



**PHOTO VOLTAIC
SYSTEMS**



UPS SYSTEMS



GENERATORS



**LIGHTING
EFFICIENCY**



**INSTANT HOT
WATER SYSTEMS**



ALTERNATIVE ENERGY SOLUTIONS

Now its time to create YOUR OWN ELECTRICITY



Renewable Energy in the form of Photovoltaic PV systems produces electricity from a natural resource, the Sun. In the Southern African region the sun's radiation per square meter, is on average one of the highest globally. This abundance of sun energy is free for all and should be deployed by everyone in one way or another.

The growing concerns about climate change and alternative sources of energy, have led to significant growth of the PV market. PV is reliable, safe, cost effective, low in maintenance, and has no CO₂ emissions.

PV systems have been designed to yield electricity exceeding 20 years, with a return of investment of less than 6 years. this means that with ever rising costs of electricity, PV has the opposite scenario, and thus makes total economic sense.



Solar Power Sets for **HOMES**

with or without battery storage



**ON/OFF GRID
INVERTOR**



**ON GRID
INVERTOR**



HYBRID INVERTOR



SOLAR BATTERIES

PV systems for Homes produce electricity without noise and pollution. While the sun is shining, the system will yield electricity to supplement energy usage in homes, thus reducing the monthly electricity bill.

We offer three solutions:

- 1) PV grid-tie system for monthly energy savings (not used as backup power)
- 2) PV hybrid system with Battery storage, which allow for electricity self consumption after dark, and backup for "Load shedding". Batteries are always charged by the PV system.
- 3) PV Island system with battery storage. These are systems deployed in area where there is no Eskom / Council electricity. Houses are self powered and totally off the grid!

Typically a three bed roomed house would require a 3 – 5 KW PV system, and larger housed 7 – 10 KW.

The more efficient a House is the smaller the system.

Thus LED Lighting and energy efficient apparatus are advised.

TYPICAL PV POWER GENERATION

	2kW	3kW	5kW	10kW	and higher
Modules (Watts)	8x250	12x250	20x250	40x250	<100
Area (sqm)	14	21	35	70	<100
Daily kWh	8.6	12.9	22.5	45.1	<100

Solar Power Sets for **COMMERCIAL BUILDINGS**



ROOFTOP PV



CARPORT PV



SKYLIGHT PV

Electricity costs contribute to a large portion of expenses in Factories and Commercial Buildings. A PV system will reduce the electricity cost considerably as most of Commercial buildings are operational during daytime, when the electricity demand is the highest. Return of Investments are achieved as high as 30% per annum! Carbon emissions are reduced dramatically, thus reducing the CO2 tax bill. PV systems are low in operational cost and do not require much maintenance, except for occasional cleaning.

Commercial Building owners who install PV, could benefit from the additional income stream when selling off the electricity to their tenants (PPA)!

Our PV systems can be installed on any suitable Rooftop, unused or vacant land applications such as window cladding for large buildings are also available. All PV systems can be monitored through the internet.

TYPICAL PV POWER GENERATION

	25kW	50kW	150kW	250kW	and higher
Modules (Watts)	100x250	200x250	600x250	1000x250	<1000
Area (sqm)	180	360	1100	1800	<2000
Daily kWh	110	220	670	1100	<1200

Solar Power Sets for AGRICULTURAL APPLICATIONS



PV FOR PIVOTS AND DAMS



PV FOR BOREHOLES

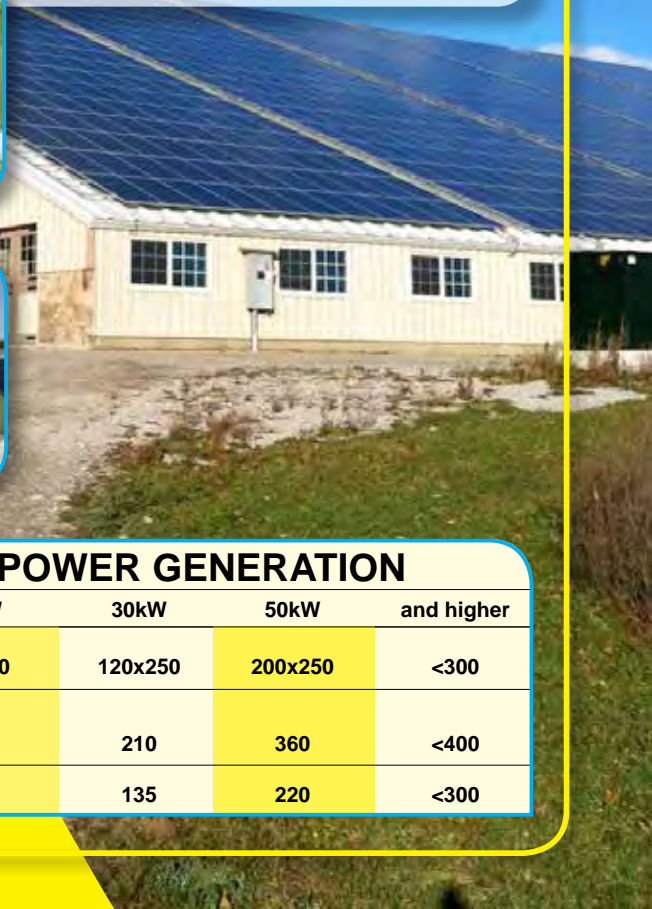


PV FOR CHICKEN FARMING

Agricultural PV Systems are beneficial, as they can be deployed in many ways. With the current electricity cost and future price hikes, our return of Investments are as low as 3 – 4 years.

Our systems are designed for:

- Borehole pumps, Irrigation Pivots, Dam pumps.
- Lighting and Ventilation for various applications. i.e Chicken farms
- Drying and refrigeration applications.
- Electric Fencing and Rural Electrification.
- General Electrification – On/Off-Grid systems.



TYPICAL PV POWER GENERATION

	10kW	20kW	30kW	50kW	and higher
Modules (Watts)	40x250	80x250	120x250	200x250	<300
Area (sqm)	70	150	210	360	<400
Daily kWh	45.1	90	135	220	<300

UPS Power Sets for HOMES & OFFICES



Our systems are designed for small and large homes as well as commercial applications. Our systems range from 1500VA to 6 KVA and beyond

Diesel Petrol GENERATORS



We supply/install generator sets from single phase 10KVA to 3 phase diesel generators from 10KVA to 1MVA.

All our generators are built to our customers' requirements to satisfy their power needs.

We do on site evaluations to determine customer specific power requirements.

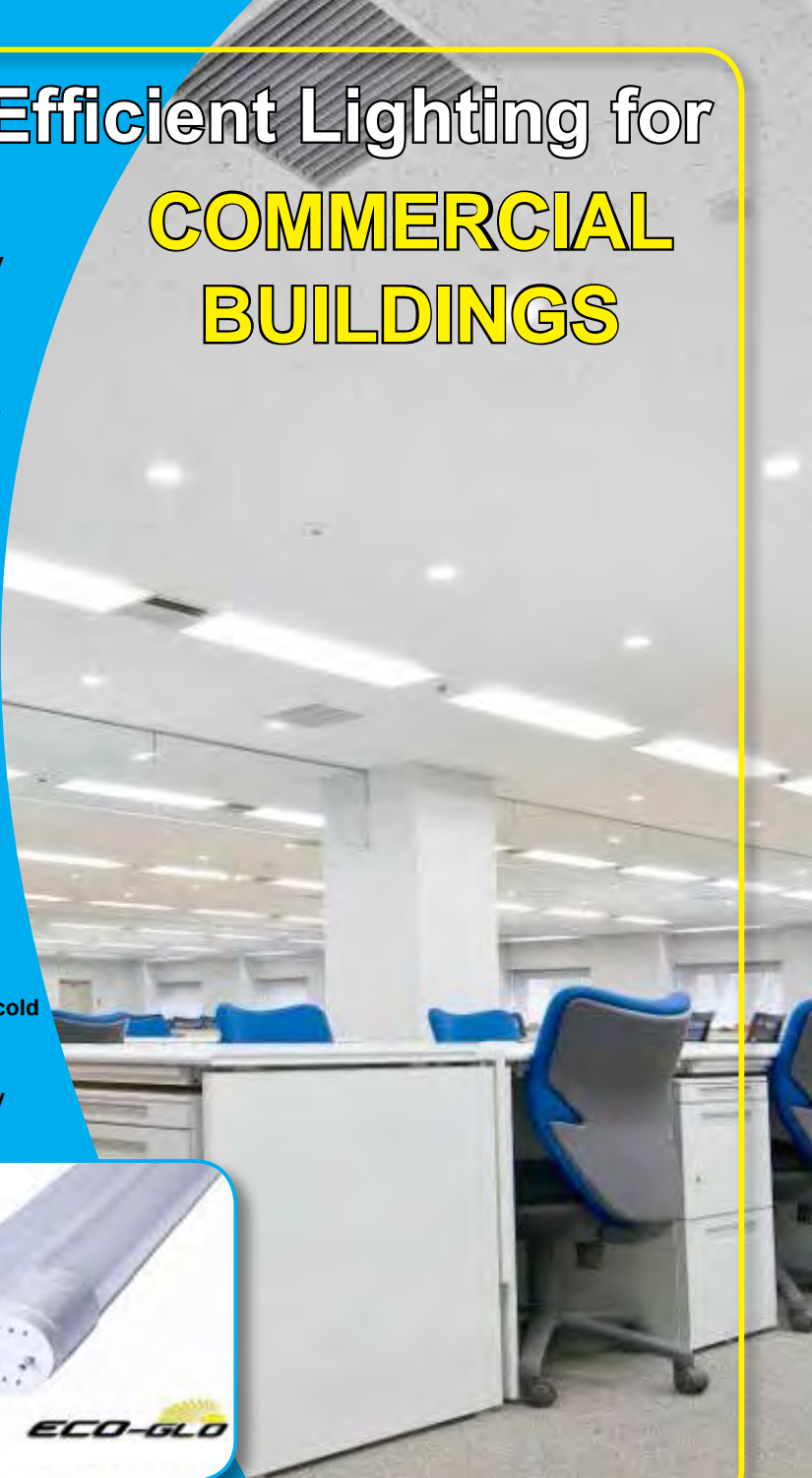
Our aim is to give the most efficient and cost saving solution to suit individual/customer needs.



LED Efficient Lighting for **COMMERCIAL BUILDINGS**

ADVANTAGES

- 60% less energy usage than conventional lighting
- Long life span – 30 000 – 80 000 hours depending on the type of LED product.
- Contains no mercury or lead.
- Reduced harmful UV radiation.
- Ecologically friendly – cuts greenhouse gas emissions and reduces landfill.
- Operational flexibility, hot or cold environment
- Colour flexibility 2000K-6000K



Schneider Solar
Electric

Weidmüller

YINGLI SOLAR

X SOLAX
POWER

SMA



ZEVE solar



CSUN
energy for today

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POWER FROM INNOVATION

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MISSION STATEMENT

As a successful growing business ourselves, we place great emphasis on minimising disruption and maximising your returns. We've worked with many commercial organisations across multiple Industries and have proven experience in sourcing systems that work to enhance business plans and fit with company aims.



**South African
Alternative Energy
Association**

