

# **DHARMA ELECTRICAL WORKS**

(A Govt. Contractor)

**Solar Power Plant Installation Company.**

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# **Govt. Approved 'A' Class Electrical Contractor ( 11 KV )**

- **Govt. License no: CHD/ECL/031**
- **Govt. License no: H-2338/14**
- **Chartered Electrical Safety Engineer Authorized by Govt.**
  
- **Registered in CREST**
- **Registered in PEDDA**
- **MNRE Approved**
- **(Domestic, Commercial, Industrial, institutes and Govt. Projects)**

# Solar Energy

- The ultimate renewable energy resource.
- Immortal resource.
- Clean renewable source of energy from Sun
- Converted into Usable energy Such as **Electricity**

# Why Solar?

- Solar power is good for the environment.
- Solar power is free source of energy.
- Start savings from day one.
- (go for on-grid solar power plant)

# On grid solar system



# TECHNICAL VIEW

- Selection of size of wire .
- Invertor connection at shortest path.
- Structure stability.
- Protection devices.
- Earthing measurement.
- Installation by expert Engineers

# Major Components

- **Structure** (Should be rust free, more tensile strength etc.)
- **Solar Modules** (Should be high generation efficiency)
- **Grid Tie Inverter** (Should be high performance, less self consumption )
- **AC DB** ( DC SPD , FUSE should be ISI Mark)
- **DC DB** ( AC SPD , MCBs should be ISI Mark)
- **DC Cable** (Should be TYPE '1' , no losses )
- **AC Wire** ( Should be high quality)
- **Solar meter** (Show online solar generation)
- **Net Meter** (Show export and Import units)

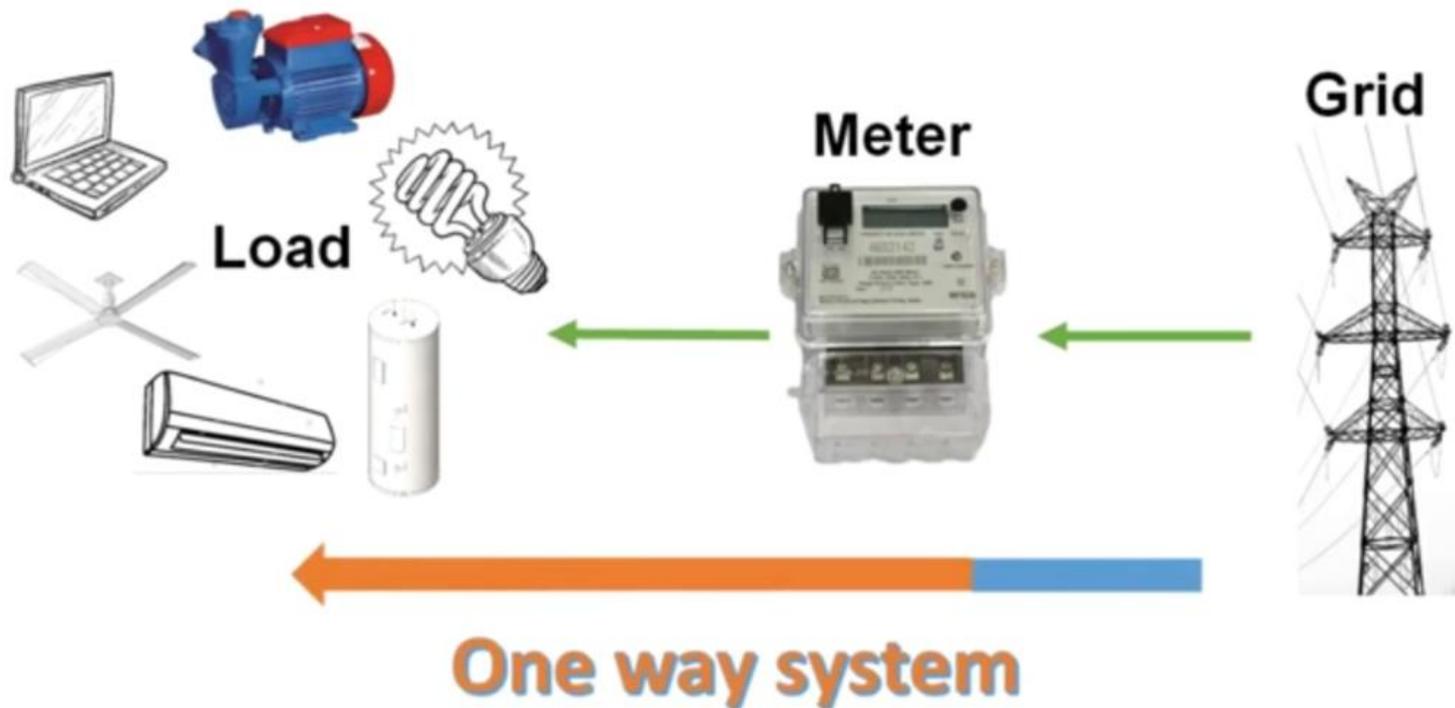
# Net Metering

- Avail credit for the surplus power supplied by the Govt. (only in Chandigarh)
- Measures both the inflow & outflow of power
- Adjustment of Units  
(If extra units export to Elect. Deptt. , it will carry forward and consumers may use before 31<sup>st</sup> March)

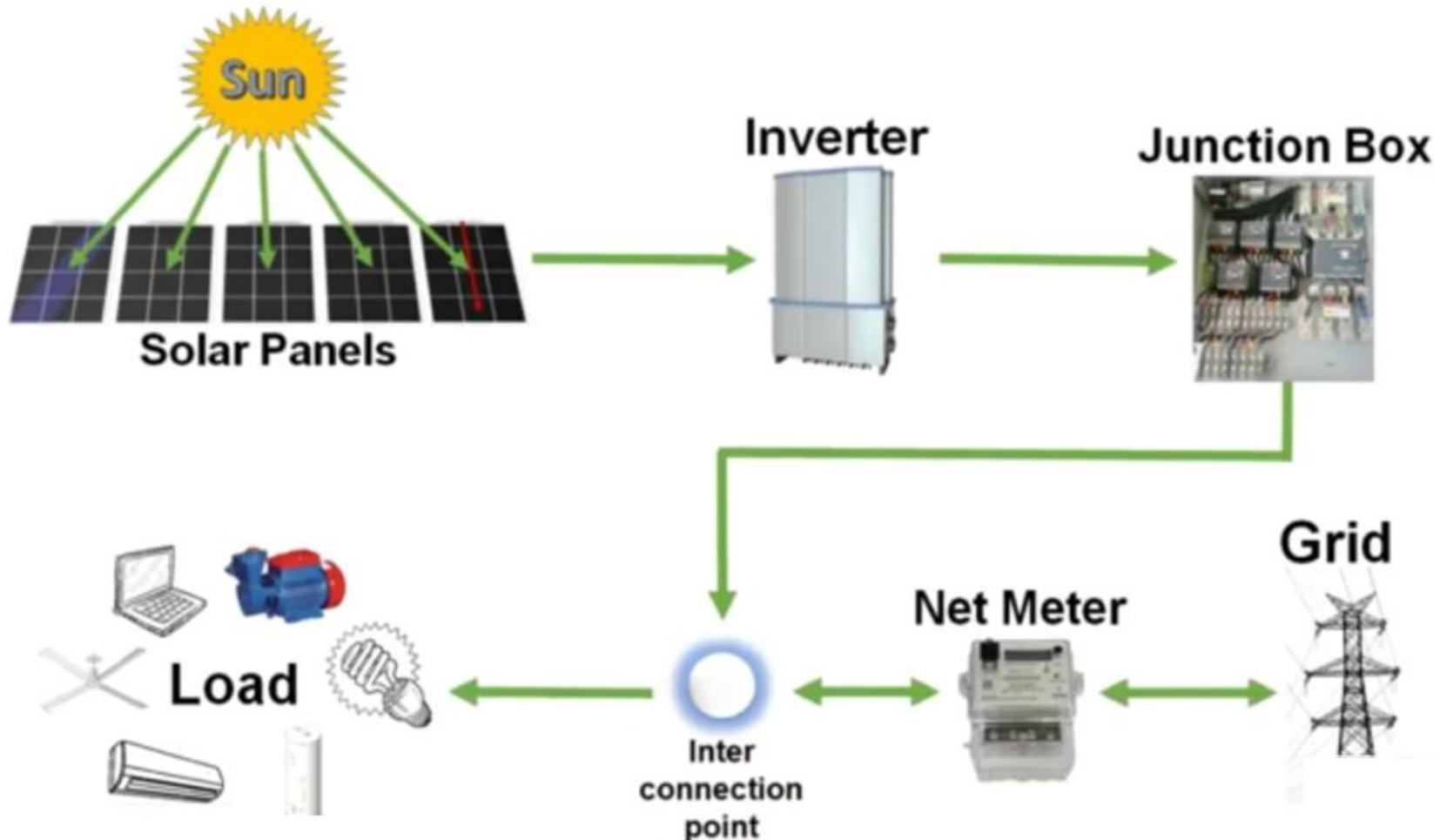
# Net Metering Benefits

- Get paid by DISCOM.
- Upto 90% reduction in an electricity bill.
- Net Unit = Imported Units – Exported Units.

# Without Solar



# How On grid Solar Power Plant with net meter will work ?

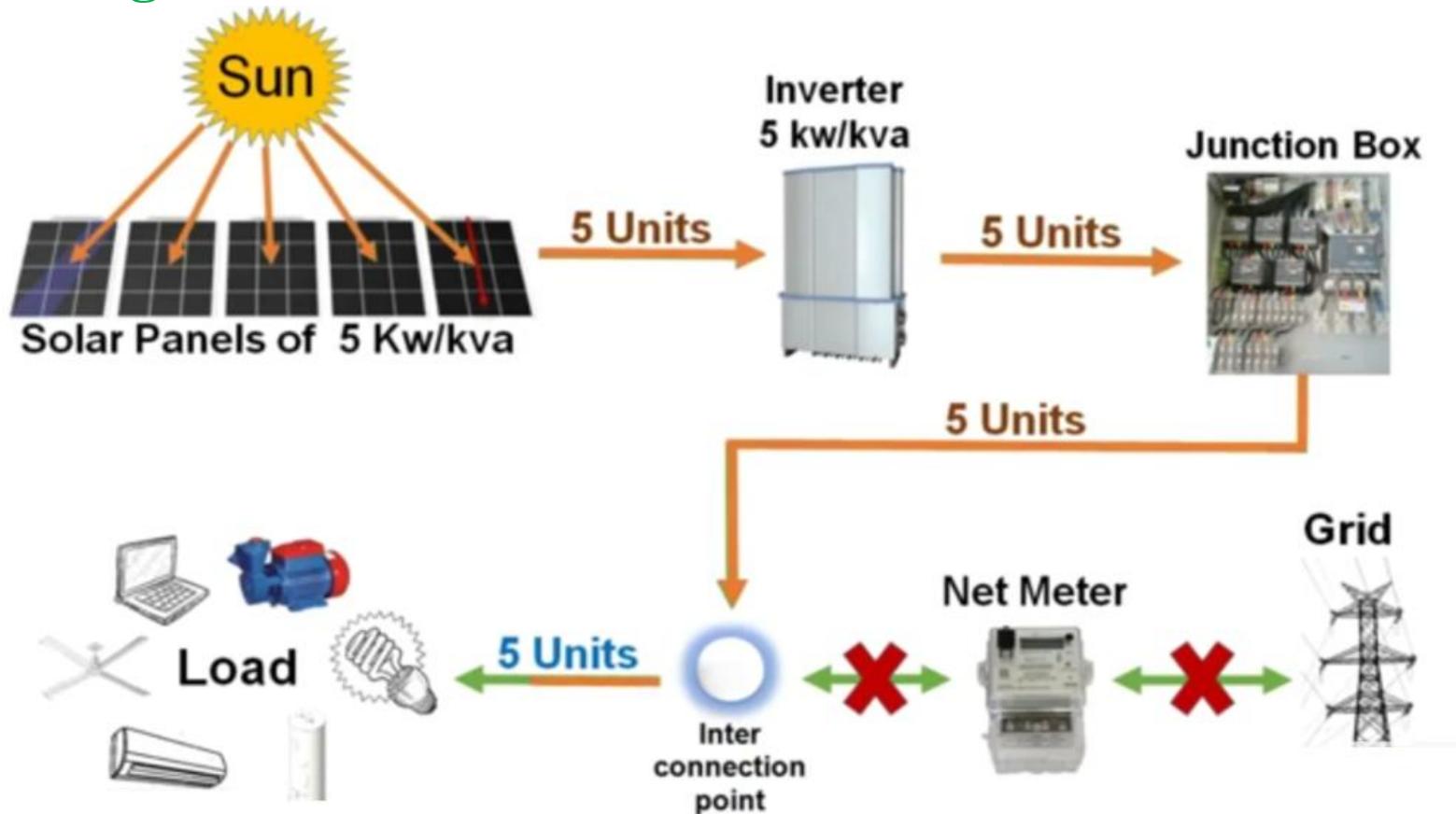


**If you will install 5 Kw/Kva On grid  
Solar Power Plant with net meter.**

**So Solar Power plant generated  
5 Units per day**

The first priority of electricity usage will be taken from **Solar Power Plant.**

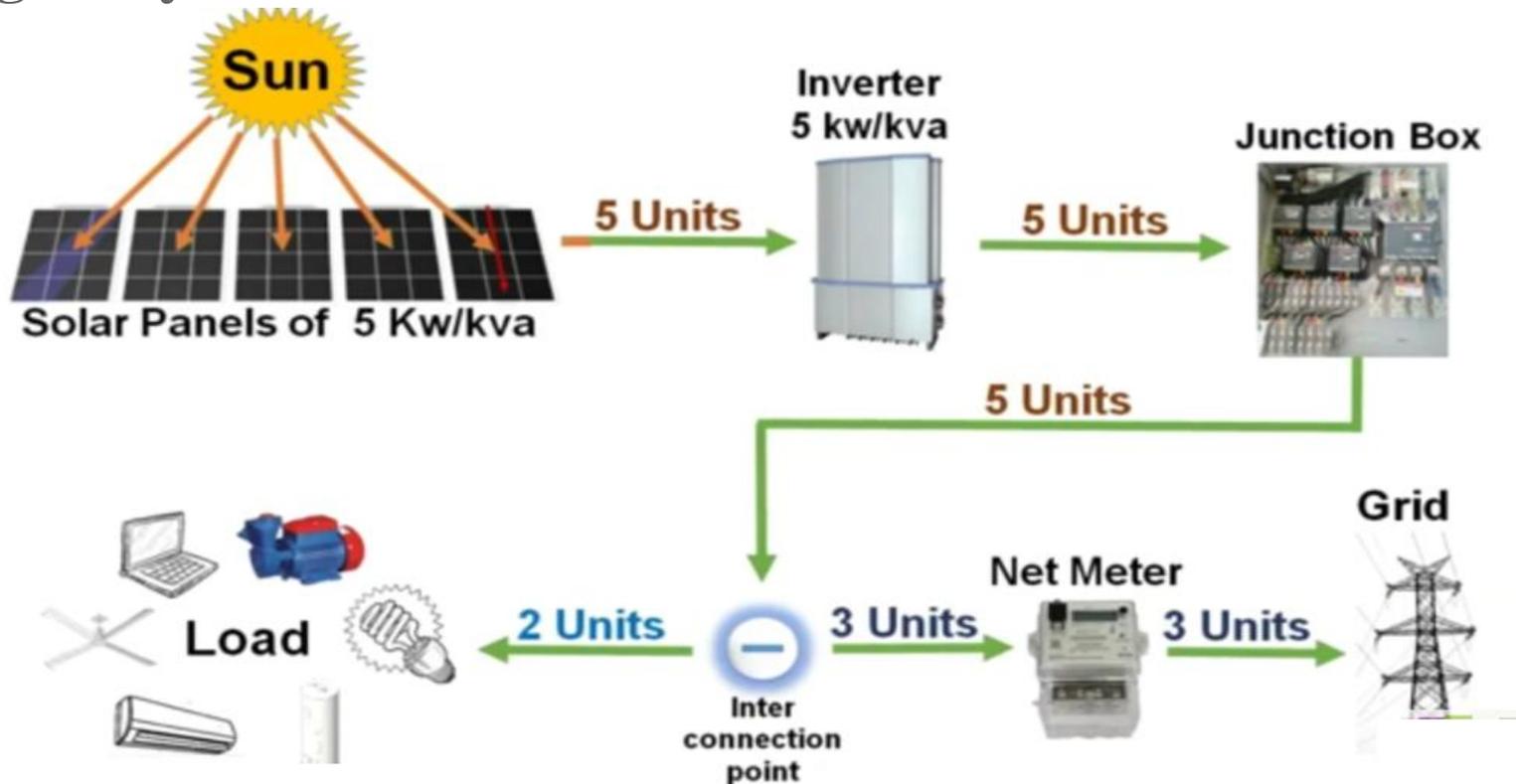
If your total load will require 5 units per day, it will take from **Solar generated 5 Units**



The first priority of electricity usage, will be taken from **Solar Power Plant.**

If your total load will require **2units per day**, it will take from **solar generated 5 units.**

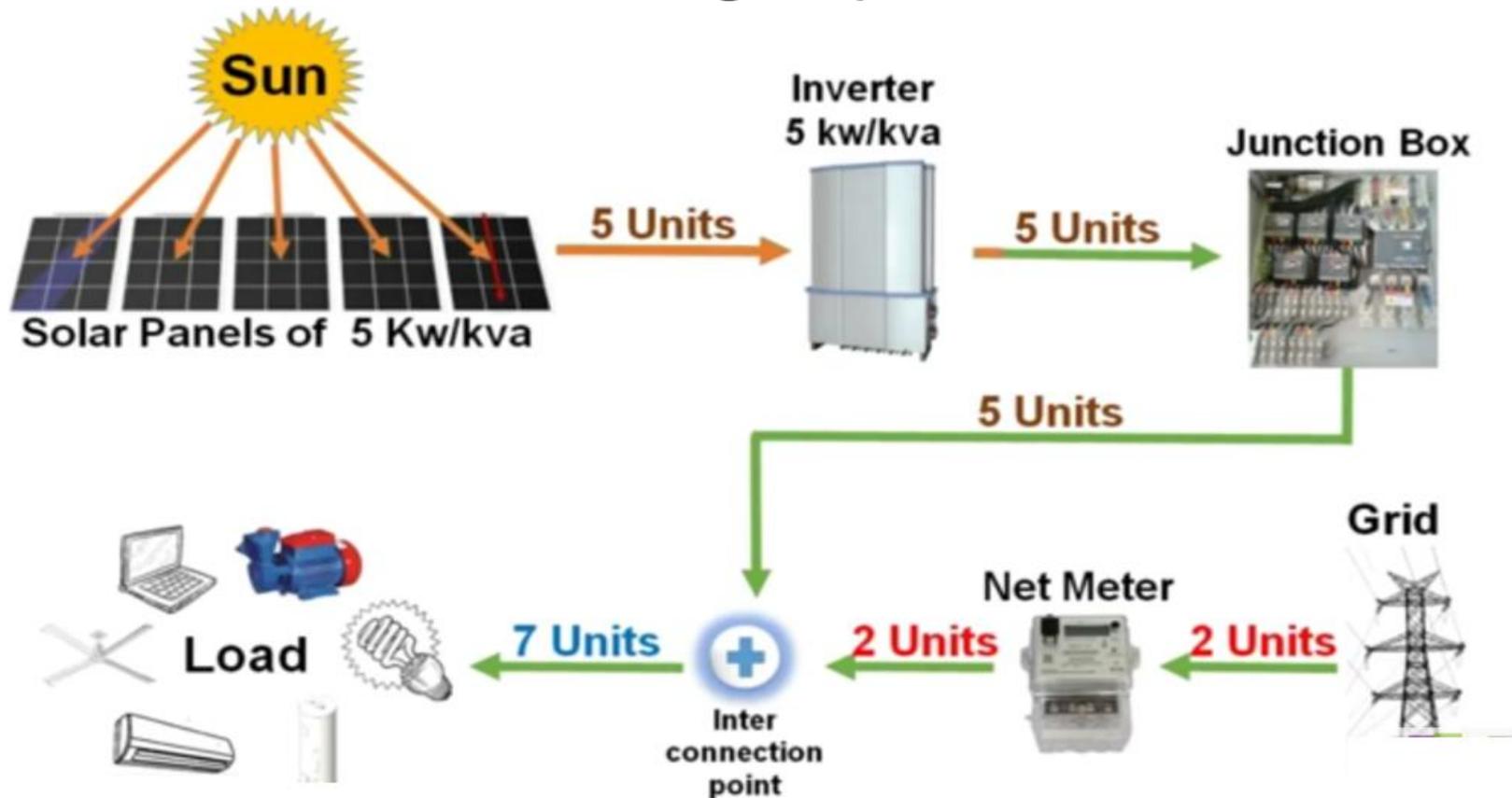
Remain **3 Units** of Solar generated out of **5 units** will return to grid by Net Meter.



The first priority of electricity usage will be take from **solar power plant**.

If your total load will require **7 units per day**, it will take from **solar generated 5 units**.

Remain 2 units will take from grid by **net meter**.



# Plant installation 5KW

- 1KW generate units per day ( Avg ) = 4 Units
- 5KW generate in 1 day (5 x 4units) = 20 Units
- 5KW generate in 30 days (30 x 20units) = 600 Units
- Generation per cycle i.e. 2 Months (60 x 20units) = 1200 Units

# Saving

## Electricity Rate (Domestic/Commercial)

- In Chandigarh @**5.5/-** per Unit (**Domestic**)  
Saving per cycle (2 Months)  $(5.5 \times 1200) =$  **6600/-**
- In Chandigarh @**7/-** per Unit (**Commercial**)  
Saving per cycle (2 Months)  $(7 \times 1200) =$  **8400/-**
- In Punjab @**8/-** per Unit (**Domestic**)  
Saving per cycle (2 Months)  $(8 \times 1200) =$  **9600/-**
- In Punjab @**10/-** per Unit (**Commercial**)  
Saving per cycle (2 Months)  $(10 \times 1200) =$  **12000/-**

# Solar Power Plant solution

- Individual houses
- Institutes
- Places of worship
- villas
- IT/BT Companies
- Industries
- Apartments
- Warehouses
- Farm Houses

# Why we are different?

- ✓ Govt. 'A' Class license Registered **CHD/ECL/031**.
- ✓ Well associated with **Electricity Department**.
- ✓ Free service upto 7 years.
- ✓ Service provide within 24 hours by Expert engineers.
- ✓ All electrical branded accessories (L&T, Pheonix, Schnieder, Havells, polycab etc....
- ✓ Not Going to Compromise with material.

# Executed Govt. Projects

- Power Grid (Hallo majra) complete installation of Substation.
- Mtc. of E.I and Switchgear in GMCH Sector-32 at Chandigarh.
- Energization of 66kv BBMB circuit at 66kv grid substation phase 1.
- Remodeling of pediatric surgery ward in GMCH, Sector 32, Chandigarh.
- Augmentation of electric control panel in aerospace engineering department of PEC sector 12 Chandigarh.
- Ample of projects in similar field

# Solar sector

- 1 Mw grid tie spv power plant for crest in water works sector 52, chandigarh.
- A lot of solar projects in different sectors of Chandigarh .
- Completed projects in domestic and commercial sectors.

# Maintenance



- Only Washing twice in month
- Cleaning by wiper