

REDEVELOPMENT BAZAAR SOLAR HOUSING SCHEME .

Rooftop Solar PPAs: Innovative Energy Solutions for Housing Societies

This comprehensive guide explores how Rooftop Solar Power Purchase Agreements (PPAs) can

transform energy management for housing societies and residential communities. Through this no-investment green energy solution, your community can significantly reduce electricity costs, contribute to environmental sustainability, and enjoy hassle-free renewable energy. The following sections detail the benefits, implementation process, and real-world savings of this innovative approach to community solar power.

Rooftop Solar PPAs Explained

Rooftop Solar PPAs represent a pioneering green energy solution for residential societies, entering a blue ocean market with a unique IoT-enabled OPEX-based model that simplifies the transition to renewable energy. This innovative approach removes traditional barriers to solar adoption by eliminating upfront costs and technical complexities.

What is a Solar PPA?

An onsite solar PPA is a contract between a developer and a customer with suitable space to install a solar PV system. This agreement allows residential communities to benefit from solar energy without purchasing the equipment, focusing instead on the energy produced.

Developer Responsibilities

The developer installs and maintains the solar PV system for a fixed term and sells the electricity to the customer at a tariff significantly lower than the grid. All technical aspects, including system performance, maintenance, and repairs, are handled by the developer throughout the contract period.

Customer Benefits

The customer pays no upfront costs (capex) for the solar PV system and enjoys the savings, energy security, and sustainability of solar power delivered at a fixed tariff. This arrangement provides budget predictability with protection against rising utility costs.

Aligned Incentives

The customer only pays for the energy produced by the plant. Hence, the incentives of both parties are fully aligned. The developer is motivated to maintain optimal system performance, while the customer benefits from maximum clean energy production.

No capex, hassles or risks. Only green savings. The PPA model transforms solar energy from a complex capital investment into a simple utility service, making renewable energy accessible to all residential communities.

Value to End Customer (Societies)

50% ¹2Cr+

Electricity Bill Reduction

Housing societies can experience dramatic reductions in their electricity expenses, with savings of up to half of their current bills. This immediate impact on operating costs benefits all residents.

Long-Term Savings

Over the tenure of the PPA, societies can accumulate savings exceeding 12 Crores, representing a significant financial benefit that can be directed toward other community improvements and amenities.

10

Quality Serviced Asset

The solar PV system is installed, maintained, and serviced at zero cost to the society. Professional monitoring and maintenance ensure optimal performance without burdening the community with technical responsibilities.

24/7 Real-Time IoT Updates

Advanced IoT

technology provides residents with real-time updates on energy production and savings via WhatsApp, creating transparency and engagement with the solar installation's performance.

Beyond these quantifiable benefits, housing societies also gain improved energy security during grid outages, contribute to environmental sustainability, and enhance their property value through modern green infrastructure. The solar installation becomes a visible symbol of the community's commitment to innovation and environmental responsibility.

The above numbers are considering a 220 kWp solar plant which required approximately 2,220 square meters of shadow-free area.

The 3-Month Path to Green Savings

Implementing a rooftop solar PPA is a straightforward process designed to minimize disruption while maximizing benefits for housing societies. The journey from initial assessment to energy savings typically spans just three months, with clear milestones along the way.



✔ Start of Savings!

Within just 3 months from initial contact, your housing society will begin generating clean energy and realizing significant financial savings. The developer handles all technical aspects, while your community simply enjoys lower electricity costs and environmental benefits.

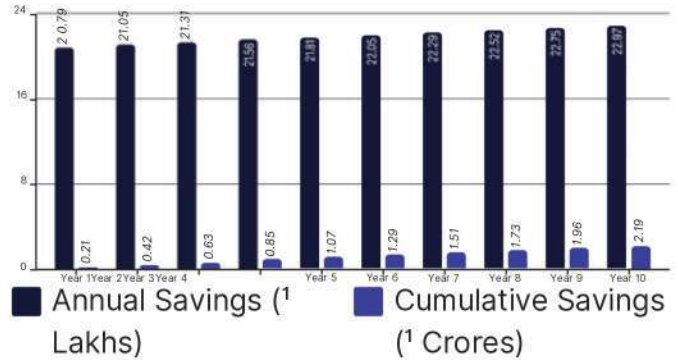
This streamlined implementation process minimizes administrative burden on housing society management while ensuring rapid deployment of solar technology. Each step is managed by experienced professionals who guide the community through the transition to clean energy with minimal disruption to residents' daily lives.

Case Study: Savings from Rooftop Solar PPAs

To illustrate the substantial financial benefits of adopting a rooftop solar PPA, let's examine a real-world implementation at a housing society in Mumbai. This case demonstrates how communities can achieve significant savings without any capital investment.

Customer Profile

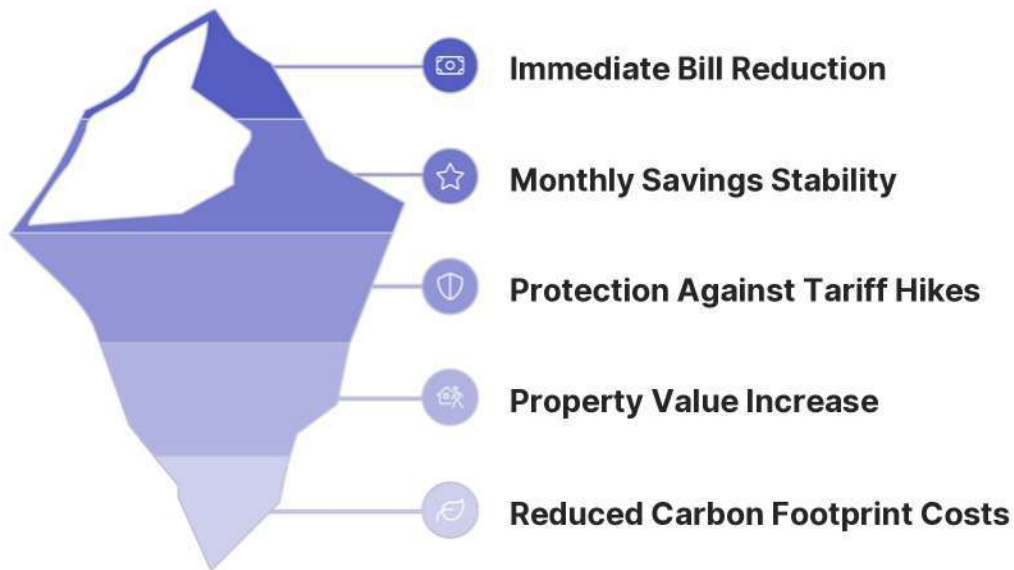
- Housing Society in Mumbai, Maharashtra
- 220 kWp solar system capacity
- Zero investment from customer (10 capex)
- First-year savings: 121 Lakhs
- Minimum 10-year savings: 12.2 Crores



This case study demonstrates how the solar PPA model delivers immediate and substantial savings for residential communities. The solar tariff remained fixed at 19.00 per kWh throughout the contract period, while the grid electricity tariff increased annually, amplifying savings over time.

The financial analysis shows a consistent increase in annual savings, driven by rising grid electricity costs while solar tariffs remain constant. The economic benefits continue to grow, demonstrating the long-term value proposition of the solar PPA model.

Financial Impact Analysis



The case study from Mumbai demonstrates how a 220 kWp solar installation delivers substantial economic benefits through a PPA structure. The financial advantages extend far beyond the immediately visible electricity bill reductions, creating multiple layers of value for housing societies.

Key Financial Parameters

| Parameter | Value |
|---------------------------|-------------------|
| Solar Tariff (Fixed) | ₹19.00 per kWh |
| Grid Tariff (Year 1) | ₹16.00 per kWh |
| Grid Tariff Inflation | 1% annually |
| Solar Generation (Year 1) | 1,350 kWh per kWp |
| Panel Degradation Rate | 1% annually |

Long-term Value Creation

The financial impact extends beyond direct electricity savings to include:

- Predictable energy costs for budget planning
- Protection against volatile utility rate increases
- Enhanced property value for all residents
- Reduced common area maintenance fees
- Potential carbon credit opportunities
- Improved financial position for future community improvements

i The ₹12.2 Crore savings over 10 years represents a conservative estimate based on historical grid tariff increases. If electricity prices rise more rapidly than projected, savings could be substantially higher.

Understanding Net Metering



Net metering is a crucial component of the rooftop solar PPA that significantly enhances its financial benefits for housing societies. This billing mechanism allows communities to feed excess solar electricity back to the grid when production exceeds demand, receiving credits that offset consumption during periods when solar generation is insufficient.

System Components

- **PV Plant:** Solar panels that convert sunlight into electricity
- **Solar Meter:** Measures total electricity generated by solar panels
- **Net Meter:** Bidirectional meter that tracks energy flowing to and from the grid
- **LT Panel:** Connects the solar system to the building's electrical infrastructure
- **Local Grid:** The utility power network that exchanges electricity with the building
- **DG (Optional):** Backup generator that can integrate with the solar system

Billing Comparison

| Scenario | Grid Exchange | Billed Units |
|----------------------|--------------------------------------|--------------|
| Without Net Metering | 0 kWh Exported 1,000 kWh Imported | 1,000 kWh |
| With Net Metering | 800 kWh Exported 200 kWh Imported | 600 kWh |

With net metering, the society only pays for the **net consumption** (imports minus exports), maximizing the financial benefits of solar generation even when production and consumption patterns don't perfectly align.

📌 Net metering regulations vary by state and utility company. The solar PPA provider will handle all regulatory requirements and ensure compliance with local net metering policies.

Getting Started: Required Information

To evaluate the feasibility of a rooftop solar PPA for your housing society and prepare a customized proposal, we need specific information about your community and its energy usage patterns. This initial data gathering is simple and requires minimal effort from society management.

1

Society Information

Please provide your society's name, precise location (Google Maps link), and governing entity details such as RWA incorporation documents (scanned copies). This information helps us understand your community structure and assess legal requirements for PPA implementation.

2

Electricity Consumption Data

Share 12 months of electricity bills for your society's common areas. These documents help us analyze your consumption patterns, peak usage times, and seasonal variations to design an optimally sized solar system that maximizes your savings.

3

Available Installation Areas

Provide photographs or screenshots of potential installation areas on your property, particularly rooftops. These visuals help our technical team assess available space, orientation, shading, and structural considerations for optimal panel placement.



4

Term Sheet Approval

Review and sign off on the preliminary term sheet (detailed in the next section) to indicate your society's interest in proceeding. This non-binding document outlines the general framework for the PPA and initiates the detailed assessment process.

Once this information is provided, our team will conduct a comprehensive analysis and present a detailed proposal specifically tailored to your society's needs, including projected savings, system specifications, and implementation timeline. This no-obligation assessment gives your management committee the data needed to make an informed decision.

Term Sheet Overview

The Power Purchase Agreement (PPA) term sheet establishes the framework for the long-term partnership between your housing society (the Power Purchaser) and the solar provider (the Power Seller). While the complete document contains comprehensive legal details, here are the key provisions that society management should understand:



Agreement Structure

A Built-Operate-Own-Transfer (BOOT) model: the Power Seller installs, maintains, and sells solar electricity at a fixed rate. After the contract, the system transfers to the society for 11.



Maintenance Responsibilities

The Power Seller manages all system operations, maintenance, repairs, insurance, and upgrades. The society provides site access and basic utilities (water, power).



Contract Duration

The agreement typically spans 10 years with a lock-in period, ensuring maximum savings and system performance throughout the operational period.



Dispute Resolution

Clear mechanisms for addressing disagreements, including discussion, mediation, and arbitration, with jurisdiction specified.



Tariff Structure

The Power Purchaser pays a fixed INR 9 per kWh for solar electricity. This rate remains constant throughout the agreement, regardless of grid tariff increases.



Lien Requirement

A lien of 16 lakhs per 100 kWp will be required for project security. It survives for the 10-year PPA term and is extinguished post-term.

This overview highlights the main components of the term sheet, but society management should carefully review the full document to understand all rights and obligations.

Authorized Signatory Name

Designation

Date

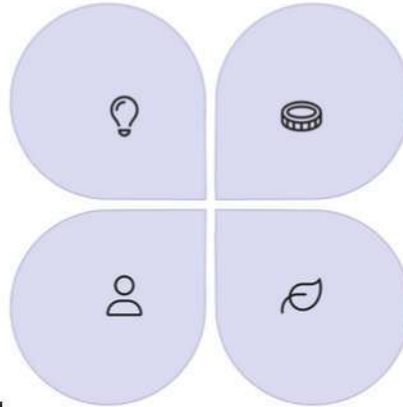
Together, Let's Build a Brighter, Cleaner Future

Sustainable Energy Solutions

By adopting rooftop solar, your society joins the renewable energy movement, reducing dependence on fossil fuels and embracing clean, sustainable power generation for decades to come.

Empowered Communities

Take control of your energy future while inspiring neighboring societies to follow your example, creating a network of environmentally conscious communities across India.



Significant Cost Savings

Transform your society's financial outlook with immediate electricity bill reductions and substantial long-term savings that can be redirected to community improvements and resident benefits.

Reduced Carbon Footprint

Make a meaningful environmental impact by significantly reducing your community's carbon emissions, contributing to cleaner air and a healthier planet for future generations.

Rooftop Solar PPAs offer housing societies an unprecedented opportunity to simultaneously reduce operational costs, increase property values, and demonstrate environmental leadership4all without any capital investment or technical expertise required from the community.

Your society's journey toward sustainable energy independence begins with a simple conversation. Contact us today to explore how rooftop solar can transform your community's energy profile and financial outlook for years to come.

For More Details

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