

Solar Rooftop Installation and Generation in Uttar Pradesh

The Uttar Pradesh New and Renewable Energy Development Agency (UPNEDA) and Uttar Pradesh Power Corporation Ltd. (UPPCL) have been actively working on solar rooftop installations.

According to the data from UPNEDA, as of July 2024, Uttar Pradesh has installed around 1065 MW of solar rooftop capacity across various sectors. This includes both residential and commercial installations.

The power generation from these solar rooftop systems has been consistently growing, contributing significantly to the state's renewable energy output. Monthly generation data varies, but it is estimated that these installations generate approximately 125 million kWh of electricity per month.

Lucknow Electricity Rate

Avg. Electricity bill of residential homes is Rs. 3000 to Rs. 5000 in summer season and Rs. 1000 to Rs. 2000 in winter and rainy season. Avg. Electricity rates in Lucknow is Rs. 7 per unit and some extra charge.

Slab Unit	Cost Per Unit (Rs.)
0 – 150 Units	Rs. 5.50
150 – 300 Units	Rs. 6.00
300 – 400 Units	Rs. 6.50
More than 400 Units	Rs. 7.00
Fixed/Demand Charges	Rs. 412.50
Electricity Duty	Rs. 20.63
Sanctioned Load	3 kW / 5 kW

The rate of electricity is 7.50 Indian Rupee per unit (kWh) for residential consumers and 12.50 Indian Rupee for commercial consumers which includes all components of the electricity bill such as the cost of power, distribution, and taxes. We find electricity traffic rate after discussion with local residents of Lucknow. In Lucknow, there is slab unit charge cost of electricity. In Lucknow, 70% of homes have a 3kW sanctioned load and 25% of homes have 1kW & 2kW sanctioned load. Avg. cost of normal homes (which has 3kW meter) come approx. Rs. 3000 to 3500 per month.

How to Install Rooftop Solar?

Bill Amount (in Rs.)	Recommended System (in kW)	Payback
3,000	3kW	4-5 years
5,000	5kW	4-5 years
7,500	7.5kW	4-5 years
10,000	10kW	4-5 years

The economics of rooftop solar energy in India has become extremely compelling. It makes great sense for commercial and industrial customers to use rooftop solar energy as it has become much cheaper than the grid electricity. You can convert your own property into a revenue-generating avenue by investing in solar and achieving ROI in just 4-5 years.