

PROELECTRIC

The Power Within!



Company Profile – ProElectric Projects (P) Limited

Solar Roof Top/Ground Mount/Substation & Transmission Lines projects



TRANSMISSION LINES

SUBSTATION & DISTRIBUTIONS

ACDB/DCDB/LT PANELS

ProElectric Projects Private Limited

Reg. Office : 402, T-8, Sunworld Vanalika, Sector-107, Noida (U.P)- 201301

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1. KEY FACTS AND FIGURES:

- ❖ **Year of Establishment: 2017**
- ❖ **Total Installed capacity of Solar Plants as on date: 40 MW+**
- ❖ **Substation and TL projects done till date: 2 Projects**
- ❖ **International Project: 1 TL project & a 10 MW Ground Mount Solar Project**
- ❖ **No. of solar projects completed so far: 25+**
- ❖ **Workforce / Headcounts: 35+**
- ❖ **Govt. of India Start-up Registration No. : DIPP34404/IMB (Since Aug. 2019)**
- ❖ **Electrical Contractor License No. : 5059000000947 (Govt. of NCT of Delhi)**
- ❖ **GST No. 09AAJCP2598Q1ZC**
- ❖ **EPF & ESIC registered company**
- ❖ **Registered System Integrator Channel Partner of VIKRAM SOLAR LIMITED**



2. Overview

It's Not Yours, Not Mine, It's Ours, So, Protect The Mother Earth, Who Nourish You.

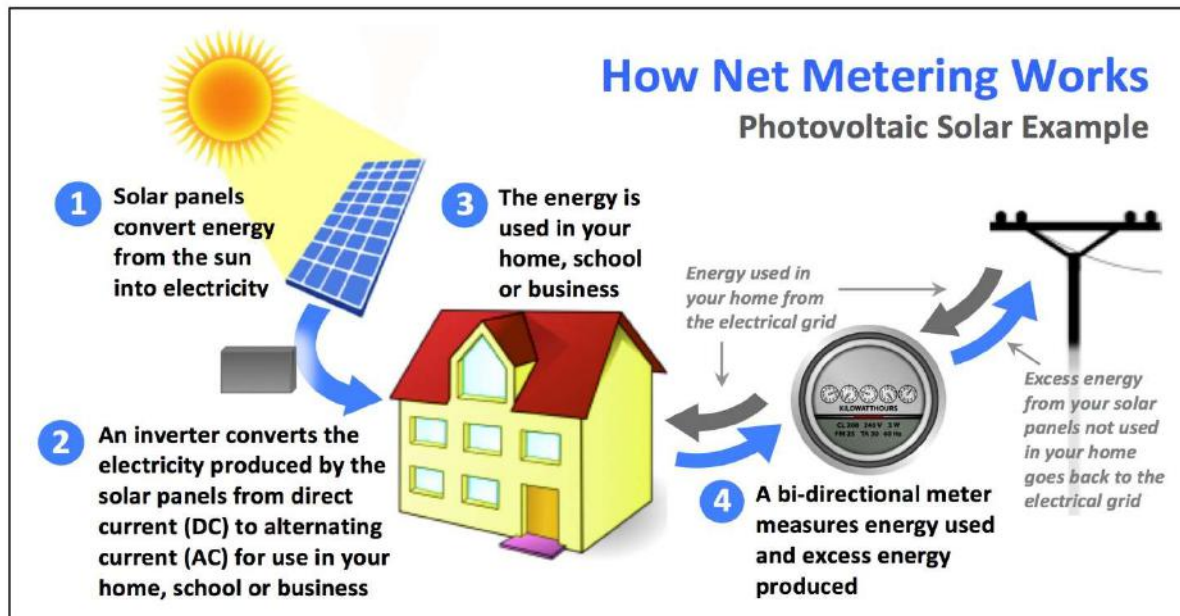
With the firm belief that Economy and environment are really 2 sides of the same coin, and if we cannot sustain the environment, we would not be able to save ourselves.

With an aim to save the environment and connect the humanity with the nature through renewable source of energies, ProElectric a solar energy solution provider, visions to reduce 10 million tonnes of carbon reduction till 2030. Having specialization in Solar PV projects execution for Industry, Commercial and Residential we are happy to assist people to feel proud bay saving environment and money.

With a strong Technocrat team, we strongly believe in shaping the solar revolution. This is the best source of renewable energy due to its ease in implementation, static system, very lesser maintenance. So far, we have worked over 75+ solar plants for harnessing the power of Sun and some of the sites are even able to reduce their bills to Zero for their energy consumption.

Photovoltaic systems are able to generate electricity at the point of consumption and thus avoid the high cost of transmission and distribution of electricity from the utility which is embedded in the cost of the electricity itself. Solar photovoltaic systems are efficient and cost effective and have a lifetime of 25 years and more. Several users are immensely benefited by using solar photovoltaic systems for electricity generation. Solar energy is a completely clean, green energy and does not produce greenhouse gases simultaneously providing energy absolutely free of cost.

From an economic perspective as well, the capital investment in solar is hedged against electricity escalation costs in the future. Use of solar energy also endows the user with a clean and environment- friendly reputation.



3. About ProElectric

ProElectric Projects (P) Limited is a privately owned multi-trade contractor providing full electrical, mechanical and civil services throughout India. The Company has ambition to become one of the largest EPC contractor in country. From our office facilities located in Noida, Ghaziabad and Bhopal we provide our clients with services for design, detailed engineering, fabrication, supply, complete civil works, erection, testing and commissioning in following areas by providing best in class technology coupled with excellent Installation services.

1. Solar Projects – EPC Contracts on Turnkey basis (Roof top & Ground Mounted plant)
2. Transmission & Distribution Projects (GIS/AIS/Hybrid GIS and Transmission Lines)
3. Railways & Metro Rails services- Traction Substation EPC
4. Electrical Contracts (Illumination System, Fire Fighting, Cable laying)
5. Electric Vehicle Charging Stations / System
6. Annual Maintenance Services (AMC) of Solar Plants and Industrial Projects

We have our associate factory M/s Gupta Engineering Corporation located at Govindpura Industrial area, Bhopal for different type of light and heavy fabrication works as per the client's requirement. It is a full-service Fabrication and Machining facility offering customized solutions. At Ghaziabad we have our associate facility M/s BSR Automations for manufacturing of ACDB and LT panels.

Our Product and Services / Solutions are using best in class material and advanced technology. Our Offered products are widely acknowledged among our Prestigious Clients due to their excellent quality, robust construction, dimensional accuracy and high durability. Our Offered Products and services can be availed by clients at the most reasonable prices. Our team comprise of technically qualified and committed individuals with diverse industry exposure and having cumulative experience of 15+ years.

The Management and our Employees have intensive experience of Roof Top/Ground mounted solar plant EPC /Substation/Transmission Lines, Solar water heating and all other applications in Power sector / Industry.

4. How we work

BASIC ANALYSIS:

Generally, analysis is done on your past 1-year electricity bill and feasible plant capacity is given accordingly. In this case, plant size is selected as per the space availability and requirements.

SITE SURVEY:

Measurement of your available place is carried out to have a fair idea for how much solar plant can be installed at your place.

DETAILED ENGINEERING:

System Analysis, Shadow Analysis, Panel Placement and Arrangement, Cable Routing, Foundation and Structure drawings, civil block and Earthing drawings, detailed Bill of Material, ROI/ IRR shall be offered to give you a better perspective on Technical Feasibility & Commercial Viability of your solar plant.

INSTALLATION:

Installation as per detailed engineering will guarantee you for long life of solar plant with trained team.

PERFORMANCE MONITORING:

Complete system check shall be carried out by a strong professional team every month to ensure the system is performing and optimum generation is achieved at all time.

Why ProElectric

- We Provide complete Solar EPC solutions
- Vast Experience in Solar Power Plants and T&D projects
- Energetic & Dynamic approach for Providing extraordinary benefits to our clients
- Team of Dedicated Professional and learned management staff
- Ready Pool of Technician to deliver the project on Time
- Big List of Satisfied Industrial Clients
- In house design team having experience of more than 100 MW Solar Power Plants
- Timely Delivery and efficient man power
- Competitive Prices with best-in-class Product and Services

DESIGN BASIS REPORT FOR SOLAR PLANT SYSTEM		
Sr. No.	Description	Parameters
1	Site Location	Input provided after site visit
2	Module Type and capacity	
3	Power at Generation Terminal	
4	Generation Voltage	
5	Modules inclination	
6	Type of Inverters	

The Power Plant is being designed for specific input parameters as mentioned in the Design Basis report and the site contour map shared by the CUSTOMER, any change in the same may have an impact on the Price, performance and delivery of the plant which shall be extra to CUSTOMER’s account. Any variation in Design Input conditions including but not limited to Solar radiation, meteorological data and/or the plot plan shall attract appropriate variation in Price, performance and delivery of the plant which shall be extra to CUSTOMER’s account.

5. General Technical Specifications

Solar photovoltaic modules

Module Make	VIKRAM / Tier -1
Module Type	Mono PERC half-cell PV Module
Module Cells	144
Module Capacity (per module) WP	540 Wp
Size	2102x1040x35 mm approx.
Efficiency % (Approx.)	20.82%
Electrical Data at STC (Irradiance 1000 W/m ² , cell temperature 25C, air mass AM 1.5)	Vmp-40.8 V, Imp - 10.9 A, VOC - 49.4V, Isc-11.46A
Degradation Profile	Linear degradation - 10-90% in 10 years
Temperature Range	-40 degree C to 85 degree C
Approvals & Certificates	IEC 61215, IEC 61730, IEC 62716, IEC 62804

Inverter

Make	Delta / Solis / Sungrow
AC Voltage Range	400V
Efficiency	98.5%
Nominal AC voltage	3Ph, 400V
Nominal Frequency	50 Hz
Anti-islanding protection/Grid regulation	VDE-AR-N 4105;VDE 0126-1-1
Certificate &code	EN 62109-1/-2, IEC 62109-1/-2, EN 50530, IEC 62116, IEC 62910, IEC 60068, IEC 61683, IEC 61727
Ingress Protection	IEC 60529
Integration with Grid	YES
MPPT Details	43467
Degree of protection	IP 65
Operating Temperature range	-25 degree C to +60 degree C

Module Mounting Structures (MMS)

Module mounting structures are used based on the sheet metal profile, RCC roof area parameters and type of land available. Generally, MMS are made of Aluminium, Hot Dip Galvanized steel to prevent it from rusting. Short Rail, mono rail type of MMS are fixed on the roof by using reviting method. On request we work out for MMS pasting method also which is little but costlier.

DC Distribution board

- a) DC Distribution panel to receive the DC output from the array field. Each string individually shall be provided with necessary protection for short circuit and surge protection.
- b) DCDB's enclosure shall be made of dust & vermin proof conform to IP 65 protection. Suitable capacity Fuse/MCBs will be provided for controlling the DC power out put to the PCU along with necessary surge arrestors.

AC Distribution board

- a) AC Distribution Panel Board (DPB) control the AC power from PCU/Inverter, and have necessary surge arrestors. Interconnection from ACDB to mains at LT Bus bar shall be made in grid tied mode.
- b) All switches and the circuit breakers, connectors should conform to IEC60947.

Cables (DC and AC cables)

Make	Polycab / Havells / KEI / Reputed
Type	DC Cables-Single Core, double insulated solar cable
	With fine-wire copper strands. TUV Certified according to the latest regulations. -10 degree C to +80 degree C (Permanent)UV ,ozone and hydrolysis-resistant.
	AC Cables-Single/multi-core, stranded Cu/Al conductor as mentioned, XLPE with PVC outer sheath made on PVC compound .
Standard/Code Conforming to	IEC60227/IS694, IEC 60502/IS1554

System Earthing

Each array structure of the PV yard will be earthed properly as per IS:3043-1987. Lightning protection and invertors shall be earthed properly. CPRI tested and certified Maintenance free earthing for 25 years shall be used.

Lightening Protection

The SPV power plant will be provided with lightning protection with ESE arrester to meet the safety protection against the lightning for above 15-meter height of the buildings.

6. Warranties associate with the system

1. **Performance warranty of solar Photovoltaic modules is proposed for 80% performance for 25 years**
2. **Manufacture's standard warranty for product warranty of modules is for 10 years.**

Further:

- Inverter will have a manufacturing warranty of 5 years.
- All the components and BOS Warranty terms will be as per MNRE guidelines.
- The warranty is reckoned from the date of acceptance of the individual subsystems.
- The System is designed so as to minimize the cable losses for higher Energy Yield.
- The harmonized components ensure extra-long life and minimize maintenance.
- Force Majeure conditions & Natural Calamities will not be covered in the warranty terms & conditions.

7. List of Major Projects Executed

AC Side of The Solar Power Plant (Ground Mount)

- ✓ 10 MW Ground Mount Solar Power Plant Installation work on DC and AC yard at Raniyapur (Nepalgunj), Nepal for M/s Golyan Group / REnego Developers Pvt. Limited ... **January 2023**
- ✓ 220 kV Line Bay Extension work at PGCIL Substation, Raipur required for Power evacuation of 68MW Solar Plant (End user South East Central Railways)
Project developer: M/s SunEdison Infrastructure Limited) **June 2022**

Solar Power Plants (Roof Top)

- ✓ 340 kWp Solar Roof Top Project (RCC) at AMRITA HOSPITAL, Faridabad..... **August 2022**
- ✓ 1954 kWp Solar Roof Top Project at Starwire India Limited, Chhainsa, Faridabad
..... **February 2022**
- ✓ 625kWp Solar Roof Top Project at STAR WIRE , Sector-58, Faridabad Plant **Sep 2021**
- ✓ 1300kWp Solar Roof Top Project at CEAT Limited, Ambernath, Thane (MH) **June 2021**
- ✓ 1.80 MW Solar Power PV Plant on a single Tin shed roof at Indian Oil Corp. Limited (IOCL),

Paradip (Orissa) a/c Vikram Solar Limited **April 2021**

- ✓ 1.11 MW Roof top Solar PV Plant at Banaras Hindu University (Rajiv Gandhi South Campus, Mirzapur (U.P) **February 2021**

- ✓ 904 kW Solar Roof Top Project at Titagarh Steel Limited (Kolkata) a/c Fourth Partner Energy Limited **January 2021**

(Sheet metal roofs with solar plant capacity of 904 kW , completed on EPC basis. Modules, Inverters were supplied by our client M/s Fourth Partner Energy Limited. Lord Glu pasting adhesive is used to fix Aluminium short rail / MMS)

- ✓ 730 kW Solar Roof Top Project at Dhuri, Punjab (Pvt. Industry) **December 2020**

(Sheet metal roofs with Solar plant capacity of 345kW, 200 kW and 185 kW each completed on Design and EPC basis. Modules and Inverters were supplied by our client M/s Vikram Solar Limited)

- ✓ 752 kW Solar Power PV Plant at NTPC Solapur Township area **March 2020**
(This is project was done adhering stringent technical norms of a PSU i.e. NTPC Limited)

- ✓ 850 kW Solar Power PV Plant on Single roof at AISIN Automotive Haryana (P) Ltd. at Rohtak (Project Developer – Renew Power) **August 2019**

(We have completed this project installation in just 2 months' time adhering to all EHS & PPE (Safety) compliances of this Japanese MNC)

- ✓ 968 kW (≈ 1 MW) Solar Power Project of Municipal Corporation of DELHI (SDMC) a/c BVG India Limited. Project done on complete EPC basis **July 2018**

(It was a single Order for Solar Roof Top Projects spread over 22 roofs of MCD Primary Schools ranging from 30kW to 82kW completed in 3 months' time as per SECI Specifications).

- ✓ 422 kW Solar Power Project of Indian Institute of Technology (IIT), INDORE a/c BVG India Limited. Project done on complete EPC basis. **FEB 2019**

(It was a prestigious Order for Solar Roof Top Projects spread over 7 roofs of different buildings of IIT campus capacity from 30kW to 85kW as per SECI Specifications)

- ✓ 450 kW Solar Power Project of Ordnance Equipment Factory (OEF), KANPUR a/c BVG India Limited Project done on complete EPC basis **OCT 2018**

- ✓ 235 kW Solar Power Project of Sandeep Motors , Bhilwara a/c Amp Solar, Delhi done on complete EPC basis **DEC 2017**

(Beside this we have executed various projects in the range of 30kW to 500kW)

8. Actual Photographs of our executed Projects

(For latest updates you may please visit our Facebook page)

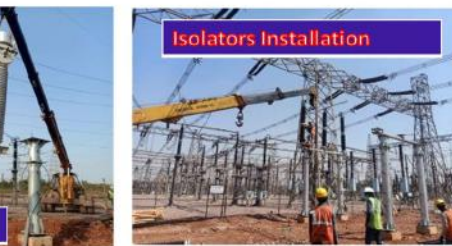
<https://www.facebook.com/proelectric.in>

10 MW Ground Mount Solar Power Plant at Nepalgunj, Nepal



220 kV Line Bay Extension work at PGCIL Substation, Raipur required for Power evacuation of 68MW Solar Plant (End user South East Central Railways)

220kV Substation Bay Extension Work at PGCIL Raipur



2.6 MWp Sheet metal Roof top Solar PV Plant at Starwire, Faridabad (Haryana)





1300 kWp Solar PV Plant on a single roof at CEAT Ltd. Ambernath, Thane (MH)



1.80 MW Solar Power PV Plant on a single Tin shed roof at Indian Oil Corp. Limited (IOCL), Paradip (Orissa) a/c Vikram Solar Limited



1.11 MW RCC Roof top Solar PV Plant at Banaras Hindu University (Rajiv Gandhi South Campus, Mirzapur (U.P))



850kWp Solar PV Plant on single roof at AISIN Automotive, Rohtak (Haryana)



340 kWp RCC Roof (14 Storey Building) top Solar PV Plant at AMRITA Hospital, Sector -88, Faridabad (Haryana)





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