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Homeowners **Guide to** Rooftop solar

This guide is offering straightforward and comprehensive information to help you make an informed decision before switching to solar energy at home.

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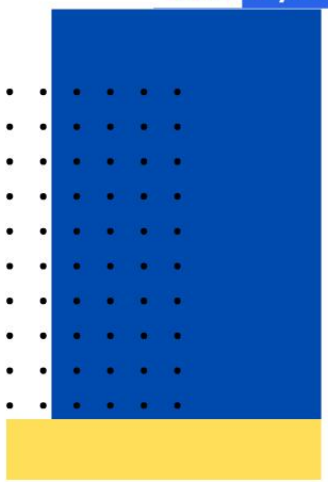


WHY SOLAR?

In short, **to save over 90% on your electricity bills every month!**

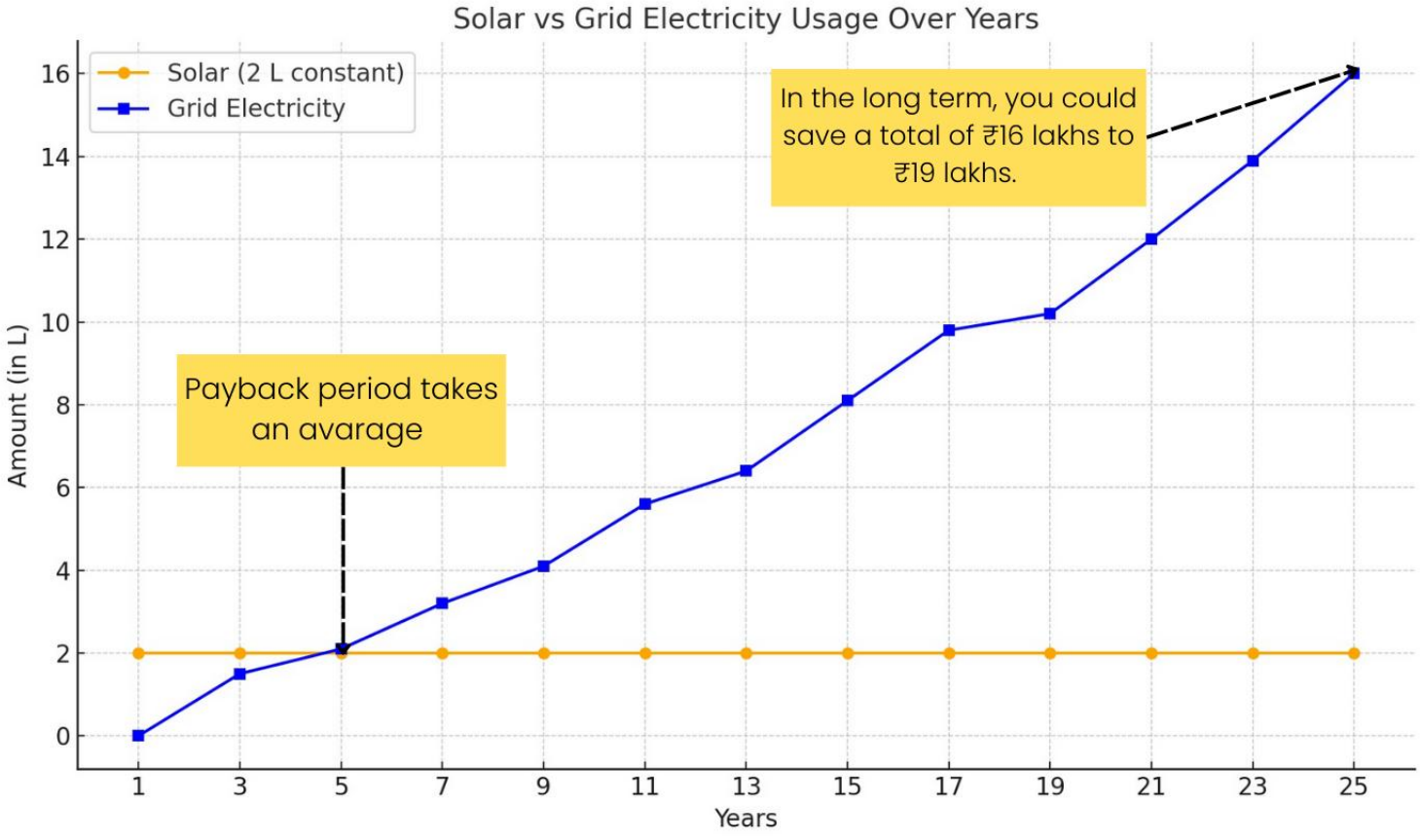
For Example:

If the electricity rate in your state is ₹9.5 and your monthly bill is ₹3,500, that adds up to ₹42,000 annually.

With electricity prices rising by 3-10% each year, in the next 25 years, you'll end up paying around ₹16-19 lakh for electricity.

This demonstrates how much your electricity costs could escalate over time due to rising tariffs!

Switching to solar for ₹1,32,000 (after subsidy) is a far more cost-effective and sustainable option compared to spending ₹13–14 lakh or more on electricity bills over the next 25 years.



WHY SOLAR?

Renewable Energy Source:

- Solar energy is clean and inexhaustible, reducing reliance on fossil fuels

Lower Carbon Footprint:

- Helps combat climate change by reducing greenhouse gas emissions.

Sustainable:

- Promotes the use of renewable resources for future generations.

Freedom from Rising Costs:

- Say goodbye to increasing electricity bills.
- Enjoy a reliable energy supply for years to come.

Eco-Friendly:

- Reduce your environmental impact.
- Support the shift to renewable energy.

TYPES OF SOLAR THAT SUITES YOUR HOME.

Commonly there are two types on-grid and off-grid solar system.
depends on several factors, such as your location, energy needs, budget, and etc.

Here's a detailed guide to help you make the right decision:

Feature	On-Grid System	Off-Grid System
Definition	Connected to the main electricity grid.	Operates independently without connection to the main grid.
Power Source	Solar panels + grid supply (acts as backup).	Solar panels + battery storage for energy backup.
Electricity Bills	Reduces electricity bills by offsetting grid usage; may still have minor charges.	Eliminates electricity bills entirely as it operates independently.
Cost	Lower upfront cost (no batteries needed).	Higher upfront cost (includes batteries for energy storage).
Maintenance	Lower maintenance as batteries are not required.	Higher maintenance due to battery upkeep and replacement needs.
Net metering	It allows homeowners to receive credits for the surplus electricity they produce and send back to the grid.	Does not get the advantages of net metering, electricity is stored in batteries.

HOW CAN I DETERMINE THE RIGHT SIZE OF A SOLAR SYSTEM TO MEET MY NEEDS?

1. Analyze Your Energy Usage

Review Electricity Bills: Look at your electricity bills for the past 12 months to determine your average monthly or annual energy consumption (measured in kilowatt-hours, kWh).

Daily Usage:

Divide your monthly usage by 30 to estimate your daily energy consumption.

For example:

Monthly usage = 900 kWh
Daily usage = 900 ÷ 30 = 30 kWh/day

2. Peak Sun Hours:

Research the average number of peak sunlight hours in your location per day.

3. Calculate System Size:

Use this formula to estimate the required system size:

$$\text{System Size (kW)} = \frac{\text{Daily Energy Usage (kWh)}}{\text{Peak Sun Hours x Efficicency Factor}}$$

For Example:

Daily energy usage = 30 kWh
Peak sun hours = 5 hours
Efficiency factor = 0.8

$$\text{System Size (kW)} = \frac{30}{5 \times 0.8} = 7.5 \text{ kW}$$

4. Evaluate Roof Space:

Check if you have enough space for the number of panels required.

Are solar systems hard to maintain? Will I need to clean them often?

It's is esseSolar systems are relatively easy to maintain compared to other home appliances or systems.
Failing to maintain your solar system can drastically impact its performance, potentially reducing power generation by up to 40% within a few months.

It's important to have your solar system cleaned and maintained by professionals who use the right tools and techniques.

Panel cleaning

Dust, dirt, leaves, bird droppings, and debris can collect on solar panels over time, reducing their efficiency.

While you can occasionally rinse the panels with a hose to remove surface dirt, it's better to avoid self-cleaning for tougher grime.

Professionals use gentle tools, such as soft-bristled brushes (4-5 inches long), and specialized cleaning solutions to carefully remove stubborn dirt and bird droppings without harming the panels.

Mechanical & electrical health check

Loose connections can result in electrical issues and decreased system efficiency. Regular inspections and securing all connections firmly can help avoid these problems and keep the system running efficiently.

Monitoring performance

By consistently monitoring your solar system's performance, you can catch problems early, which helps prevent expensive repairs down the line.

Pro tip

Pick a solar installation company that provides real-time monitoring via a mobile app. This allows you to monitor your system's performance and ensure it is generating power at its optimal capacity.

WILL PURCHASING SOLAR REQUIRE A LOT OF TIME AND EFFORT ON MY PART?

#1

Evaluate your electricity needs

First step Look at your monthly energy consumption (in kWh) for the past 6-12 months to understand your average usage.

#2

Have your roof survey

It's important to have your roof evaluated to ensure it's capable of supporting solar panels.

The roof should be strong enough to handle the weight of the solar panels and offer enough unobstructed space, free from shadows, to allow for efficient energy generation.

#3

Choosing a reputable solar provider

A trustworthy provider will deliver high-quality installation and ongoing support for your solar system.

Experienced:
They should have a solid track record of solar panel installations.

Responsive:
They should be able to answer all your queries in detail.

Maintenance Services:
Choose a provider that offers full maintenance support for your system.

Licensed:
Ensure they have the proper certification to operate.

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#4

Request a solar estimate

After selecting a **solar provider**, ask for a solar estimate. This will cover the cost of all system components, installation, and required permits.

#5

Secure the required permits.

Prior to beginning installation, it's important to obtain all required permits from your local government, including a net meter permit. Depending on your situation, you may also need permits for a load change, name change, or a subsidy application. Your installation provider will assist you in determining if these additional permits are necessary.

#6

Mount and connect the solar panels

After securing all necessary permits, the solar provider will proceed with installing the solar panels on your roof.

#7

Connect to the grid

Once the installation is complete, the solar panels must be connected to the electrical grid. This process will require an inspection by your local distribution company (discom).

#8

"Enjoy solar! Let the sun pay your electricity bills

Once your solar system is connected to the grid, you can begin reaping the rewards of solar power by generating your own electricity.

How much does rooftop solar cost? What about government subsidy?

The cost of rooftop solar varies based on system size, location, and the type of panels & inverters that used.

Government Subsidy:

The Indian government offers subsidies under the Ministry of New and Renewable Energy (MNRE) scheme:

- **Up to 3 kW**: A subsidy of **40%** of the total cost.
- Above **3 kW and up to 10 kW**: A subsidy of **20%** for the additional capacity beyond 3 kW.
- Above **10 kW**: No subsidy for capacity exceeding 10 kW, but the first 10 kW qualifies for the same benefits.

Subsidy for residential households

Total kilowatts (kW)	Applicable Govt Subsidy
Upto 2 kW	₹ 30,000 kW
Upto 3 kW	**₹ 30,000/kW for the first 2 kW; Thereafter ₹ 18,000/kW**
Larger than 3kW	**₹ 78,000 fixed**

To avail of the government subsidy for rooftop solar systems, you must meet certain eligibility criteria:

1. Property Type:

Subsidies are available only for residential properties, including individual houses and housing societies.

2. System Type:

The solar system must be grid-connected to qualify for the subsidy.

3. Solar panels:

The solar panels used must comply with ALMM specifications issued by (MNRE).

The Ministry of New and Renewable energy (MNRE) transfers the subsidy directly to the customer's bank account within 30 days after local discom inspection.

Capacity	Mounting cost	Subsidy	Avg. Installation Cost
2 kW	₹1,75,000	₹ 60,000	₹1,15,000
3 kW	₹2,00,000	₹ 78,000	₹1,22,000
4 kW	₹2,70,000	₹ 78,000	₹1,92,000

Please note:

The costs mentioned above are approximate and can vary depending on several factors, such as the product variant, net-metering charges, type of panels and inverters, mounting structure, and the after-sales service chosen. These installation costs take into account

- No Maintenance contract / Packages
- String inverters and installation charges

Key Facts About Solar Energy and the Environment

1. Renewable Energy Source

Solar energy is a clean, inexhaustible resource that reduces dependency on fossil fuels.It helps combat climate change by lowering greenhouse gas emissions.

2. Reduces Carbon Footprint

A typical 5 kW solar system can prevent approximately 7,000 kg of CO_2 emissions annually, equivalent to planting over 100 trees per year.

3. Decreases Air Pollution

Unlike coal or gas power plants, solar panels produce electricity without releasing pollutants like sulfur dioxide, nitrogen oxides, or particulate matter.

4. Saves Water Resources

Solar power generation uses significantly less water compared to coal or nuclear power plants, helping conserve vital freshwater resources.

5. Mitigates Climate Change

By reducing fossil fuel usage, solar energy helps lower the concentration of greenhouse gases in the atmosphere, mitigating global warming.

6. Improves Public Health

Cleaner air and reduced environmental pollution lead to fewer health issues like respiratory and cardiovascular diseases.

7. Minimizes Land Use Impact

Rooftop solar systems make efficient use of already developed spaces, avoiding the need for new land.

8. End-of-Life Recycling

Solar panels can be recycled, reducing waste and ensuring materials like glass, aluminum, and silicon are reused sustainably.

Why Choose SKS Synergies for Your Solar Installation?

1. **Proven Expertise**

   SKS Synergies has extensive experience in designing and installing reliable solar systems tailored to individual needs.

2. **End-to-End Service**

   From consultation and installation to maintenance and support, we provide a seamless, hassle-free experience.

3. **Top-Quality Equipment**

   We use only premium, MNRE-approved solar panels and equipment to guarantee durability and efficiency.

4. **Certified Professionals**

   Our team consists of skilled and certified professionals who ensure the highest standards of quality and safety.

5. **Government Subsidy Assistance**

   We guide you through the subsidy application process, helping you reduce your initial investment.

6. **Live Monitoring & Support**

   We offer live system monitoring through mobile apps, ensuring your system performs at its best, with ongoing support whenever needed.

7. **Commitment to Sustainability**

   By choosing SKS Synergies, you're partnering with a company dedicated to promoting clean, renewable energy for a greener future.

Ready to make the switch? Let SKS Synergies handle your solar journey with professionalism and care!

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Ready to enjoy up to 90% savings on your electricity bills?

Book a FREE in-home or virtual solar consultation today!

Call or Whatsapp us at

9655272707

Book via Website

www.skssynergies.com

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