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Houses take a shine to solar power

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New Delhi

Cost Down, Investment Recovered In 5-6 Yrs

As solar panels get cheaper, they are being bought for use in houses also.Until last year, industries and institutions like schools and hospitals bought most of the rooftop solar systems to save on power bills and taxes.

Free power from solar panels offset the high rate of electricity for commercial use and businesses were also able to claim accelerated depreciation (a method to increase deductions) on the equipment to lower their taxable income.

Households, however, were reluctant to pay the steep initial cost of rooftop systems. But now, prices have come down to a level where users can recover the initial cost in 5-6 years, so interest in these systems is increasing.

"Our company is receiving decent demand from the residential sector because people have realized that they can reduce their electricity bill considerably . The highest slab of grid tariff that a household pays is Rs 9.6 per unit but with the installation of rooftop solar systems they only have to pay around Rs 6.5 per unit. Installing a system of 3kW-5kW can reduce the electricity bill by 30%," says Tanya Batra, senior marketing manager, Sunkalp Energy .

The demand from households is growing slowly and there are limitations attached to the installation of solar power panels. The wind speed in an area determines the thickness of a solar panel. The efficiency of a system also depends on its orien tation. It has to face outwards and be at an angle of 28 degrees from the ground for optimum efficiency .

Sunil Tiku, associate vice president of Luminous Power Technology Limited, says his customer base from the residential sector is limited to people who have independent houses. "It is difficult to install solar panels in multistorey housing societies. Residents of apartments that do not have (independent) roofs cannot install solar panels and not all the residents of a housing society would want to invest so much in solar energy-driven systems."

The solar energy sector is carrying out various innovations in an attempt to attract the attention of individual consumers towards the benefits of solar power.

Rooftop systems come with a net metering system that displays the power produced in real time on a monitor.

Many companies are also developing economical solar products. "We have come up with solar batteries that can charge inverters. They are very economical and useful in areas that face frequent power cuts," says K K Roy , director of Kalisons Telvent Private Limited that supplies solar energy equipment.

Atul Khanna, a resident of Green Park, installed a 4kW solar panel in his house a year ago. His experience has been good so far as he is able to save Rs 4,000 on his electricity bill.

"With the net metering system I am able to monitor the energy produced which I give to BSES in return for a reduction in my electricity bill. Even though the installation cost was high it has turned out to be beneficial in the long run."

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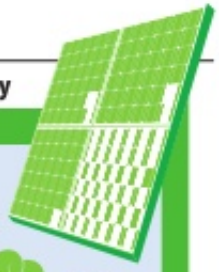
HARNESSING THE SUN

The Energy Efficiency & Renewable Energy Management Centre will be nodal agency

HIGHLIGHTS OF DRAFT POLICY

- Mandatory installation on all government rooftops, to be completed within 3 years
- All government buildings with a minimum shadow-free rooftop area of 50 sq m must generate 5 kW or 15% of sanctioned load
- Solar adoption will be encouraged with generation-based incentive for 3 years
- Solar panels can also be floated on perennial water bodies



Installation must with net metering on 50% of shadow-free rooftop area in buildings completed after Sep 1, 2015

COMMERCIAL
500 sq m

RESIDENTIAL
300 sq m

Amendment to building bylaws

Height of structure carrying solar panels shall not be counted towards total height of building

INCENTIVES

- A generation-based incentive (GBI) of ₹ 2 per solar unit for 3 years
- It will be paid on a first-come first-serve basis
- GBI shall come from a Green Fund established by government
- If consumer's bill falls to lower tariff slab through use of net metering, they aren't eligible

- Electricity tax shall be exempted for solar energy units generated
- No transmission and wheeling charge for five years
- Solar panels, inverters, energy meters and other devices exempted from VAT and entry tax for five years

- Generator can avail proceeds of carbon credits if any

Growth plan for solar power in Delhi

Fiscal year	Solar energy generation target (MW)	Cumulative generation target (MW)
FY 16	60	65
FY 17	108	173
FY 18	184	357
FY 19	281	638
FY 20	354	991
FY 21	276	1,268
FY 22	221	1,488
FY 23	186	1,674
FY 24	165	1,839
FY 25	150	1,989

How costly it is for domestic generators

Cost of 1 kW solar rooftop system
₹ 90,000

A basic household will need a 5 kW system which can run 1 geyser, 1 AC, 3 fans, 3 lights and 2 room heaters