

Solar Rooftop for

- Housing Society
- Individual Houses

Dtd: 5th june 2019 Sandip Ghosh









Rooftop Solar Plant in Housing Society









You are paying around **Rs. 6.20** per Kwh to DHBVNL for electricity from the grid

Your society is having around 5000-10,000 Sq. ft. of shadow free roof-top / open space









A Win – Win Proposal

- Assessment of Housing Society roof top space for installing a solar power generating plant and preparation of Project Report
- Get Solar power plant installed on the roof top without any capex contribution.
- Electricity generated from the roof top solar plant to be consumed by the Housing Society – with option of export of surplus, if any.
- Payments to be made on monthly basis for electricity consumed.







- For the solar energy consumed, you continue to pay Rs. 5.50 per Kwh (escalation free for the agreement period) as you pay today.
- Solar Plant O&M will be done by us including.
- Agreed price will be not change during period of contract (except any future tax levied by Govt/DISCOM which shall be paid extra).
- After the contract period is over, the solar plant to be transferred to RWA at a value of Rs 1.

- After the contract duration is over, you keep on using the free energy from solar plant
- If required, We can also take care off O&M on agreed charges.

The indicative Contract period shall be 14 Years

<u>Free Energy utilized after 12Years is 1.58 Million Units - Savings of over Rs. 86 lakh over 13 years</u>
(considering 100KWp Solar plant)





Grid Connected Solar Plant with Battery Back-Up for Residents











HERC Latest Regulation for Domestic



Tariff for 2019-20 (W.E.F. 01.05.2019)			
Category of consumers	Energy Charges (Paisa / kWh or/ kVAh)	Fixed Charge (Rs. per kW per month of the connected load / per kVA of sanctioned contract demand (in case supply is on HT) or as indicated	MMC (Rs. per kW per month of the connected load or part thereof)
Domestic Suppl	-		
Category I: (Tota	al consumption	n up to 100 units per r	month)
0 - 50 units	270/kWh	Nil	Rs. 115 up to 2
per month			kW and Rs. 70
51-100	450/kWh	Nil	above 2 kW
Category II: (Total consumption more than 100 units/month and up to 800 units/month))			
0-150	450/kWh	Nil	Rs 125 upto 2 kW and Rs.75 above 2 kW
151-250	525/kWh	Nil	
251-500	630/kWh	Nil	
501-800	710/kWh	Nil	
Category III:			
801 Unit and	710/kWh	Nil	Rs. 125up to 2
above	(flat rate		kW and Rs.75
	no		above 2 kW
	telescopic		
	benefits)		

Consumer

Various benefits have kept for promoting smart meters/smart grid in the State. The incentive has been given on rooftop solar system @ Rs. 1/- per unit only for all DS consumers/Bulk supply (domestic) consumers. In case the solar system is accompanied by battery storage system of the equivalent capacity, additional incentive of Rs. 1/- per unit has been provided, for Bulk Supply (Domestic) consumers.

As per new HERC for solar grid connected system with battery back-up shall qualify for **Rs. 2/-** discount on electricity billing





Grid Connected, Battery Back-Up Solar Plant for 300 sq.ft Roof space



Roof Space	300 Sq. ft.
Typical Sanctioned load	3 KWp
Average Billing/ Month	Rs. 2000 - 3000
Average Consumption Year	5160 units
Average yearly bill	Rs. 28,524
Average unit rate	Rs 5.5
Suggested Solar Plant rating	2 KWp
Solar Plant Price	Rs. 1,60,000 + taxes
Subsidy @ Rs. 14850/ KWp	Rs. 29,700
Effective Price	Rs. 1,30,300
Estimated yearly generation	3100 units
Consumables unit from DISCOM (with solar plant)	2060 units #
Government Incentive on billing	Rs. 2/- per unit
Yearly Billing after considering the slabs, Haryana government incentive for Solar & Battery	Rs. 5564
Normal Inverter Battery cost	Rs. 29,000
Return on Investment (ROI) considering no requirement of inverter battery	4.4 Years

BOQ – 2 Kw Hybrid Solar Plant			
Products	Specification	Quantity	
Solar Module	Polycrystalline	1950 Wp	
Solar Hybrid Inverter	2 Kva/ 48V	1	
Solar Battery	12 V/ 75 Ah	4	
Structure, BOS & I&C	Structure, Cables, Earthing etc.	1 set	
Warranty	Complete set	5 years	

- 1. Cost of Solar Plant recover in 4 4.5 years
- 2. System comes with battery back-up, so no need to buy separate inverter battery system.
- 3. Net saving in 15 years—approx. 2.5 lacs (after adjusting replacement of inverter battery cost)

- estimated @best case scenario





Grid Connected, Battery Back-Up Solar Plant for 500 sq.ft Roof space



Roof Space	500 Sq. ft.
Typical Sanctioned load	5 KWp
Average Billing/ Month	Rs. 3000 - 4000
Average Consumption Year	8640 units
Average yearly bill	Rs. 52,908
Average unit rate	Rs 6.1
Suggested Solar Plant rating	4 KWp
Solar Plant Price	Rs. 3,00,000 + taxes
Subsidy @ Rs. 14850/ KWp	Rs. 59,400
Effective Price	Rs. 2,60,600
Estimated yearly generation	6200 units
Consumables unit from DISCOM (with solar plant)	2440 units #
Government Incentive on billing	Rs. 2/- per unit
Yearly Billing after considering the slabs, Haryana government incentive for Solar & Battery	Rs. 6810
Normal Inverter Battery cost	Rs. 55,000
Return on Investment (ROI) considering no requirement of inverter battery	4 Years

BOQ – 4 Kw Hybrid Solar Plant			
Products	Specification	Quantity	
Solar Module	Polycrystalline	3900 Wp	
Solar Hybrid Inverter	5 Kva/ 48V	1	
Solar Battery	12 V/ 100 Ah	4	
Structure, BOS & I&C	Structure, Cables, Earthing etc.	1 set	
Warranty	Complete set	5 years	

- 1. Cost of Solar Plant recover with in 4 years
- 2. System comes with battery back-up, so no need to buy separate inverter battery system.
- 3. Net saving in 15 years—approx. 5 lacs (after adjusting replacement of inverter battery cost)

- estimated @best case scenario





Grid Connected, Battery Back-Up Solar Plant for 1000 sq.ft Roof space



Roof Space	1000 Sq. ft.
Typical Sanctioned load	10 KWp
Average Billing/ Month	Rs. 8000 - 9000
Average Consumption Year	13200 units
Average yearly bill	Rs. 95,040
Average unit rate	Rs 7.2
Suggested Solar Plant rating	7.5 KWp
Solar Plant Price	Rs. 5,40,000 + taxes
Subsidy @ Rs. 14850/ KWp	Rs. 1,11,375
Effective Price	Rs. 4,88,625
Estimated yearly generation	11625 units
Consumables unit from DISCOM (with solar plant)	1575 units #
Government Incentive on billing	Rs. 2/- per unit
Yearly Billing after considering the slabs, Haryana government incentive for Solar & Battery	Rs. 4088
Normal Inverter Battery cost	Rs. 85,000
Return on Investment (ROI) considering no requirement of inverter battery	3.7 Years

BOQ – 7.5 Kw Hybrid Solar Plant			
Products	Specification	Quantity	
Solar Module	Polycrystalline	7500 Wp	
Solar Hybrid Inverter	7.5 Kva/ 48V	1	
Solar Battery	12 V/ 200 Ah	4	
Structure, BOS & I&C	Structure, Cables, Earthing etc.	1 set	
Warranty	Complete set	5 years	

- 1. Cost of Solar Plant recover in 3-4 years
- 2. System comes with battery back-up, so no need to buy separate inverter battery system.
- 3. Net saving in 15 years—approx. 11 lacs (after adjusting replacement of inverter battery cost)

- estimated @best case scenario









For Any Kind of Further Information and Project Enquiry

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Thank You

