



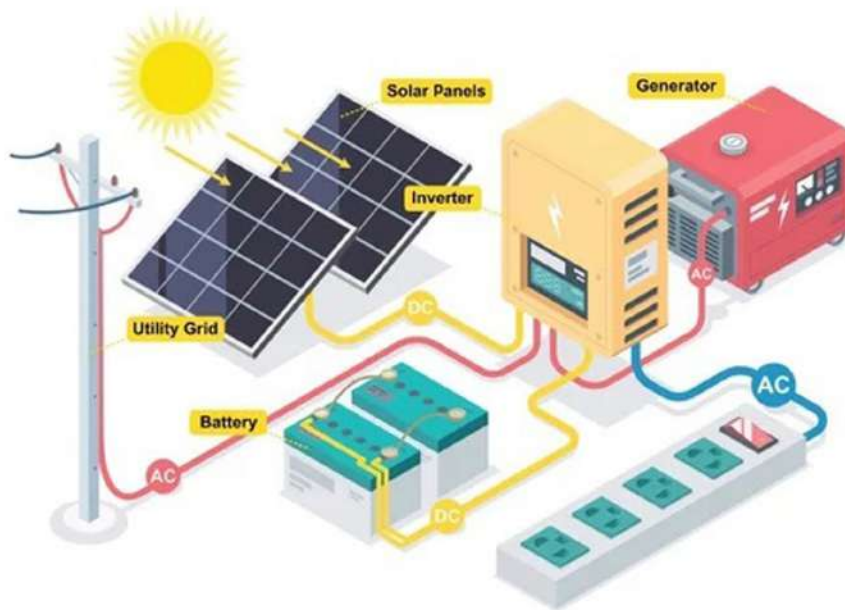
**We require solar solutions to shape a brighter future**





## ABOUT US

Eco Sunshine Energy solutions are paramount, there has never been a better time to embrace solar power. With technology driving costs down and efficiency up, we offer a unique range of tailored solar solutions. As the premier provider of solar installations and home solar systems, we bring unmatched expertise to every project. Our experienced team ensures a smooth transition to solar power for your business. From meticulous planning to flawless installation, we deliver solutions that boost energy efficiency and cut costs. Our top-tier industrial solar plants, leading installation services, and innovative home solar systems propel you towards a greener future. With us, you're not just adopting solar energy; you're investing in a sustainable and economical tomorrow."



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## OUR FEATURES PRODUCTS

- 1 ON GRID SOLAR SYSTEM**
- 2 OFF GRID SOLAR SYSTEM**
- 3 HYBRID SOLAR SYSTEM**
- 4 SOLAR WATER PUMPS**
- 5 SOLAR WATER HEATER**
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## OUR VISION

Our aim is to be the top choice for solar solutions, ensuring customer satisfaction every step of the way, from design to installation and maintenance. We're committed to developing innovative and reliable solar solutions to become a leading global renewable energy firm. We strive to create value for clients by leveraging our skilled technical team to deliver top-quality renewable energy solutions accessible to all. Customer satisfaction is our priority, achieved through continuous improvement and innovation in our products and processes.

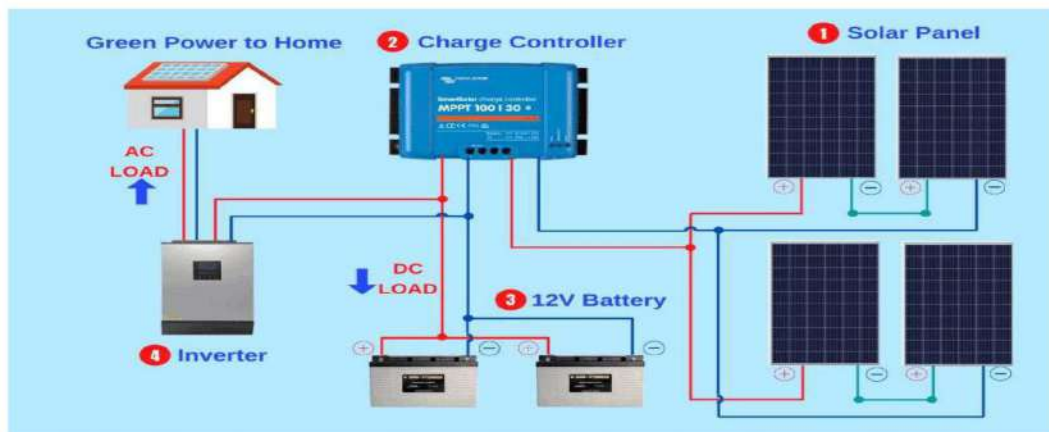
## CERTIFIED





## INTRODUCTION SOLAR PANEL

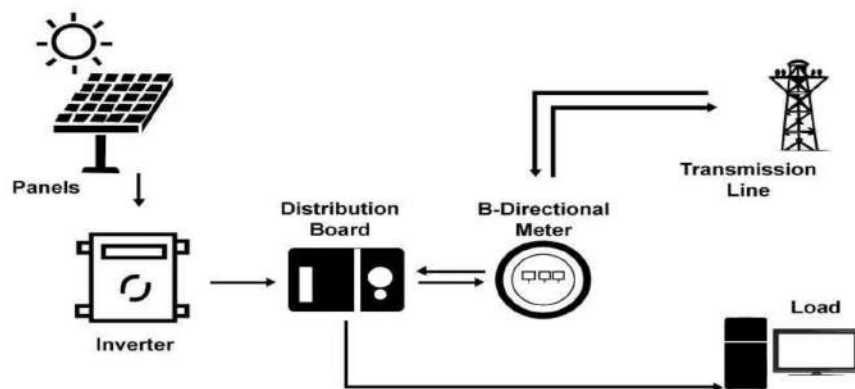
Solar panels, the epitome of sustainable energy, have revolutionized the way we power our world. These sleek, photovoltaic devices quietly harness the sun's rays, converting them into electricity with remarkable efficiency. Whether adorning the rooftops of homes or sprawling across vast solar farms, their presence signifies a commitment to a cleaner, greener future. With each passing day, solar panels contribute to reducing carbon emissions, mitigating climate change, and fostering energy independence. As the global demand for renewable energy continues to surge, solar panels stand as symbols of innovation and hope, offering a tangible solution to our planet's energy challenges.



### SOLAR SYSTEM WORKS

Solar systems work by capturing sunlight using solar panels, converting it into electricity, and distributing it for use in homes or businesses. The solar panels generate direct current (DC) electricity, which is converted into alternating current (AC) by an inverter. This AC electricity is then used to power appliances and devices, with any excess electricity potentially being fed back into the grid for credit or storage.

## ON GRID SOLAR



### Components

1. Solar Pv Modules
2. Mounting Structures
3. Solar Inverter
4. Monitoring Device
5. Net Meter

### Introduction on grid solar power

On grid solar power system is a solar power generation system where it is connected to the utility grid. The electricity produced by the system is routed to the grid from where it is used to run the various appliances. The installation of the same is also fuss-free and easy to maintain.



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## **How does on-grid solar power system work?**

The arrangement of solar modules absorbs the sunlight on them and converts them into electricity. The current generated here is Direct Current (DC). The solar inverter then converts the DC to Alternating Current (AC), thus making it power the electrical items. This electricity is then routed to the grid where it is supplied for day to day use. An important feature is a net meter. It is a device that records the energy supplied to the grid and the energy consumed. At the end of each month, the outstanding is recorded and the consumer is provided with a bill.

## **Benefits of on-grid solar:**

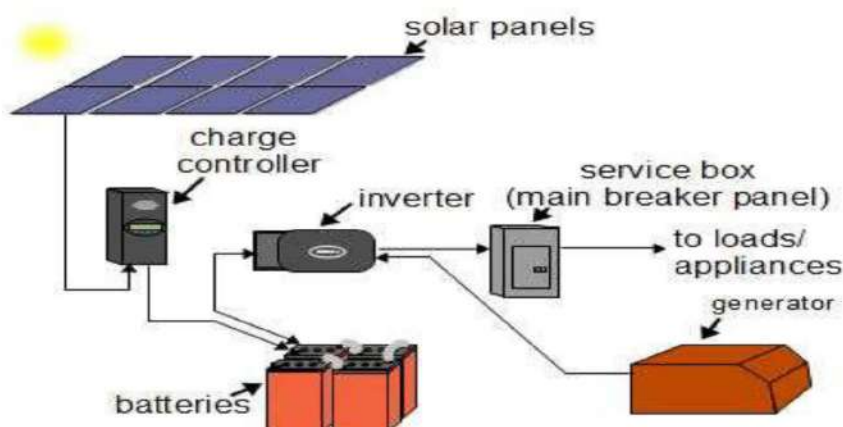
1. Zero Electricity Bills – Though the solar power system is connected to the grid, the consumer has to pay only for the surplus electricity he consumes. The bill generated on a monthly basis determines whether the consumer has any payments to be made. However, at the same time, if the consumer utilizes less electricity, the excess is fed back into the grid.
2. Easy maintenance – The on-grid solar power system has the least number of parts along with simple installation. The elimination of batteries makes the maintenance quite easy.
3. Passive income generation – With a connection to the grid, the consumer can charge for the surplus electricity he has generated. It not only eliminates your electricity bills but also avails the cost benefits for the excess electricity generated.

Solar power has several benefits, notably including a reduction in electricity cost and usage. However, there are other benefits that depend on the type of system you choose.

## **GENERATIONS**

1. First Generation: These systems typically consist of traditional solar photovoltaic (PV) panels connected to the grid through inverters. They are characterized by their simplicity and basic grid-tie functionality.
2. Second Generation: These systems incorporate advanced technologies such as microinverters or power optimizers, which optimize the performance of individual solar panels. This generation offers improved efficiency and reliability compared to first-generation systems.

## OFF GRID SOLAR



### Introduction

Off-grid solar energy – a pioneering approach to power independence. Off-grid solar systems operate autonomously, detached from the conventional utility grid, offering a sustainable solution for remote locations or those seeking self-sufficiency. These systems harness the abundant energy of the sun, converting sunlight into electricity through solar panels and storing it in batteries for use around the clock. From secluded cabins nestled in the wilderness to eco-friendly homesteads striving for energy sovereignty, off-grid solar empowers individuals and communities to embrace a lifestyle untethered from the constraints of traditional power sources. Welcome to the frontier of off-grid solar – where sustainability meets freedom.

### OFF-grid solar power system work?

Off-grid solar systems work by capturing sunlight using solar panels, converting it into electricity, and storing it in batteries for later use. Solar panels generate direct current (DC) electricity, which is then routed to a charge controller and battery bank. The charge controller regulates the flow of electricity to prevent overcharging or damage to the batteries. When electricity is needed, the stored energy is converted from DC to alternating current (AC) using an inverter, allowing it to power appliances and devices in the absence of a connection to the utility grid. This self-sufficient system provides reliable and renewable energy for off-grid locations, offering independence from traditional .

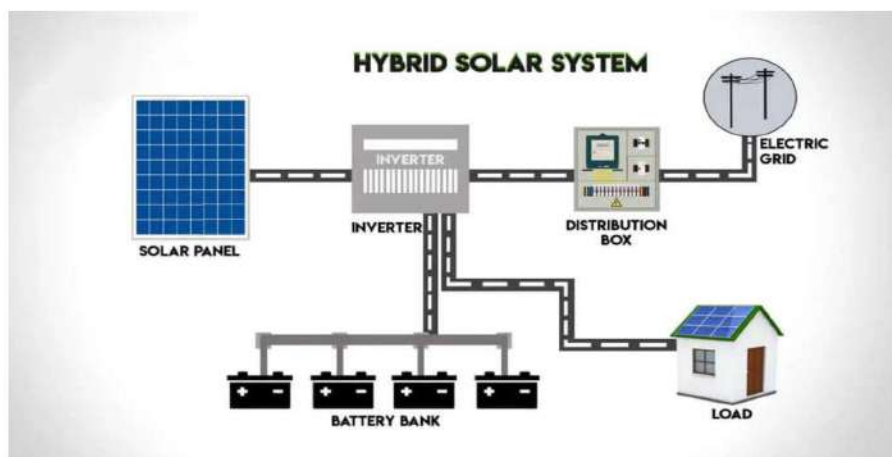


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## HYBRID SOLAR SYSTEM



### INTRODUCTION

A Hybrid solar system combines solar and battery storage into one, offering the advantages of both on-grid and off-grid setups. With decreasing battery storage costs, even grid-connected systems can now benefit from storing solar energy generated during the day and using it at night. The grid serves as a backup when stored energy is insufficient, providing consumers with the best of both worlds. Hybrid Solar Inverters offer full control over power while maintaining grid connectivity during emergencies. These systems generate power similarly to regular grid-tie solar setups but utilize specialized hybrid inverters and batteries for energy storage. This storage capability enables most hybrid systems to function as backup power supplies during outages, akin to uninterrupted power supplies (UPS).

### Hybrid solar system work?

Hybrid solar systems work by combining solar panels with battery storage and specialized inverters. During the day, solar panels generate electricity from sunlight, which can be used to power appliances or stored in batteries for later use. The hybrid inverter manages the flow of electricity, directing it to the grid, batteries, or appliances as needed. When solar generation is insufficient, stored energy from the batteries can be used, providing continuous power supply. This setup allows hybrid solar systems to operate both connected to the grid and independently, offering flexibility, reliability, and the ability to function as backup power during outages.

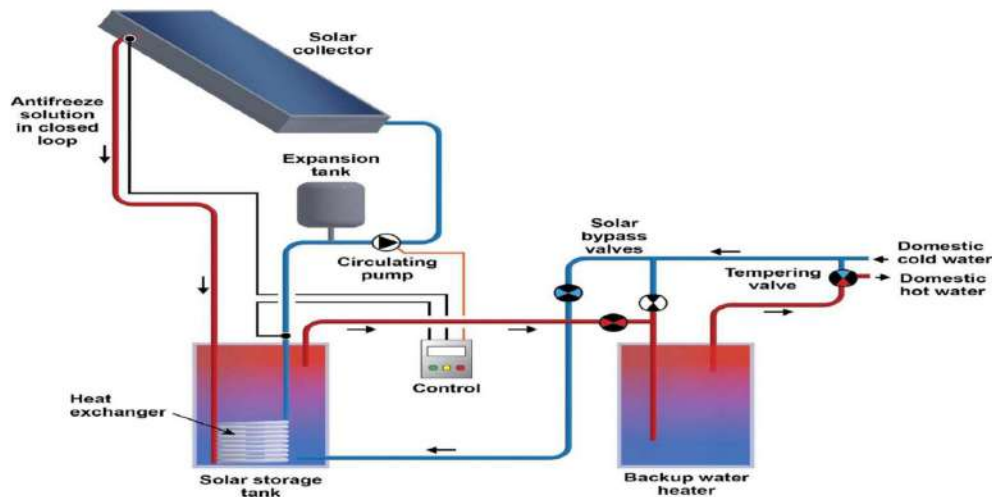


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## SOLAR WATER HEATER



### INTRODUCTION

The solar water heater, a popular solar device, utilizes solar energy efficiently. It's a cost-effective method for providing hot water using sunlight as fuel. With unlimited solar power available at no cost, it's an economical choice for various settings including homes, hospitals, hotels, and industries. This system eliminates the need to pay for the heat of the sun, making it an affordable option for heating.

### COMPONENTS

1. Solar Collector (helps in collecting solar energy)
2. Insulated Storage Tank (its purpose is to store hot water)
3. Supporting Stand
4. Connecting Pipes and Instrumentation, etc.

### Solar Water Heater Working Principle

The solar water heater works by absorbing sunlight with a solar collector, which heats water flowing through it. The heated water is then stored in an insulated tank to maintain its temperature. Circulation between the collector and tank ensures a continuous supply of hot water without additional cost.

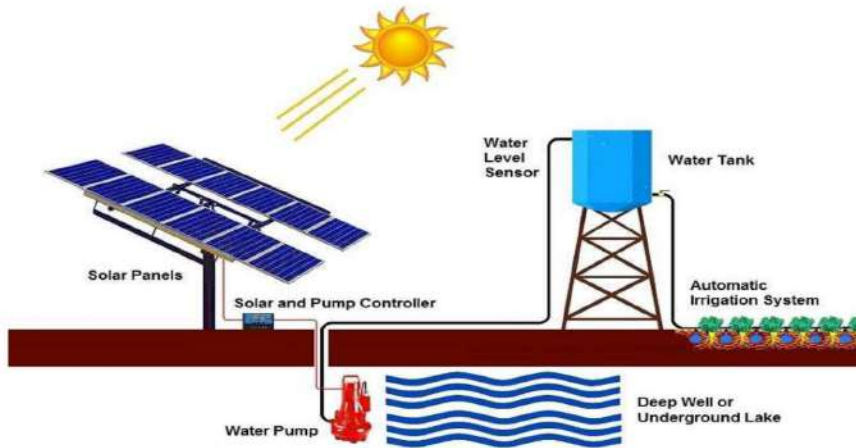


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## SOLAR WATER PUMP



### INTRODUCTION

Solar water pump, harnessing the abundant power of the sun, these innovative pumps offer a sustainable and cost-effective solution for farmers and communities worldwide. By converting sunlight into energy, solar water pumps efficiently draw water from wells, rivers, or reservoirs to nourish crops, livestock, and households without relying on traditional electricity or fuel. With their simplicity, reliability, and environmentally friendly operation, solar water pumps are revolutionizing agriculture and empowering communities to thrive in harmony with nature. Welcome to a brighter, greener future with solar water pumps.

### Solar Water Pump Working Principle

The working principle of a solar water pump is straightforward: solar panels convert sunlight into electricity, which powers a motor connected to a pump. This pump draws water from a water source, such as a well or reservoir, and delivers it to where it's needed, like irrigation systems or storage tanks. Essentially, sunlight fuels the pump's operation, making it a sustainable and eco-friendly solution for water pumping needs.

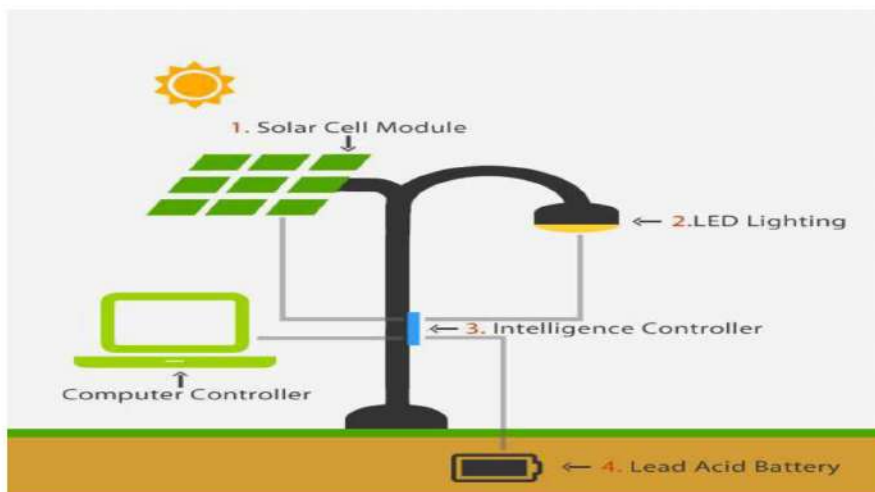


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## SOLAR STREET LIGHTS



Solar street lights epitomize the marriage of sustainability and practicality in outdoor lighting solutions. These innovative fixtures harness the power of the sun during the day, storing energy in built-in batteries. As dusk descends, the solar panels activate the lights, illuminating streets, pathways, and public spaces with clean, renewable energy. With no reliance on traditional electricity grids, solar street lights offer cost-effective and environmentally friendly illumination, enhancing safety and visibility while reducing carbon emissions. From urban thoroughfares to rural roads, solar street lights illuminate the way towards a brighter, greener future.

### Advantages of solar street lights:

1. Energy efficiency: Harness solar power to illuminate streets, reducing reliance on traditional electricity sources.
2. Cost savings: Eliminate electricity bills associated with street lighting, leading to long-term cost savings for municipalities and organizations.
3. Environmentally friendly: Reduce carbon emissions and environmental impact by using clean, renewable solar energy for lighting.
4. Independence from the grid: Operate autonomously, without the need for connections to the electrical grid, ensuring reliable lighting even in remote areas.
5. Low maintenance: Require minimal upkeep compared to traditional street lights, resulting in reduced maintenance costs and downtime.



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## SOLAR CCTV CAMERAS



Discover the unparalleled security solutions offered by Reliable Solar CCTV Services, delving into the cost-effective and impactful realm of solar camera security. Our innovative solar-powered cameras are tailor-made for off-grid security needs, utilizing resilient 4G or 5G networks for seamless transmission of video images to property owners or security teams. In situations where Wi-Fi is unavailable, these cameras efficiently store data on SD cards, ensuring convenient playback. Embrace the flexibility and scalability of our systems, effortlessly adding additional cameras as needed. Uncover the pinnacle of Solar CCTV Services in Hadapsar, Pune, and throughout India with Agrotech Green Energy, your steadfast partner in security innovation.

### **Advantages of Solar CCTV Cameras :**

1. Off-grid operation: Operate independently of traditional power sources, making them ideal for remote or off-grid locations.
2. Cost-effective: Eliminate electricity bills associated with powering CCTV cameras, leading to long-term cost savings.
3. Environmentally friendly: Utilize clean, renewable solar energy, reducing carbon emissions and environmental impact.
4. Easy installation: Require minimal wiring and infrastructure, simplifying installation and reducing labor costs.
5. Reliability: Ensure continuous operation even during power outages or grid failures, providing uninterrupted surveillance.
6. Flexibility: Can be deployed in various locations without the need for access to



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**WE REQUIRE SOLAR SOLUTIONS TO SHAPE A BRIGHTER FUTURE**



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