VATSAA ENERGY

Solar On Grid Rooftop solution

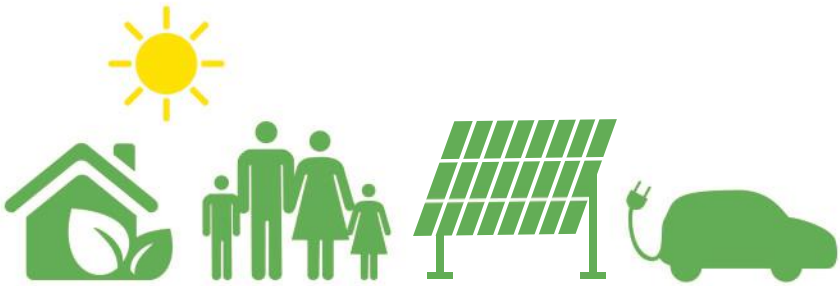
Govt. of India
MNRE
Channel Partner
MNRE/EN/GCRT/1626

VATSAA ENERGY

Green power for ever

Solution For Electricity Tariff

Electricity prices across India shows a huge hike in the last few years. Price per unit for a domestic customer have increased by more than 45%, for an industrial customer by more than 35% and for a commercial customer by more than 20% in the last 5 years.This hike will go on in coming years, as our power needs are also increasing day by day. Rising fuel costs (coal and diesel) and an urgent need of increasing generation capacity and grid infrastructure are responsible for this tariff hike.



Vatsaa Energy presents a unique solution for this increasing tariff trend.We the masters of green power offer Grid-tie Solar Rooftop System. It is the only answer to this increasing tariff trend as it would tap solar energy as an alternate source of electricity and help in reducing the monthly electric bill to a large extent.

Vatsaa Energy -Solar Rooftop system

A tie grid rooftop solar is photovoltaic system that has its solar modules mounted on the rooftop of a residential / commercial/industrial building. The system converts solar electric power into utility –grade electricity. This electricity can be utilised to operate all kinds of electrical utensils and any additional power generated can be transmitted to the power grid. For the system to run, the solar grid tie inverter must be grid power connected and available. Advanced form of art electronics inside the inverter guarantees that maximum power is converted to electricity and distributed for regular consumption or transmission to the power grid.

Component	Installation	Function
Solar modules	Installed on the roof. With maximum precision	Converts solar power in to direct current.
Solar inverter	Installed inside the house under the module.	Converts output of solar module ie, DC current into utility grid electricity.
Bi-directional Energy meter	Installed near to the current electricity meter.	Monitor and record number of units consumed or supplied to grid
Other accessories		

Solar Modules

Mounted on a supporting structure that converts solar energy into direct current (DC). We vatsaa energy is using globally trusted modules which are manufactured with highest standards of quality (ISO9001:2008and ISO14001:2004) and are designed to be cost- effective, robust, rugged and highly efficient. Solar module means a set of photovoltaic modules which are electrically connected and

We are using solar modules with specific features as given below

Manufactured in India and abroad on leading technology using world class processes.

Reliability and durability under all extreme conditions, certified to withstand snow loads and wind loads .

Greater energy generated due to positive power tolerance of up to 5W

TUV and UL certified Potential Induced Degradation free modules

corrosion free GI structure

Structure designed to with stand 150kmph wind speed

Solar Grid-tie Inverter

A solar grid- tie inverter converts the direct current of a photovoltaic solar module into utility grade electricity that can be transmitted to a power grid or which can be used by a local network. It guarantees a stable DC output and provides maximum power point tracking to get maximum possible power output from the solar modules. We are using globally recognized inverters with specific standards as below

IP-65, environmental protection rating, can withstand extreme weather conditions

Efficiency up to 97% and wide input voltage range

Certified IP21 PCU enclosure for indoor use

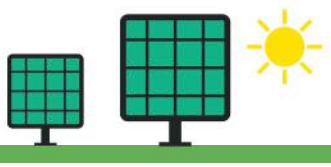
Remote monitoring system with RF technology / Wifi

Inbuilt anti- islanding feature

LCD display

All – pole fault current monitoring and ground fault monitoring features

VDE/ Golden Sun/ IEC certified



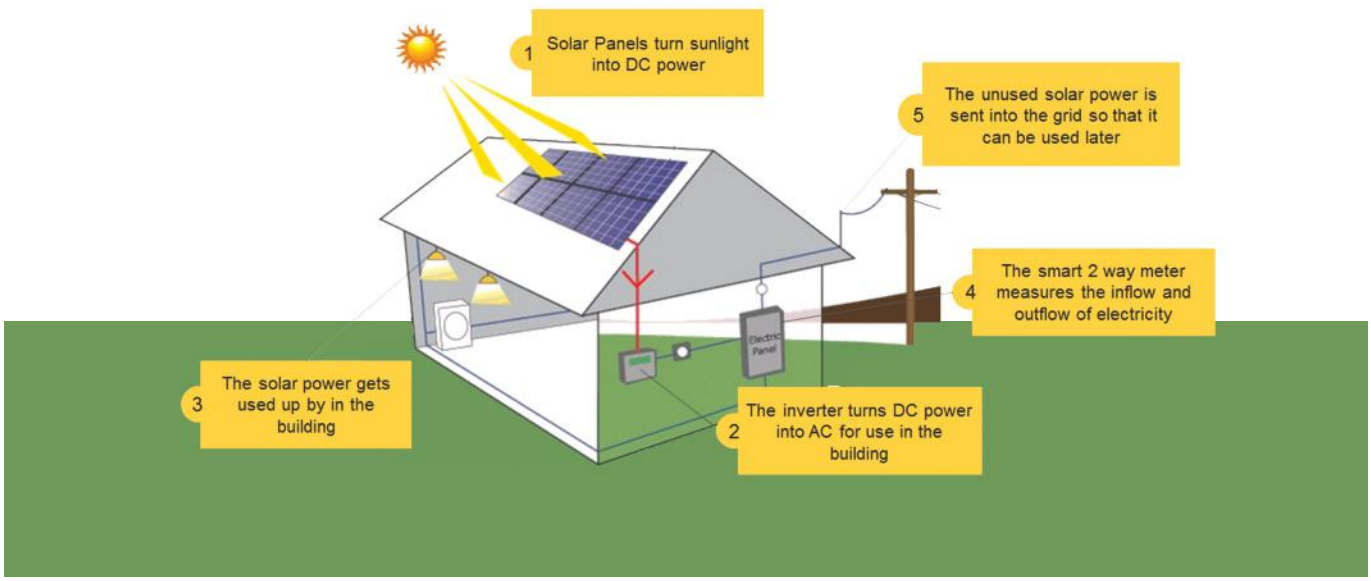
Vatsaa Energy Solar Grid- tie Rooftop Solutions

	SUNROOF-5000	SUNROOF-10000	SUNROOF-15000
Rooftop area required	500-700sqft	1000sqft	1500-1700sqft
Grid-tie solar inverter	5kVA	10kVA	15kVA
Solar modules	20nos. 250Wp	40nos. 250Wp	60nos. 250Wp
Units generated annually	7300	14600	21900
Annual Saving of upto*	62392	130301	198210

	SUNROOF-20000	SUNROOF-30000	SUNROOF-50000
Rooftop area required	2000sqft	3000sqft	5000sqft
Grid-tie solar inverter	20kVA	30kVA	50kVA
Solar modules	80nos. 250Wp	120nos. 250Wp	200nos. 250Wp
Units generated annually	29200	43800	73000
Annual Saving of upto	266062	401880	673440

System Installation technique

1. Solar panel converts sunlight into Direct current.
2. Inverter converts DC current into useable utility grade electricity.
3. When the solar system produce any additional power it is sent back to your electricity providers adding money to your wallet .
4. Electric power is imported from the grid and used for our home purposes during night hours.
5. Bi-directional energy meter that measures how much power you are consuming and if any additional power your's solar power system it feeds to the grid.



Technical Specification

	SUNROOF-5000	SUNROOF-10000	SUNROOF-15000
No of units(KWh)generated per year	7300	14600	21900
AC connection(Phase)	Single/ Three	Three	Three
COMPONENTS			
Solar Modules	20*250Wp	40*250Wp	60*250Wp
Inverter	5 KVA	10 KVA	15 KVA
Module mounting structure	Hot dip galvanized. Floor mounted		
FEATURES			
INPUT PARAMETERS			
Maximum DC input power	5500W	11000W	17000W
Maximum DC input voltage	600V	1000V	1000V
MPPT work voltage range/ nominal voltage	150V - 500V	200V-1000V/600V	350V-800V/600V
Maximum input current	10A	15A	23A
No. of MPPT tracker/ strings per tracker	2/2	2/2	2/2
OUTPUT PARAMETERS			
Maximum AC output power	5KW	10KW	15KW
Rated AC output power	5KW	10KW	15KW
voltage	230V/400V	230V/400V	230V/400V
Maximum output current	8A	16A	24A
Output frequency range	47-53Hz/57-63Hz	47-53Hz/57-63Hz	47-53Hz/57-63Hz
Power factor (Adjustable)	>0.99@full power 0.80 lead–0.80 lag	>0.99@full power 0.80 lead–0.80 lag	>0.99@full power 0.80 lead–0.80 lag
EFFICIENCY			
Maximum	98%	98%	98%
Euro- eta	97.50%	97.50%	97.5%
MPPT efficiency	99.5%	99.5%	99.5%
PROTECTION			
Ground fault monitoring	Yes	Yes	Yes
Grid monitoring with anti-islanding	Yes	Yes	Yes
All- pole fault current monitoring unit	Yes	Yes	Yes
DC reverse polarity protection	Yes	Yes	Yes
DC switch for MPPT	Yes	Yes	Yes
OTHERS			
Display	LCD	LCD	LCD
Communication interface (RS485/Ethernet/Wifi/RF)	Optional	Optional	optional

Technical Specification

	SUNROOF-20000	SUNROOF-30000	SUNROOF-50000
No of units(KWh)generated per year	29200	43800	73000
AC connection(Phase)	Three	Three	Three
COMPONENTS			
Solar Modules	80*250Wp	120*250Wp	200*250Wp
Inverter	20 KVA	30 KVA	50 KVA
Module mounting structure	Hot dip galvanized. Floor mounted		
FEATURES			
INPUT PARAMETERS			
Maximum DC input power	22000W	31000W	56000W
Maximum DC input voltage	1000V	1000V	1000V
MPPT work voltage range/ nominal voltage	350V-800V/600V	350V-800V/600V	350V-800V/600V
Maximum input current	30A	66A	130A
No. of MPPT tracker/ strings per tracker	2/2	2/2	2/2
OUTPUT PARAMETERS			
Maximum AC output power	20KW	30KW	50KW
Rated AC output power	20KW	30KW	50KW
Voltage	230V/400V	230V/400V	230V/400V
Maximum output current	32A	48A	60A
Output frequency range	47-53Hz/57-63Hz	47-53Hz/57-63Hz	47-53Hz/57-63Hz
Power factor (Adjustable)	>0.99@full power 0.80 lead–0.80 lag	>0.99@full power 0.80 lead–0.80 lag	>0.99@full power 0.80 lead–0.80 lag
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Benefits from solar roof tops

Forget your shocking electricity bills
Install a solar power system with adequate specification to eliminate conventional power use.

Get rid of tariff hikes
Don't worry about rising tariff hikes because it has no impact on your budget.

Harvest money from your rooftop space
Excess power produced is supplied to the grid and we can earn marginal profits too.

Reap depreciation benefit
Eligible for accelerated depreciation of 80% in the first year of commissioning.

Vatsaa Energy Solar Advantages

Domestic, industrial and commercial rooftop solar player,	Vatsaa Energy Pvt.Ltd realised world's first concrete floating solar power plant for KSEB.We are the pioneers of solar technology , and MNRE channel partner. Our solutions are world class with supreme technology and undergo stringent quality processes
Dependable , reliable & long lasting	We give standard warranty conditions on solar modules ensuring longevity of the system
Experience and excellence in solar industry	Vatsaa Enegy has Govt. of india MNRE channel partnership under Grid Connected Rooftop and Solar powerplants programme. We believe , our well experienced and skilled manpower can address all technical challenges in the industry.
Accessibility	We provide site survey to assess your precise requirement, install best – fit solution for maximizing your benefits, & ensure assistance for all government paper work.
Efficient and effective customer Service and support	We ensure fulltime customer support post installation providing you complete peace of mind.

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Vatsaa Energy Pvt. Ltd

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