

ON-GRID SOLAR SYSTEM

Intelligent Rooftop Solar Solutions by Uniq Solar

Power your home or business with a high-performance On-Grid Solar System from Uniq Solar. Designed using premium solar technologies and installed by certified experts, our rooftop solar solutions help reduce electricity costs, improve energy independence, and contribute to a cleaner future.

Whether you are a homeowner, commercial establishment, educational institution, or industrial facility, Uniq Solar delivers customized solar solutions engineered for maximum performance, safety, and long-term reliability.

Book Your Free Site Survey Today

What is an On-Grid Solar System?

An On-Grid Solar System, also known as a Grid-Tied Solar System, is connected directly to your local electricity distribution network. Unlike off-grid systems, it operates without battery storage and uses the utility grid as a backup power source.

During daylight hours, solar panels generate electricity from sunlight. The electricity produced is first used to power your home or business. If the system generates more electricity than your property consumes, the excess energy is exported to the utility grid through a bi-directional net meter. During periods of low solar generation, such as nighttime or cloudy weather, electricity is automatically imported from the grid.

This makes on-grid solar one of the most efficient and cost-effective renewable energy solutions for locations with a reliable electricity supply.

Benefits of an On-Grid Solar System

Significant Reduction in Electricity Bills

Generate your own electricity and reduce dependency on conventional grid power, helping lower monthly electricity expenses.

Net Metering Advantage

Export surplus electricity to the grid through net metering and receive credits based on your local utility regulations.

Government Subsidy Eligibility

Residential rooftop solar systems may qualify for incentives under government schemes, subject to applicable policies and eligibility requirements.

Maximum Energy Efficiency

Modern solar panels and advanced inverter technologies ensure high energy production throughout the year.

Environmentally Friendly

Generate clean, renewable energy while reducing carbon emissions and supporting sustainable development.

Minimal Maintenance

With no batteries to maintain, on-grid solar systems require minimal routine maintenance while offering long operational life.

Long-Term Investment

A professionally installed solar system can deliver reliable performance for over 25 years while increasing property value.

Components of an On-Grid Solar System

1. Premium Solar Panels

Solar panels are the primary energy-generating component of the system. They capture sunlight using photovoltaic (PV) technology and convert it into Direct Current (DC) electricity.

At Uniq Solar, we offer premium solar modules from globally trusted manufacturers, ensuring superior efficiency, durability, and long-term energy production.

2. Solar Inverter

The inverter is the heart of the solar system. It converts Direct Current (DC) generated by the solar panels into Alternating Current (AC), which powers household appliances and commercial equipment.

We provide advanced inverter technologies including:

- Enphase Microinverters
- SolarEdge Power Optimizer Systems
- Premium String Inverters

These intelligent systems maximize energy harvest while providing advanced monitoring and safety features.

3. Solar Module Mounting Structure

The mounting structure securely supports solar panels on the rooftop.

Our high-quality mounting systems are designed to:

- Withstand high wind speeds
- Resist corrosion
- Ensure optimal panel orientation
- Deliver structural stability for decades

4. Net Meter

A bi-directional net meter records both:

- Electricity imported from the utility grid
- Electricity exported back to the grid

This enables seamless net metering and accurate energy accounting.

5. Electrical Protection & Accessories

Every Uniq Solar installation includes premium-quality electrical components such as:

- AC & DC Cables
- AC Combiner Box
- DC Combiner Box
- Surge Protection Devices
- Lightning Protection
- Earthing System
- MC4 Connectors
- Cable Management Systems

These components ensure safe, efficient, and reliable system operation.

How Does an On-Grid Solar System Work?

Step 1 – Solar Energy Collection

Solar panels absorb sunlight and generate Direct Current (DC) electricity through photovoltaic cells.

Step 2 – DC to AC Conversion

The inverter converts the generated DC electricity into Alternating Current (AC), making it suitable for residential and commercial use.

Step 3 – Powering Your Property

The AC electricity produced by the solar system is immediately used to power electrical appliances within your property.

Step 4 – Exporting Excess Electricity

If the system produces more electricity than required, the surplus energy is automatically exported to the utility grid through the net meter.

Step 5 – Importing Electricity When Required

During nighttime or periods of low solar production, electricity is automatically imported from the utility grid to ensure uninterrupted power supply.

Government Rooftop Solar Subsidy

The Government of India encourages rooftop solar adoption through various residential solar incentive programs.

Eligible homeowners installing rooftop on-grid solar systems may benefit from financial assistance under applicable government schemes.

Please Note:

- Subsidies are applicable only as per prevailing government regulations.
- Eligibility criteria and subsidy amounts are subject to change.
- Our team assists customers throughout the subsidy documentation process.

Why Choose Uniq Solar?

10+ Years of Solar Expertise

Extensive experience delivering rooftop solar solutions across residential, commercial, and industrial sectors.

Premium Global Brands

We partner with leading international and Indian manufacturers to deliver reliable and efficient solar systems.

Brands include:

- Enphase Energy
- SolarEdge
- RenewSys
- Adani Solar
- Waaree
- LONGi Solar
- Canadian Solar
- Tata Power Solar

Customized Solar Design

Every rooftop is different.

Our engineering team designs customized solar systems based on:

- Roof size
- Electricity consumption
- Shadow analysis

- Structural assessment
- Future energy requirements

Professional Installation

Our trained technicians follow industry best practices to ensure safe, precise, and high-quality installations.

Smart Monitoring

Monitor your solar system anytime using mobile applications and web portals.

Track:

- Daily Energy Generation
- Monthly Savings
- System Performance
- Historical Reports
- Fault Notifications

End-to-End Project Execution

We manage every stage of your solar journey:

- Site Survey
- System Design
- Engineering
- Installation
- Electrical Testing
- Net Metering Assistance
- Commissioning
- After-Sales Support

Applications

Our on-grid solar systems are suitable for:

- Independent Homes
- Villas
- Apartments
- Housing Societies
- Commercial Offices
- Retail Showrooms
- Schools & Colleges

- Hospitals
- Hotels & Resorts
- Industrial Facilities
- Warehouses
- Manufacturing Units

Frequently Asked Questions

How long does an on-grid solar system last?

A high-quality rooftop solar system typically provides reliable performance for over 25 years with regular maintenance.

Do I need batteries?

No. On-grid solar systems operate without batteries and use the utility grid whenever additional electricity is required.

Can I monitor my solar system?

Yes. Modern solar systems include intelligent monitoring platforms that provide real-time performance updates.

Is maintenance required?

Routine cleaning and periodic inspections help maintain optimal performance.

Is rooftop solar safe?

Yes. When installed using certified components and professional engineering practices, rooftop solar systems are safe, reliable, and built to international standards.

Start Your Solar Journey with Uniq Solar

Contact Uniq Solar today to schedule a FREE Site Survey and receive a customized solar solution tailored to your energy needs.