and install Modular Systems that Focus on your power needs by providing essential Plant Backup with Electricity and Fuel savings. Reducing Costs, Generating a Return on your Investment and putting Sustainability first**



### Project Applications

- **Essential Power Services - Schools and Education Facilities – Factories for Key production and Plant equipment – Hotels - IT Systems and Networks - Common Area Services in :- Buildings Lifts, Lighting, Water pumps, Fire hydrants - Warehouses for Peak TOU savings and Generator Load Replacements – Hospitals and Medical Facilities -**

### Advanced Technology

Current C&I Solar Hybrid technology has evolved with high voltage Battery Energy Storage Systems (BESS) enabling higher performing hybrid power solutions and applications.

### Key Benefits

- Faster Charging and discharge Rates
- Improved power efficiencies reduced line losses
- Capable of covering quick demand surges from starting equipment
- Higher voltage allows lower current to be used in battery charging
- Less overheating and optimal power retention in the system
- Remote Portal monitoring and reporting

## Who is Blue Sun Energy

With its **Specialist Engineering, Electrical and Solar Installation Teams**, Blue Sun Energy offers professional services that combine the best of breed equipment to with our experience to foster long term relationships with our clients

## Our Approach

- Customized Project applications
- Accurate Power Analysis and Electrical reticulation design
- Dedicated Energy Station assembly and testing workshops
- Solar system performance and design
- Experienced Solar Installers and Trained High Voltage Technicians
- Aftersales Service and support with workmanship warranties on all systems and equipment

Pursuit of excellence - Electrical and Solar By-Laws NRS 97, Sans, COC's, PR Eng Line Drawings Etc



## Recently Installed System Site Examples

**Note : Systems can be Retrofitted installed onto existing PV systems or stand alone**  
**Prices include AC Works Costs which vary site to site**



**SIZE 50 KW**

### System Information

<b>50Kw Deye Solar Hybrid Inverters</b>	<b>1</b>
<b>Max rated Output</b>	<b>80 Amps</b>
<b>Battery Type Deye 5.12 HV</b>	<b>8 X 5.12KW = 40KWh</b>
<b>Battery Bank Size</b>	<b>Minimum size 8 Batteries</b>
<b>PV Array</b>	<b>24KWp</b>
<b>Price Guide</b>	<b>R545 000 Ex VAT</b>



**SIZE 100KW**

**System Information**

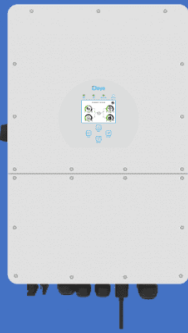
<b>50Kw Deye Solar Hybrid Inverters</b>	<b>2</b>
<b>Max rated Output</b>	<b>160 Amps</b>
<b>Battery Type Deye 5.12 HV</b>	<b>24 X 5.12KW = 124KWh</b>
<b>Battery Bank Size</b>	<b>Minimum size 20 Batteries</b>
<b>PV Array</b>	<b>40 KWp</b>
<b>Price Guide</b>	<b>R 1 340 000 Ex VAT</b>



**SIZE 150KW**

**System Information**

<b>50Kw Deye Solar Hybrid Inverters</b>	<b>3</b>
<b>Max rated Output</b>	<b>240 Amps</b>
<b>Battery Type Deye 5.12 HV</b>	<b>36 X 5.12KW</b>
<b>Battery Bank Size</b>	<b>184KWh</b>
<b>PV Array</b>	<b>55Kwp</b>
<b>Price Guide</b>	<b>R1 750 000 Ex VAT</b>



**Arriving April 2024!!  
SIZE 30KW**

**System Information**

<b>30Kw Deye Solar Hybrid Inverters</b>	<b>1</b>
<b>Max rated Output</b>	<b>60 Amps</b>
<b>Battery Type Sunwoda 5.12 HV</b>	<b>6 X 5.12KW</b>
<b>Battery Bank Size</b>	<b>30KWh</b>
<b>PV Array</b>	<b>24KWp</b>
<b>Price Guide</b>	<b>R495 000 Ex VAT</b>

**Please Note All Systems are modular and are subject to power metering and a site assessment**

**For a Quote and further information on System sizing**  
**Please Contact James Fisher or email us at [Info@bluesunenergy.co.za](mailto:Info@bluesunenergy.co.za)**

**Some of Our Clients and Partners**



## PREBUILT BATTERY ENERGY STATION



### Pre-assembled power packs

(up to 10 in parallel 500kw)

- 50 KW Deye Hybrid inverter
- 60 kWh Lithium power pack.
- Built in air conditioner
- Built in fire suppression
- Built in Smoke detector
- IP 55 Rated



**\* R420 000 Ex VAT**

### C&I Solution-1: 60KWh Energy Station



#### Features:

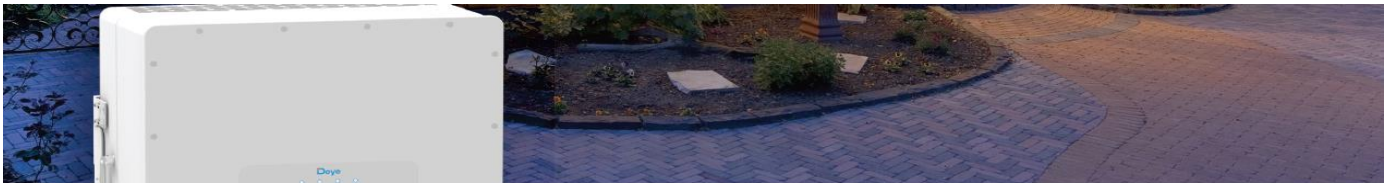
- Easy to install and deploy with large space utilization.
- Unique modular design & flexible function configuration.
- With self-use, peak shifting, forced charging & discharging and other working modes.
- Strong scalability, simple & convenient expansion on both AC and DC sides.



#### SPECIFICATION

Module	3060	5060
Rated voltage	614.4V	
Voltage range	556.8~662.4V	
Rated energy	60kWh	
Cycle life	6000 times	
Max.PV input power	39kW	65kW
AC rated input/output power	30kVA	50kVA
Voltage	3L/N/PE; 230/400V	
Frequency	50/60Hz	
Dimension (W*H*D)	1200*2160*750mm	
Warranty	10 years	
Expansion	Support in parallel up to 150kW/180kWh	
Protection grade	IP55	
Cooling Method	Air conditioner	
Fire protection	Fire extinguisher	
Certification	UN38.3,CE,IEC62619 ,CEI 0-21,VDE-AR-N 4105 ,IEC 62109	
Environment temperature	-30°C ~ 50 °C	

System Parameter								
System Model	CIESS25-R	CIESS30-R	CIESS35-R	CIESS40-R	CIESS45-R	CIESS50-R	CIESS55-R	CIESS60-R
Number of battery packs	5	6	7	8	9	10	11	12
Rated voltage	256V	307.2V	358.4V	409.6V	460.8V	512V	563.2V	614.4V
Voltage range	224~284V	268.8~340.8V	313.6~397.6V	371.2~454.4V	417.6~511.2V	464~568V	510.4~624.8V	556.8~681.6V
Rated energy	25kWh	30kWh	35kWh	40kWh	45kWh	50kWh	55kWh	60kWh
Usable energy (90%DOD)	22.5kWh	27kWh	31.5kWh	36kWh	40.5kWh	45kWh	49.5kWh	54kWh
Max.continuous charging/ discharging current	100A/100A	100A/100A	100A/100A	100A/100A	100A/100A	100A/100A	100A/100A	100A/100A
Weight	311kg	356kg	401kg	446kg	515kg	560kg	605kg	650kg

## High Voltage Solar Hybrid Inverters 30KW and 50Kw Models



- 100** 100% unbalanced output, each phase; Max. output up to **50%** rated power
-  DC couple and AC couple to retrofit existing solar system
- 10** Max. 10pcs parallel for on-grid and off-grid operation; Support multiple batteries parallel
- 100** Max. charging/discharging current of 100A
- H** High voltage battery, higher efficiency
- 6** 6 time periods for battery charging/discharging
-  Support storing energy from diesel generator

**Deye**

Stock Code: 605117.SH

AC Output Data				
Rated AC Output and UPS Power (W)	25000	30000	40000	50000
Max. AC Output Power (W)	27500	33000	44000	55000
AC Output Rated Current (A)	37.9/36.3	45.5/43.5	60.7/58	75.8/72.5
Max. AC Current (A)	50	60	70	83.3
Max. Continuous AC Passthrough (A)	150			
Peak Power (off grid)	1.5 time of rated power, 10S			

## 10 Year Warrantees with Battery Supplier

## 545W TIER ONE MONO SOLAR PANELS



**JA SOLAR**



**25 Year Warrantees**

**Installed with Schletter Framing System**



## HIGH VOLTAGE BATTERIES WITH BMS



### FEATURES

- Easy to install and deploy with large space utilization;
- Unique modular design & flexible function configuration;
- Real time monitoring , remote maintenance and upgrades;
- Strong scalability, simple & convenient expansion on DC sides;



**10 Year Warrantees**