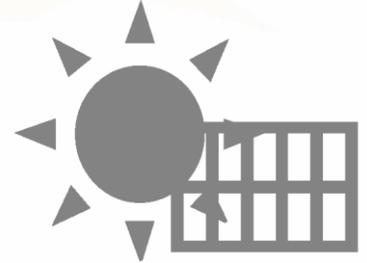


## PV Solar System

Photovoltaic (PV) panels generate electrical power by converting solar radiation into direct current electricity using semiconductors that produce the photovoltaic effect. PV generated electricity is a free and renewable energy source from the sun. Installing batteries to store the generated electricity will allow you to make use of the solar energy even when the sun is not shining.



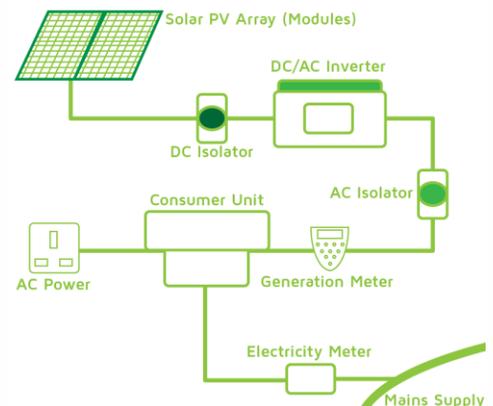
### Recommendations

- ❑ Know the facility or building energy consumption and make the facility more energy efficient before implementing a solar PV system.
- ❑ Be sure to understand your load profile in order to design an optimal PV installation.
- ❑ The PV systems should comply with the relevant electrical service and installation rules for the region where the system is installed.
- ❑ Conduct a shading analysis in order to accurately estimate the system performance.
- ❑ Determine whether the building structure can support the PV array proposed.
- ❑ If a ground mounted system is proposed, a framing system must be certified for the wind region in which it is installed.
- ❑ The system must be installed according to the manufacturer's instructions.
- ❑ Decide whether to lease or to buy the equipment.
  - ❑ If you lease, make sure you understand the details of the lease contract.
- ❑ Choose a reliable vendor.
- ❑ Contact [Ecolution](http://www.ecolution.co.za) for more details.

Environmental Improvement	High
Awareness Impact	High
Capital	High
Payback	5-10 yrs

### Savings and Benefits

- ❑ Reduce the monthly electricity bill by generating renewable electricity
- ❑ Reduced use of fossil fuels to generate electricity by harnessing free solar energy.
- ❑ Reduces greenhouse gas emissions.
- ❑ Minimal environmental risks.
- ❑ Increases the value of the business.
- ❑ Gain government tax credits.



## PV Solar System



(Green Castle Innovation Sdn. Bhd., 2019)