



AXISOL

SAVINGS THROUGH THE ROOF!

A GUIDE FOR HOUSING SOCIETIES TO GO SOLAR





A transition to
clean energy is
about making an
INVESTMENT
in our future



DHAVAL MEHTA – CEO



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BHAVIN MEHTA – CTO

We at Axisol are pushing every single day to achieve India's mission of achieving 500 gigawatts (GW) by 2030.

Join us in contributing to an energy independent India.





21 MW +

Projects Commissioned

Proven track record across
diverse verticals

7 +

YEARS IN OPERATION

Excellence in execution
& astute project planning

100 +

Happy customers

Constantly innovating to
add value to your investment



IN-HOUSE
DESIGN EXPERTISE



EFFICIENT BOS
PROCUREMENT



INSTALLATION
& COMMISSIONING



BEST INSTALLATION
PRACTICES



PERFORMANCE
TESTING



REMOTE
MONITORING



PREDICTIVE
MAINTENANCE



CENTRALISED
CUSTOMER SUPPORT

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01. How does India consume electricity ?



OLD WAY

- Coal powered electricity is transmitted to your building Via electrical Grid
- In the process people who earn are:
 - Electricity generators
 - Electricity Transmission companies
 - Local discomm companies who bill the end consumer on a monthly basis
- In this whole process, there are about 30% transmission losses which are also factored-in your monthly bill. This is massively expensive as there are too many parties involved who all want to earn profits
- Leads to Carbon emissions that causes global warming and pollution
- Since every unit of electricity that you consume is from grid, you pay for each unit of electricity consumed

NEW WAY

- Clean Electricity Energy generated by Solar system installed on your rooftop
- During the process of electricity generation, there is ZERO EMISSION by a solar rooftop system
- Once installed, your solar rooftop system will generate free electricity for a minimum of 25 years
- You only pay for the extra units of electricity that you consume from grid (over and above the electricity generated by your solar rooftop system)

WE AT AXISOL HELP YOU WITH END-TO-END



ROOFTOP SOLAR
DESIGNING



INSTALLATION



MAINTENANCE

INCLUDING ALL GOVERNMENT PERMITS AND SUBSIDIES

02. What system capacity is right for our Society ?



Three parameters determine the right solar system size:

01

Electricity bill

How many units do you consume each month on each common area meter?

*1 kW solar = 1,400 units/ year

02

Rooftop space

How much square feet of shadow free rooftop solar space is available in your building?

*1 kW Solar = ~80-100 sq ft

03

Discom policy

Solar system capacity cannot exceed your meter's sanctioned load

*Solar Capacity <= ~Sanctioned Load (*50kW limit for LT Meters)



Let's take the example of a housing society that consumes 35,000 units/ year.

- The society's unit consumption/ year: 35,000 units
- Units generated/ kW/ year: 1,400 units
- Suitable solar system size for this society: 25 kW ($35,000/1,400$)

03. What is the cost of a solar system ?



The cost of a rooftop solar system depends on:

- **System size**
- **Panel Type**
- **Payment method you choose – direct or EMI**

**Here's the estimated cost of a rooftop solar system
(as per the commodity cost in June 2024)**

System Size	Average installation cost/ kW (without GST)
25 kW	₹55,000 to ₹58,000
50 kW	₹48,000 to ₹53,000
100 kW	₹45,000 to ₹50,000
150 kW and Above	₹44,000 to ₹48,000

Note: The installation cost provided above includes:

- DCR Mono-PERC solar panels
- String inverter
- 6-feet module mounting structures (MMS)
- Prices may differ basis any special considerations at the site. The above costing is for a 5-storey apartment

04. How much will we actually save by going solar ?

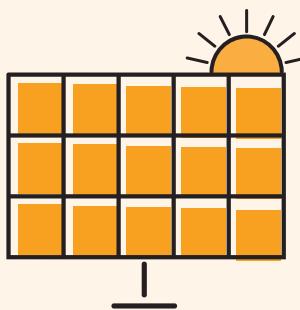


Your actual total savings will depend on the following four factors:



Your current electricity usage

Cost of electricity in your area



Size of the solar system you install

Your location which dictates the solar irradiance



05. When will we recover our money by going Solar ?

We provide all the AXISOL customers with an ROI document, which helps them have a near accurate understanding on the expected generation, thereby giving them proper clarity on break-even time.

06. What are the financing options and what are the Documents required ?



There are a total of 3 methods to finance your rooftop solar project

01

Self Funded

PAYMENT: Full payment would be required. Payments to the Solar vendor will be as per the execution stage of the solar project

BANK GUARANTEE: No Bank Guarantee required as there is no financing-option availed

COLLATERAL: No Collateral required as there is no financing-option availed

OPTED BY: This method is generally opted by cash rich societies, as the complete investment amount should be available for the installation with the society

SUBSIDY: Can be availed in this method of payment

OUR VIEW:

- If the society has sufficient funds, it should opt for this method, as there is no financing partner involved

- So in this method, since only the society has invested, only the society benefits

02

Loan / EMI

PAYMENT: Generally, around 30% payment would be required up-front. Remaining Payments to the Solar vendor will be by the financing partner as per the execution stage of the solar project

BANK GUARANTEE: Bank Guarantee will required as a financing-option is availed

COLLATERAL: Typically, 60-70% of the Solar project cost value will be required in the form of bank guarantee by the financing partner, in order to safeguard their investment in your society's rooftop solar

SUBSIDY: Can be availed in this method of payment

OPTED BY:

-This method is generally opted by societies where they do not wish to invest the complete project cost immediately and want to break up the expense outflow over a longer period-of-time.

-However, the societies still need to have significant cash surplus in their account as 30% is required up front and remaining 70% in the form of BG

OUR VIEW:

-Managing committees of Large societies (with more than 50 members) face significant challenges in getting the loan approved in the AGM and also loose significant time in arriving at a consensus with all the society member.

-Smaller societies or societies with greater mutual-understanding should opt for this method as the financial burden is divided over a longer period of time

MINIMUM DOCUMENTS REQUIRED IF ANY FINANCING OPTION AVAILED:

- PAN CARD of society
- Last 12 months bank statement
- Last 3 months electricity bill
- Last 2 years audited financials
- Registration documents
- List of members
- Contact details

03

FUNDED BY AXISOL

PAYMENT: Only 1% of the project cost would be required upfront for legal agreements. Remaining payments will be recovered from only against monthly electricity units that are supplied to your society from the installed solar rooftop system

BANK GUARANTEE: Bank Guarantee will required as a financing-option is availed

COLLATERAL: Typically, 30% of the Solar project cost value will be required in the form of bank guarantee by AXISOL, in order to safeguard our investment in your society's rooftop solar

SUBSIDY: Cannot be availed in this method of payment

OPTED BY:

- This method is generally opted by societies where they do not wish to invest the complete project cost immediately and want to break up the expense outflow over a longer period-of-time.
- Societies with low cash-surplus in their account can opt as only 30% of the project cost is required up front and that too in the form of a BG

OUR VIEW:

- Managing committees of Large societies (with more than 50 members) face significant challenges in the form of
- Difficult to arrive at a large-investment decision due to so many stake holder's involvement
- Loose significant time in arriving at any consensus with the society members
- Very low faith and changing managing committees questioning precious decisions.
- In such cases, requiring "no investment" or "loans from banks" makes the decision making faster and very transparent as the payment are to be made only for the electricity units generated. If no units generated then no payment to be made. It is a performance-linked-pay.

07. How much subsidy will we get on rooftop solar ?



The Indian government offers housing societies up to ₹90 Lakh in subsidy for rooftop solar. Govt. has recently doubled subsidy to ₹18,000/kw (up to 500kw) for RWAs under PM Suryaghar Muft Bijli Yojana.

This subsidy is applicable on made-in-India DCR solar panels on systems up to 500 kW for common facilities.

AXISOL will help you with all the required paperwork.

Subsidy offered to housing societies

System size	Subsidy offered
50 kW	₹9,00,000
100 kW	₹18,00,000
150 kW	₹27,00,000
500 kW	₹90,00,000

Subsidy offered to Residential Rooftops

System size	Subsidy offered
1 kW	₹30,000
2 kW	₹60,000
3 kW & Above	₹78,000



08. Which panels should we buy ?

Two main choices of module technology are
MONOCRYSTALLINE & BIFACIAL SOLAR PANELS.

MONOCRYSTALLINE



Composition

Single silicon crystal

Sunlight collection

One side

Peak power generation

500-watt

Degradation Rate/ Year

0.55%

Shadow Performance

Can perform

BIFACIAL



Two silicon cells facing opposite directions

Both sides

540-watt

0.45-0.50%

Can perform

01

Form a solar committee

Form a special solar committee for vendor selection (Civil/ Electrical Engineers, Treasurer, etc.).

- Explore options through vendors
- Compare quotes
- Prepare budget and ROI calculation
- Present the budgetary and returns

02

Get in-principle approval

Get a nod from all management committee members to go solar within the tentative budget agreed in an AGM meeting first.



03

Float an RFQ (Request for Quote)

Inviting open quotes will lead to different configurations, making it difficult to compare prices. Floating an RFQ for vendor selection after AGM approval will:

- Bring all vendors on a level playing field
- Help standardise bill of materials
- Make comparison easier for management committees

04

Educate Residents

Circulate reading material/ solar presentation before meeting to build consensus.

Pro tip

Axisol can assist your society in drafting RFQs and share our ready-made RFQ templates.



10. What are some of the solar myths that societies should know ?



MYTHS

Solar systems don't work in the monsoons

Solar systems are too expensive to own

Rooftop solar doesn't require maintenance

A solar system spoils the look of the rooftop

By installing a higher capacity system, you can sell the extra units for money

FACTS

Solar works in all seasons
- though the units generated vary

Rooftop solar is not an expense, but an investment which gives you big returns for 25 years

Solar systems need regular maintenance, & reputed solar providers offer service

A well-installed solar system is an aesthetic addition to a rooftop

Rooftop solar should only be installed for captive consumption. Any excess units sent to the grid at the end of a year are purchased at very petty rates



WHY TRUST AXISOL FOR YOUR PROJECTS



**7+ YEAR'S EXPERIENCE
IN SOLAR EPC**

MOST COST EFFECTIVE & VIABLE SOLAR SOLUTIONS

We work together with the client in adopting the most cost effective methods which ensures viability on your investment. While designing your plant, we pay attention to choosing matching components and source the best products available globally.

TRANSPARENT PRODUCT SELECTION & PROCUREMENT

We are not here to push any favoured products, but instead, we provide you with informed options and help you choose the best fit products for your system.

**PHASED DESIGN
AND PLANNING**

**SOURCING TIER 1 SOLAR
PANELS AND INVERTERS**

5 YEAR EPC & WORKMANSHIP SUPPORT

Every little part of our installation is covered beginning from structure to wiring to small fitments. Due diligence on our part translates into hassle free maintenance and operations for you, for years.

**END-TO-END PROJECT
EXECUTION**

**INCLUDES NET METERING
& SUBSIDY**

MINIMUM PLANT PERFORMANCE RATIO OF 75%

Our expert in-house engineering and design center maintains high quality construction and installation methodologies which enables you to reduce your system losses to gain maximum yield from your system.

**RETURN ON INVESTMENT
4 YEARS
OR LESS**

INNOVATIVE INSTALLATION SOLUTIONS

Based on your site requirements our design and engineering team can suggest installation solutions that help you maximise your usage of space while generating optimum power.

**FREE ELECTRICITY FOR
25 YEARS
OR MORE**



SAVINGS THROUGH THE ROOF!

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