

Building a greener future..



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25 YEARS
WARRANTY
ON OUR
SOLAR
PANELS

SAVING YOUR
MONEY
IS OUR
PRIORITY

EXCLUSIVE!

**FINANCE
OPTIONS
AVAILABLE!**

GREEN ENERGY

Solar Power enables to create a world
with zero carbon emission

LONG LASTING PERFORMANCE

With our equipment's you are without
worries for the next 25 years

EARN WITH POWER

Stop wasting your valuable money
over increasing electricity bills

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2. **WHY SOLAR?**
3. **COMPANY OVERVIEW**
3. **MEET THE TEAM**
4. **OUR SERVICES**



SPOTLIGHT

THE FUTURE OF THE SOLAR INDUSTRY

The world is going to switch over to renewable energy. When are you? p05

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TIPS

SWITCH TO SOLAR LIGHT

You own a house or a hotel, solar lights can save you a lot of money. p06

TRENDS

GENUINE PRODUCTS USED BY HELIOS

Our products have an operability life of 25 years with 25 years of warranty. p11



DOMESTIC USE

HEAT UP YOUR WATER WITH SUN RAYS

Contact our Sales team for a demo of any Solar product you can think of.

EIGHT BEST REASONS TO GO SOLAR

→ Generates Shadow Area



To cover any open sky area, if we install solar panel instead of other shadow slide (Asbestos, RCC roof etc.) it will make the place covered from

sunshine as well as generate power. Example: Car parking, Bus stop etc.

→ Use Under-Utilized Land



Any land that is not suitable for agriculture or not recommended for any other heavy industries or not used for residential purpose can be used to generate solar

power. Hence increasing value of the land.

→ Quick ROI



A solar power system developed with reliable material in reasonable price, it generates power as estimated and saves electricity bill expenses. Considering

increasing tariff in electricity bill in recent time a solar power system can assure High Return on Investment with longer lifetime of the solar project.

→ Long Lasting Performance



Helios ensures the installation of top quality Solar Panels with running capacity of more than 25 years. Unlike any other electrical appliances

Solar panels requires very less maintenance delivering high energy production quality, saving money for you for other critical needs.



WHY SOLAR?

Helios Solar Services

MORE EFFECTIVE & ECONOMICAL

Solar Power gives you freedom from Grid Supply. Reduces dependency on DISCOM.

MINIMIZE ELECTRICITY BILLS

With Solar, you can generate your own electricity and save up to 90% on your power expense!

ADDED PROPERTY VALUE

It is known that panels added to your home have the ability to increase the resale worth of your home in the long run. There have actually been studies that show including solar panel systems to your home can about 5% more resale value than comparable homes without solar power systems.

GREEN ENERGY

While there are a lot of little steps that can be taken to assist your family in being more eco-friendly and minimize your carbon footprint, among the very best and rewarding approaches is by going solar with the installation of a solar energy panel system in your house.



OUR SERVICES

➔ Technical Consultation



We provide best possible solar power solution according to customer expectation with minimum risk factor and best performance

- Data Collection
- Cost Impact Analysis
- Feasibility Study
- Site Survey

➔ Right Sizing



Provide optimized component sizing with market competitive rate. Also provide a well defined project report with techno-commercial proposal

- Design
- Cost Estimation
- Detailed Project Report (DPR)

➔ EPC Services



According to project size and timeline we deploy experienced EPC team to complete the project on time with zero hassle for customer.

- Work Order Signoff
- Material Procurement
- Project Execution
- Project Management

➔ Operations & Maintenance (O&M)



We procure material and components assuring less maintenance. However O&M team will be at site in case of any failure and provide best possible troubleshooting

- Project Completion Signoff
- Operation Handover
- Solar Maintenance

➔ Solar Appliance



Though any electrical appliances or equipment can run on solar. Keeping on present market demand we are working on below products .

- Solar Pump
- Solar Street Light
- Solar Water Heater
- Solar Lanterns

➔ Solar Training



We have a team of industry experts to impart training on solar industry in Technical, project Management, Commercial, Business point of view .

- Solar Awareness
- Solar Plant Design
- Small Scale Installation
- Project Management

Inside the Solar Cell

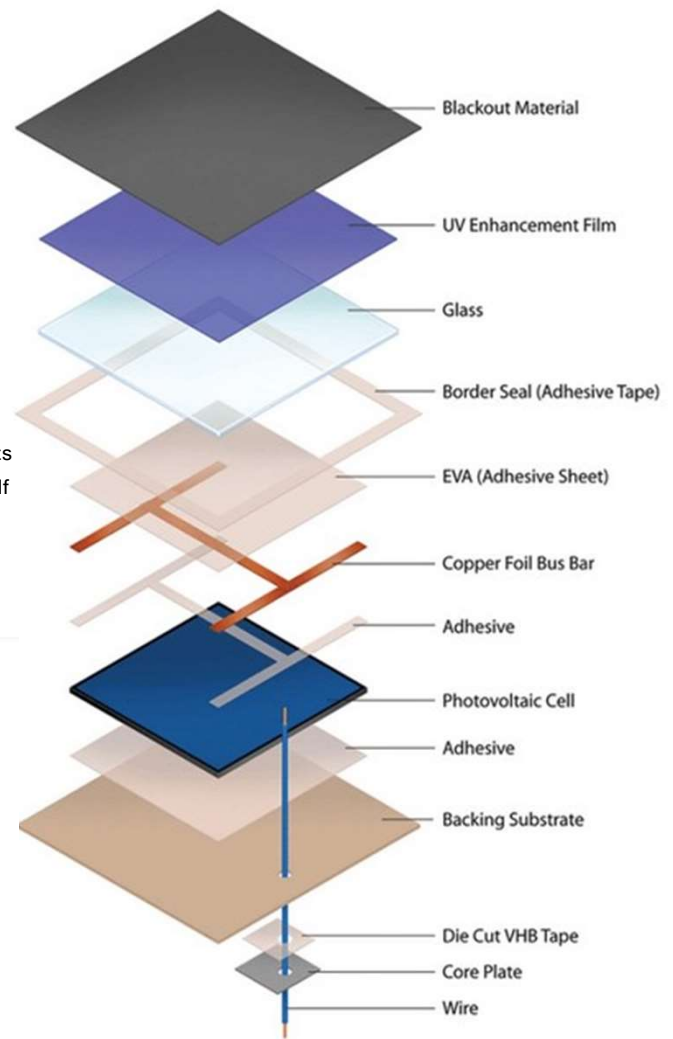
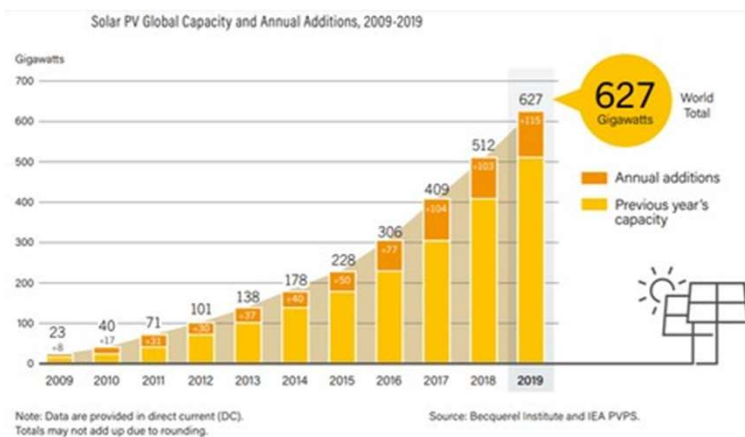
HOW DOES PV CELLS GENERATE ELECTRICITY?

When sun light incidents on the SPV plate, it generates current carriers. These current carriers get distributed in either side of the cells and produces photo voltage. If any load connected with this SPV plate, current flows through the load and the load consumes power from SPV plate. In short, we can say SPV plate converts heat energy into electrical energy.

Future of Solar Technology

THE NEXT GEN ENERGY

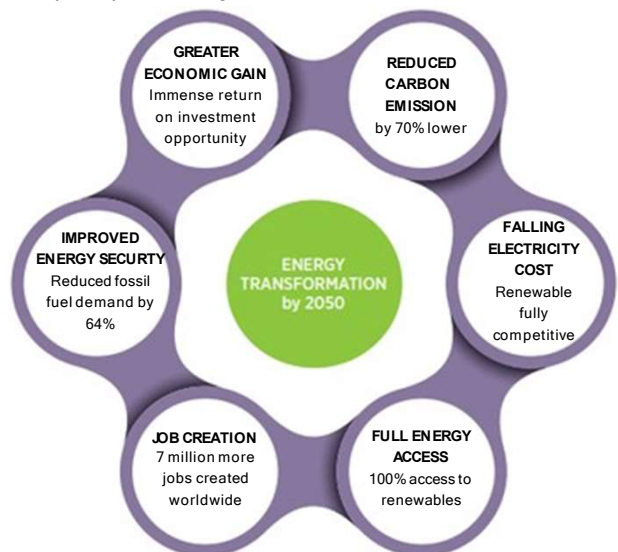
COVID 19 disruptions caused a significant slowdown of Solar PV Capacity forecasts for India. At about 70% of the Solar PV installations were observed in the first half of 2020 and significantly dropped in the rest. A rebound in PV deployment is expected for 2021 and 2022, with capacity additions exceeding the 2019 level as delayed and new projects become operational.



The Covid-19 crisis has compromised the financial viability of distribution companies (DISCOMs). The financial instability of many DISCOMs leads to delayed payments to generators, decreasing the profitability of existing projects and raising the level of risk perceived by potential developers and financial institutions. Hence, we are expecting a Solar PV capacity addition by 18% globally this year making Solar the number one

There would be many reasons for which Solar Energy would hit the charts to the top:

- **Carbon Emission** will be **reduced by 70%** with more and more Solar adoption and independence from conventional grid supplies
- **Freedom for depleting fossil fuels** - Solar will reduce the dependency on fossil fuels by 64%
- Adopting Solar means **reduced or no electricity bill** for 25 years with **quickest ROI of 5 years!**
- **Banks offering loans** to promote the adoption of Solar PV units to save on money spend on electricity.
- **7 million jobs created** worldwide through every Solar Panel you purchase
- **Increasing grid based energy costs** would be the topmost reason for Solar to become the **Nex-Gen Energy**.

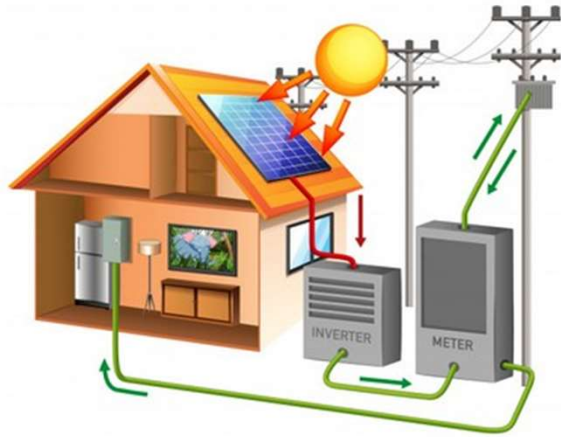


TYPES OF SOLAR PROJECTS



Grid Connected Solar Rooftop System

ON GRID INSTALLATIONS



In grid connected rooftop or small SPV system, the DC power generated from SPV panel is converted to AC power using power conditioning unit and is fed towards electricity grid network.

These systems generate power during the day time which is utilized by powering captive loads and feed excess power to the grid. In case, when power generated is not sufficient, the captive loads are served by drawing power from the grid. The concept of rooftop solar is based on the scale of the PV plant rather than the fact whether it is situated on a roof/terrace or not. Hence, the definition of Rooftop Solar (RTS) also includes small solar plant on the ground.

Key Highlights:

Minimum load should be 5 KW 3PH * Customer must have commercial meter

* Bidirectional Meter will be provided by electricity Agency once they have inspection * Electricity agency will be in back up * Cost effective with ROI in approx. 5.5 to 6 years.



Grid Independent Solar Rooftop System

OFF GRID INSTALLATIONS

Off grid system generates whole day consumption in sun shine hours (4.5 hours per day). SPV panel array produces power in DC and pushes the electricity in Inverter as well as stores excess DC electricity in batter bank. Inverter converts the electricity in AC and supplies to the appliances. In night time it retrieves the electricity from battery bank and supplies to the connected appliances.

Key Highlights:

* Applicable for domestic establishments * Feasible for low consumption * ROI in approx. 8 to 9 years * Makes your establishment independent of electricity agency



➔ Agricultural Solar Pump



In this system, SPV Panel supplies DC electricity in VFD pump controller. VFD controller drives the pump emerged into the water. According to AC or DC pump VFD controller programming should be in place.

- Operational only during day time
- Alternate solutions available to make the pumps work during the night

➔ Solar Street Light



Solar street light stores DC electricity in battery in day time. It is sensor based and gets turned on in night time automatically. Solar street light gets powered from inbuilt battery system. In recent age, LiPO₄ or tubular battery are most popular. Solar street light comes in mainly two package: Fully Integrated and semi Integrated. In Fully Integrated system SPV Panel, Battery, drives and LED light are packaged in same unit. But in semi-integrated SPV panel is separate from rest.



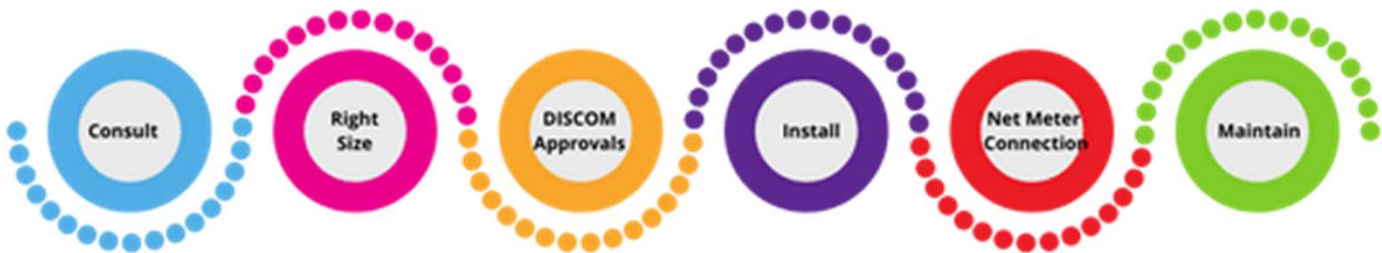
Six Step Solar Process

EASY WAYS TO IMPLEMENT SOLAR

CONSULT: According to customer expectation we provide with all the information needed for better clarity on how solar energy can help you in reducing your electricity expenses and leading an green power.

DISCOM Approvals: We coordinate with your power company to make sure you get the net-metering approvals as soon as possible. Your Helios representative does the end-to-end work.

NET METER CONNECTION: We work with your power company to get the net meter for your Solar PV System installed. Helios takes care of the entire process and you only need to give us the authorisation to do so.



RIGHT SIZE: According to project requirement we designing system and size component to ensure best performance and generation with long lifecycle

INSTALLATION: We supply and install the Solar PV System component on your site on time. We use only the best in class Panels, Inverters battery and BOS components . All the equipment will be procured with technical Datasheet, warranty (if applicable).

MAINTENANCE: Once the project is handed over to customer according to O&M contract we provide service on time with best possible troubleshooting solution.

Types of Metering

THE WAY YOU ARE BILLED..

➔ Net Metering



Net metering systems are primarily aimed at providing an opportunity to consumers to offset their electricity bills, wherein a single meter records both import of conventional energy from distribution grid and export of solar energy into distribution grid. Thus, net metering allows the final user to credit produced energy in the grid and is also promoted as a preferred option.

➔ Gross Metering



Gross metering systems are aimed at rooftop owners/third party investors who will like to sell energy to the DISCOM by using roofs owned by them or another party. It is also known as feed-in metering wherein, all the energy generated from the system is exported to the grid and is

separately recorded through a different 'feed-in meter'. The developer exports the solar energy to the utility at a predetermined feed-in-tariff (FIT) approved by the regulator, and the third party investors/RESCO developers enter into a long term Power Purchase Agreement (PPA) with the utility. Only grid-connected PV systems can be gross-metered.

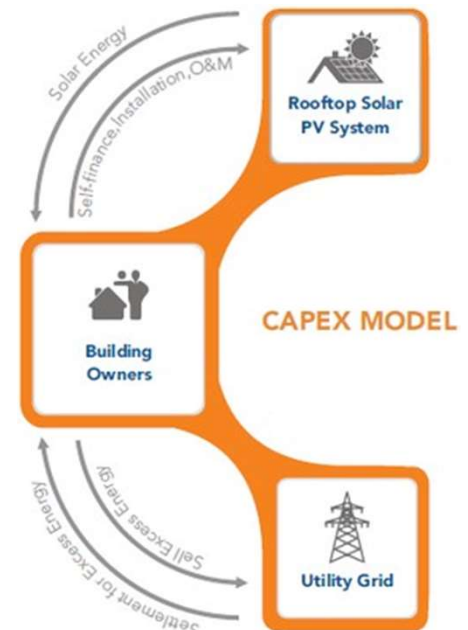
Types of Business Model

WAYS TO INVEST IN A SOLAR PROJECT

➔ CAPEX Model

CAPEX refers to Capital Expenditure. When we choose In this model, the entire investment comes from the power consumer, consumer generally hire a solar EPC company who provide turnkey installation of entire solar power system and hand over assets to consumers. EPC also do annual operation and maintained (O&M) of plant on mutually agreed cost per annum.

- Allows residential, industrial and commercial customer to own the system.
- The customer sets up rooftop solar project with the intent to reduce his own power costs.
- The customer bears the entire capital expenditure of the project.
- The gains from tariff savings accrue to the roof and solar power plant owner.
- EPC also performs annual operation and maintained (O&M) of plant on mutually agreed cost per annum.



➔ OPEX Model - RESCO

In the OPEX model, an investor or project developer (sometimes called Renewable Energy Service Company -RESCO) invests the CAPEX and consumer pays for the energy consumed/supplied by the solar power project delicately developed for a particular consumer. Both consumer and developer sign a long-term power purchase agreement (PPA) for an agreed tenure & tariff.



- Solar Power Plant is owned by the RESCO or ENERCO (Energy Company).
- The customer serviced does not own the Solar Power Plant.
- Customer have to sign a Power purchase Agreement (PPA) with actual investor at mutually agreed tariff and tenure.
- Customer only pays for electricity consumed on a per unit price for power basis.
- RESCO developer is responsible for its annual operations & maintenance (O&M).
- The RESCO gets the benefit by selling the surplus power generated to the DISCOM.

OUR EXPERIENCES

WHAT WE HAVE ACHIEVED SO FAR..

- ♦ **363 KW** Rooftop Solar Project at Karur, Tamil Nadu
- ♦ **330 KW** Rooftop Solar Project, Sikkim
- ♦ **10 MW** Ground Mounted Solar Project Design & Engineering, West Bengal
- ♦ **221 KW** Rooftop Solar Project at Dadri, U.P
- ♦ **150 KW** Rooftop Solar Project at ID & BG Hospital, Kolkata, Bengal
- ♦ **700 KW** Rooftop Solar Power Project in Kolkata
- ♦ **100 KW** Solar power project at Assam (Under Execution)
- ♦ **10 MW** Solar power project for Beed (Under Execution)
- ♦ **1 HP** Solar Pump Installation, Nandakumar



363 KW Rooftop Solar Project at Karur, Tamil Nadu



221 KW Rooftop Solar Project at Dadri, U.P



330 KW Rooftop Solar Project, Sikkim

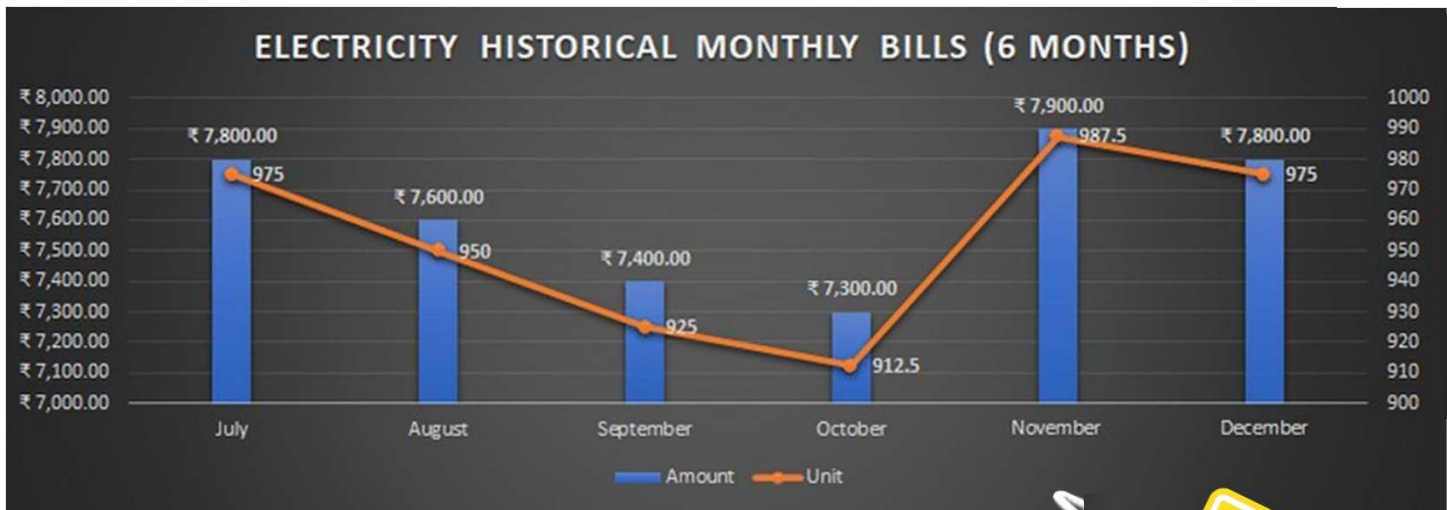


1 HP Solar Pump Installation, Nandakumar



A SAMPLE CASE STUDY

CONVERTING FROM GRID TO SOLAR BASED ENERGY FOR DOMESTIC UNITS



- Average Electricity Bill: ₹ 7633.00
- Average Units Consumed per Month: 950 approx.
- Project Size = $\frac{\text{Average Unit consumed per month} \div (30 \times 4)}{1.25}$
 - Note for Commercial 90% of Sanctioned / Calculated Load is considered
 - Project size is estimated considering 20% loss in the system
 - Average Solar Power generation is 4.5 Units per kW per Day
- Hence project Size is 10 kW

INR
6,70,000/-
+GST

➔ Bill of Materials

Service Description	Quantity
SPV Panel: Polycrystalline 330 Wp Waree / Websol / Adani	32 (3 Panels generate 1 kW)
PCU : MPPT- 3 Ph 10Kw AC output UTL / Microtek (Inverter)	1
GI Structure Module Mounting Support System	As Required
Balance Of System (BOS) Standard	As Required
Battery UTL / Exide	10 x 150 AH 12 V
Installation & commissioning	Included in the Costs

➔ Scope of Work

- Design of system
- Procurement of Material as per BOM
- Fixing of MMS with relevant civil work
- Fixing of SPV Panel
- Installation of DCDB and ACDB
- Laying of DC cable till PCU through Conduit pipe and connection with PCU
- Laying of AC Cable through conduit pipe till LT Panel
- Installing of LA and earthing
- Connection with Bi directional Meter
- Commissioning and site handover to customer

➔ Return on Investment (ROI)

