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GRID-CONNECTED ROOFTOP SOLAR SYSTEM

FOR **COMMECIAL** AND **INDUSTRIAL** CONSUMERS

In a grid-connected rooftop solar (RTS) system, the DC power generated from solar panels is converted to AC power using a power conditioning unit/Inverter and is fed to the grid.

METERING ARRANGEMENT FOR **COMMERCIAL AND INDUSTRIAL (C&I) CONSUMERS**

What is Gross Metering?

In gross metering, the power generated from the rooftop solar system is only fed to the grid. The system owner gets paid by DISCOM for such exported power at a pre-decided tariff.

What is Net Billing?

Connections in net billing RTS system are similar to net metering. However, at the end of the billing cycle (normally a month) any excess energy in the grid shall not be carried forward like in net metering, but shall be purchased by the DISCOM as per the pre-decided tariff. Therefore, energy banking in the grid is only within a billing cycle.

POCKET-FRIENDLY **SYSTEM**

The rooftop solar system has a direct impact on the monthly electricity bill of each consumer. The average monthly generation from a 20kW system is 2700 units in Uttar Pradesh. The detail of monthly calculation and saving is provided below:

Parameter	Unit	Values for C&I Consumers
Capacity	kWp	20
Cost per kWp (Tentative)	₹	60,000
Cost of system	₹	12,00,000
Total Subsidy (Central + State)	₹	NA
Net Cost of system	₹	12,00,000
Units generation per month	kWh	2,700
Average unit cost	₹	8.5
Savings from Electricity	₹	22,950
Pay back(Tentative)	Year	4.4
Life of Plant	Year	25

VIEWS OF **SOLAR CHAMPION**

Dr. Rajendra Banaudha takes immense pride in being the owner of a 28kW rooftop solar system seamlessly integrated at Nirmala Hospital in Uttar Pradesh.
The facility's sanctioned load is 45kW. The installation process of this grid-connected rooftop solar (RTS) system was remarkably efficient, completed within a single month. In the past, Dr. Rajendra Banaudha used to grapple with a daunting monthly electricity bill of 1.5 Lakhs. However, since the implementation of this system, this financial burden has substantially reduced to ₹75,000. The substantial reduction of over 50% in his bill is attributed to the ability to feed surplus power into the grid.

Expressing his profound contentment, Dr. Rajendra Banaudha applauds the successful deployment of the RTS system at his commercial establishment. With enthusiasm, he extends his recommendation to fellow consumers to join him in the role of Solar Champions, collectively contributing to the transformation of their cities into vibrant solar hubs.

SOCIO-ENVIRONMENT **BENEFITS**

- **Reduces air pollution**- Electricity generation from fossil fuels can generate harmful carbon dioxide and methane gases that lower the quality of the air we breathe. A rooftop solar system uses solar energy which doesn't produce harmful gases.
- **No extra land requirement**- Rooftop solar system doesn't require any separate piece of land for the installation. It can be designed in a manner where consumers can use the roof space for the solar plant.
- **Reducing our reliance on fossil fuels**- With the use of rooftop solar system, we can reduce the dependence on imported fossil fuels, making India ***'atmanirbhar'***.

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UTTAR PRADESH NEW AND RENEWABLE ENERGY DEVELOPMENT AGENCY
Department of Additional Sources of Energy, Government of Uttar Pradesh
Vibhuti Khand, Gomti Nagar, Lucknow, Uttar Pradesh 226010

Helpline No. : 1800 1800 005, 9415609078
www.upneda.org.in