

Before

UTTARAKHAND ELECTRICITY REGULATORY COMMISSION

Petition No. 56 of 2024 (Suo-Moto)

Order

In the matter of:

Review of the Benchmark Capital Cost for Solar PV, Solar Thermal and Grid Interactive Rooftop & Small Solar PV Plants to be applicable for FY 2024-25 and onwards till reviewed/revised by the Commission.

CORAM

Shri M. L. Prasad Member (Technical)- Chairman (I/c)

Shri Anurag Sharma Member (Law)

Date of Order: November 19, 2024

1. The Commission in exercise of the powers vested in it under Section 61(h) and Section 86(1)(e) read with Section 181(2)(zd) of the Electricity Act, 2003, notified the UERC (Tariff and Other Terms for Supply of Electricity from Renewable Energy Sources and non-fossil fuel based Co-generating Stations) Regulations, 2023 (hereinafter referred to as "RE Regulations, 2023") on 16th August, 2023.
2. Regulation 12 of the RE Regulations, 2023 specifies as under:

"12. Control Period or Review Period

The Control Period or Review Period under these Regulations shall be of five years, of which the first year shall be the financial year 2023-24.

Provided that the benchmark capital cost of Solar PV, Canal Bank & Canal Top Solar PV, Solar Thermal, Municipal Solid Waste based power projects, Refuse Derived Fuel based power projects and Grid interactive Roof Top and Small Solar PV projects may be reviewed annually by the Commission.

Provided further that the tariff determined as per these Regulations for the RE projects commissioned during the Control Period, shall continue to be applicable for the entire Tariff Period."

Accordingly, based on the above regulation, the Commission issued a draft order dated 05.09.2024 on Misc. Application No. 58 of 2024 (Suo-Moto) in the matter of review of benchmark capital cost for Solar PV, Solar Thermal and Grid Interactive Rooftop & Small Solar PV Plants (GRPV/GSPV) to be applicable for the projects commissioned during FY 2024-25 and onwards till reviewed or revised by the Commission.

3. The draft order was also posted on the Commission's website and comments were sought from the stakeholders on the same latest by 30.09.2024. However, no comments have been received from any of the stakeholders.
4. The Commission through this Order has determined the generic tariff for solar power plants on Suo-moto basis based on the norms specified in the RE Regulations, 2023. The present regulatory exercise is limited to the determination of benchmark capital cost and determination of generic tariff for Solar PV Power Plants, Solar Thermal Power Plants and Grid Interactive Rooftop & Small Solar PV Power Plants.
5. The benchmark capital cost and generic tariff have been revisited by the Commission based on the latest available data w.r.t. module cost, duties & taxes, CPI & WPI indexation, Exchange Rates and SBI MCLR Rates.
6. **Solar PV Projects**

6.1 Capital Cost

The Commission vide its draft Order dated 05.09.2024 had proposed to revise the capital cost of Solar PV based Projects and while doing so the Commission had considered the average cost of Module at 0.0868 USD/Wp and an exchange rate of Rs. 83.78/USD. Further, the Commission had also considered applicable import duty of 40% on solar modules, and degradation of 0.50% on a yearly basis, which was then applied to the module cost to arrive at yearly degradation cost. Thus, the total cost of module worked out to Rs. 104.56 Lakh/MW. The Commission had proposed Rs. 50.00 Lakh/MW as cost of land for FY 2024-25 as considered for arriving at the capital cost of Solar PV projects for FY 2023-24. The costs of civil works, mounting structure, Power conditioning units, taxes and IDC/IEDC had been considered amounting to Rs. 153.70 Lakh/MW.

In light of the above discussion, the Commission had proposed the capital cost of

Rs. 308.26 Lakh/MW for Solar PV projects to be commissioned on or after 01.04.2024.

As mentioned earlier, no suggestions or objections have been received from any of the stakeholders w.r.t. capital cost. Accordingly, the Commission has adopted the same methodology as adopted in the draft Order for determination of the benchmark capital cost of Solar PV plants. The Commission has considered the average module cost of 0.0866 USD/Wp based on the average price of solar module available on *www.pvinsights.com* from June, 2024 to September, 2024. Further, average exchange rate for the same period has been considered which works out to Rs. 83.75/USD. Accordingly, based on the above discussion, the module cost works out to Rs. 72.53 Lakh/MW. Furthermore, the Commission has also considered import duty of 40% on solar module cost and degradation of 0.05%. Accordingly, final module cost works out to Rs. 104.36 Lakh/MW.

The Commission has considered the land cost of Rs. 50 Lakh/MW as proposed in the draft Order. Further, the Commission had proposed the capital cost of Rs. 153.70 Lakh/MW for other components of Solar Power Plants escalating the approved cost for FY 2023-24 based on the average of CPI & WPI of the last three years giving equal weightage. Accordingly, based on the average of CPI & WPI and GST implication on solar components, the Commission approves the cost of Rs. 153.68 Lakh/MW for other works, i.e. civil work, mounting structure, power conditioning unit etc. including IDC/IEDC, taxes.

In view of the above discussions & analysis, the Commission approves the cost of Solar PV based Plant for FY 2024-25 as follows:

Table 1: Approved Benchmark Capital Cost of Solar PV Project for FY 2024-25

S. No.	Particulars	Capital Cost (Rs. Lakh/MW)
1.	PV Modules	104.36
2.	Land Cost	50.00
3.	Civil work, mounting structure, power conditioning unit etc. and IDC/IEDC, taxes and contingency etc.	153.68
	Total Capital Cost	308.03

6.2 Tariff for Solar PV Plants

Based on the proposed benchmark capital cost for Solar PV Plants amounting to Rs.

308.26 Lakh/MW, the Commission in its draft Order dated 05.09.2024 had proposed a gross tariff of Rs. 4.42/kWh and accelerated depreciation of Rs. 0.18/kWh.

The Commission is of the view that the present exercise has been initiated under the mandate of RE Regulations, 2023 which requires the Commission to review the benchmark capital cost in each financial year. In compliance with the same, the Commission has approved the benchmark capital cost of Solar PV Plants to be commissioned during FY 2024-25. Based on the revised capital cost, tariff has been strictly worked out in accordance with the tariff principles stipulated in RE Regulations, 2023.

In view of the above discussion, the Commission has determined the gross tariff of Rs. 4.43/kWh and accelerated depreciation of Rs. 0.18/ kWh for Solar PV sources commissioned on or after 1st April, 2024 as depicted in Annexure-I. This tariff shall continue to be the maximum tariff and the distribution licensee shall invite bids from generators/developers for procurement of power from these generators/developers.

Further, it has been observed that the Government of India/Government of Uttarakhand provides financial incentives to the developers for establishment of renewable and green energy plants in Uttarakhand. Accordingly, where any kind of subsidy/ incentive is allowable to the solar power plant developer, the Gross tariff and Net tariff of Solar PV shall decrease by 1.74 Paisa /unit and 1.63 paisa/kWh respectively for every one percent of capital subsidy as determined based on the benchmark capital cost considered by Central and/or State Government as the case may be. The same can be understood from the illustration given below:

Table 2: Illustration demonstrating adjustment of subsidy in approved tariff for Solar PV plant

S. No.	Subsidy (in %)	Subsidy (Rs./kWh)	Applicable Tariff
1.	0%	Gross Tariff = Rs. 0.0174/kWh*0= 0	Gross Tariff = Rs. 4.43/kWh
		Net Tariff = Rs. 0.0163/kWh*0= 0	Net Tariff = Rs. 4.25/kWh
2.	26%	Gross Tariff =Rs. 0.0174/kWh*26= 0.45	Gross Tariff = Rs. (4.43-0.45)= Rs. 3.98/kWh
		Net Tariff = Rs. 0.0163/kWh*26 = 0.42	Net Tariff = Rs. (4.25-0.42)= Rs. 3.83/kWh

7. Grid Interactive Rooftop & Small Solar PV based Projects (GRPV & GSPV)

7.1 Capital Cost

The Commission in the draft Order had considered the capital cost for FY 2024-25 as per the methodology adopted by the Commission while finalizing the benchmark capital cost for different slabs based on the installed capacity for previous years. Further, the Commission had kept the Solar Module cost and land cost for Grid Interactive Rooftop & Small Solar PV plants having capacity above 500 kW & up to 1 MW equivalent to the Solar Module cost determined for Solar PV plants. With respect to the cost of 'other components' namely power conditioning equipment including inverter, mounting structure and evacuation facility of GRPV & GSPV, such costs for Solar PV plants as were proposed for FY 2024-25 was to be escalated by 35% in accordance with the methodology adopted by the Commission in the previous Orders. However, inadvertently, such costs approved for Solar PV plants for FY 2023-24 were escalated to arrive at the proposed cost for the 'other components' for GRPV & GSPV for FY 2024-25. Now the calculation error has been corrected in this final Order. Further, the total capital cost determined for GRPV & GSPV having capacity above 500 kW & upto 1 MW had been proportionately increased for afore-mentioned slabs based on the same methodology adopted during finalization of benchmark capital cost for FY 2023-24.

Accordingly, the Commission had proposed a capital cost of Rs. 36,881/kW, Rs. 33,836/kW, Rs. 31,921/kW and Rs. 30,991/kW for Grid interactive Rooftop & small Solar PV plants having installed capacity upto 10 kW, above 10 kW to 100 kW, above 100 kW upto 500 kW and above 500 kW & upto 1 MW respectively in the draft Order.

With regard to grid interactive Rooftop and Small Solar PV based project, the stakeholders have not submitted any comments.

7.1.1 Commission's View and Analysis

A) Solar PV Module Cost

The Commission in its draft Order had proposed the Solar PV module cost of Rs. 12,443/kW, Rs. 11,415/kW, Rs. 10,769/kW and Rs. 10,456/kW for grid interactive Rooftop & small Solar PV projects having installed capacity upto 10 kW, above 10 kW to 100 kW, above 100 kW upto 500 kW and above 500 kW & below 1 MW respectively based

on the methodology adopted by the Commission during FY 2023-24. The Commission has not received any particular objection from the stakeholders in the matter. Accordingly, based on the latest available data and methodology adopted during FY 2023-24, the revised PV module cost of Rs. 12,419/kW, Rs. 11,394/kW, Rs. 10,749/kW and Rs. 10,436/kW has been considered by the Commission for Rooftop and Small Solar PV plants having installed capacity upto 10 kW, above 10 kW to 100 kW, above 100 kW upto 500 kW and above 500 kW & upto 1 MW respectively.

B) Land Cost/Civil & general works

The Commission in the draft order had proposed the Land/ Civil & general works cost amounting to Rs. 5,950/kW, Rs. 5,459/kW, Rs. 5,150/kW and Rs. 5,000/kW for projects having installed capacity upto 10 kW, above 10 kW to 100 kW, above 100 kW upto 500 kW and above 500 kW & upto 1 MW respectively. The Commission has not received comments from the stakeholders in the matter. Accordingly, the Commission has considered the cost proposed for such works in the draft Order as final.

C) Other Components

The Commission had proposed a cost of Rs. 18,488/kW, Rs. 16,961/kW, Rs. 16,001/kW and Rs. 15,535/kW for grid interactive Rooftop and small Solar PV plants having capacity upto 10 kW, above 10 kW to 100 kW, above 100 kW upto 500 kW and above 500 kW & upto 1 MW respectively in the Draft Order for mounting structure, power conditioning unit, taxes and contingencies. The Commission has not received any comments w.r.t. capital cost considered for other components. Further, the calculation error has been corrected and now the cost of 'other equipment' for FY 2024-25 for GRPV & GSPV has been arrived at by escalating such cost of Solar PV plants for FY 2024-25 by a factor of 35%.

In the present order, the Commission has considered the approved cost of other components for FY 2024-25 for Solar PV plants and adopted the same methodology as followed during FY 2023-24 for determination of capital cost of other components. Based on the above discussions, the Commission approves Rs. 24,694/kW, Rs. 22,655/kW, Rs. 21,372/kW and Rs. 20,750/kW each for grid interactive Rooftop and small Solar PV plants having installed capacity upto 10 kW, above 10 kW to 100 kW,

above 100 kW upto 500 kW and above 500 kW & below 1 MW respectively under the head of other components by escalating the other component cost.

In view of the above discussions & analysis, the Commission has approved the cost of Rs. 43,063/kW, Rs. 39,507/kW, Rs. 37,271/kW and Rs. 36,185/kW for grid interactive Rooftop and Small Solar PV plants having installed capacity upto 10 kW, above 10 kW to 100 kW, above 100 kW upto 500 kW and above 500 kW & upto 1 MW respectively.

7.2 Tariff for Roof-top & Small Solar PV Plants

Based on the proposed benchmark capital cost for Solar PV Plants, the Commission in its draft Order dated 05.09.2024 had proposed a levellised tariff for FY 2024-25 as follows:

Table 3: Proposed Generic Tariffs for Grid connected Rooftop & Small Solar PV Plants (Rs./kWh)

Particulars	Upto 10 kW	Above 10 kW to 100 kW	Above 100 kW to 500 kW	Above 500 kW upto 1 MW
Levelling Tariff considering nil Subsidy				
Gross Tariff	5.51	4.99	4.65	4.45
Less: Acc Dep Benefit	0.20	0.18	0.17	0.17
Net Tariff	5.30	4.81	4.47	4.28
Levelling Tariff considering 20% Subsidy				
Gross Tariff	5.09	4.61	4.29	4.10
Less: Acc Dep Benefit	0.18	0.16	0.16	0.15
Net Tariff	4.91	4.45	4.13	3.95
Levelling Tariff considering 30% Subsidy				
Gross Tariff	4.88	4.42	4.11	3.92
Less: Acc Dep Benefit	0.17	0.15	0.15	0.14
Net Tariff	4.71	4.26	3.96	3.78
Levelling Tariff considering 40% Subsidy				
Gross Tariff	4.67	4.23	3.93	3.75
Less: Acc Dep Benefit	0.16	0.14	0.14	0.13
Net Tariff	4.51	4.08	3.79	3.62
Levelling Tariff considering 70% Subsidy				
Gross Tariff	4.05	3.66	3.39	3.23
Less: Acc Dep Benefit	0.12	0.11	0.10	0.10
Net Tariff	3.93	3.55	3.29	3.13
Levelling Tariff considering 80% Subsidy				
Gross Tariff	3.86	3.48	3.23	3.07
Less: Acc Dep Benefit	0.10	0.09	0.09	0.09
Net Tariff	3.75	3.39	3.14	2.98
Levelling Tariff considering 90% Subsidy				
Gross Tariff	3.70	3.34	3.09	2.94
Less: Acc Dep Benefit	0.09	0.08	0.07	0.07
Net Tariff	3.62	3.26	3.02	2.87

Based on the above discussions, the Commission has determined the gross and net

levellised tariff to be applicable for FY 2024-25 as depicted in Annexure II-A, Annexure II-B, Annexure II-C and Annexure II-D.

Table 4: Approved Generic Tariffs for Grid connected Rooftop & Small Solar PV Plants (Rs./kWh)

Particulars	Upto 10 kW	Above 10 kW to 100 kW	Above 100 kW to 500 kW	Above 500 kW below 1 MW
Gross Tariff	6.08	5.52	5.14	4.93
Less: Acc Dep Benefit	0.24	0.22	0.20	0.20
Net Tariff	5.84	5.30	4.94	4.73

Further, the Commission observes that the subsidy allowable under PM-Surya Ghar: Muft Bijali Yojna and Uttarakhand State Policy, 2023 varies from the subsidy levels i.e. 20%, 30%, 40%, 70%, 80 and 90%, considered by the Commission for generic tariff determination of GSPV/GRPV. In the present Order, the Commission decides to provide amount to be decreased from the approved generic tariff, without subsidy, for every one percent of capital subsidy to bring more clarity.

Accordingly, gross and net generic tariff for GSPV/GRPV having different capacity shall be decreased as follows for every one percent of capital subsidy as determined based on the benchmark capital cost considered by Central and/or State Government, as the case may be:

Table 5: Decrease in Gross and Net Tariff with every percentage of subsidy

Capacity	Reduction in Gross Tariff (paise/kWh)	Reduction in Net Tariff (paise/kWh)
Upto 10 kW	2.38	2.27
Above 10 kW and upto 100 kW	2.18	2.07
Above 100 kW and upto 500 kW	2.07	1.89
Above 500 kW and upto 1MW	1.99	1.88

The same can be understood from the illustration given below:

Table 6: Illustration demonstrating adjustment of subsidy in approved tariff for GSPV/GRPV

S. No	Capacity	Subsidy (in %)	Subsidy (in Rs./kWh)	Applicable Tariff
1.	Upto 10 kW	0.00%	Gross Tariff = Rs. 0.0238/kWh*0= 0	Gross Tariff = Rs. 6.08/kWh
			Net Tariff = Rs. 0.0227/kWh*0= 0	Net Tariff = Rs. 5.84/kWh
2.		27.00%	Gross Tariff = Rs. 0.0238/kWh*27= 0.64	Gross Tariff = Rs. (6.08-0.64) = Rs. 5.44/kWh
			Net Tariff = Rs. 0.0227/kWh*27 = 0.61	Net Tariff = Rs. (5.84-0.61) = Rs. 5.23/kWh
3.	Above 10 & upto	33.61%	Gross Tariff = Rs. 0.0218/kWh*33.61= 0.73	Gross Tariff = Rs. (5.52-0.73) = Rs. 4.79/kWh

	100 kW		Net Tariff = Rs. 0.0207/kWh*33.61= 0.70	Net Tariff = Rs. (5.30-0.70)= Rs. 4.60/kWh
5.	Above 100 & upto 500 kW	45 %	Gross Tariff = Rs. 0.0207/kWh*45= 0.93	Gross Tariff = Rs. (5.14-0.93/kWh)= Rs. 4.21/kWh
			Net Tariff = Rs. 0.0189/kWh*45= 0.85	Net Tariff = Rs. (4.94-0.85)= Rs. 4.09/kWh
6.	Above 500 kW & upto 1 MW	62%	Gross Tariff = Rs. 0.0199/kWh*62= 1.23	Gross Tariff = Rs. (4.93-1.23/kWh)= Rs. 3.70/kWh
			Net Tariff = Rs. 0.0188/kWh*62= 1.17	Net Tariff = Rs. (4.73-1.17)= Rs. 3.56/kWh

8. Solar Thermal Projects

8.1 Capital Cost

In line with RE Regulations, 2023, the Commission had proposed benchmark cost of Solar Thermal Plants of Rs. 1200.00 Lakh/MW.

The Commission has observed that no comments/objections on the proposed capital cost have been submitted by any of the developers or stakeholders, hence, the same has been considered by the Commission for the FY 2024-25.

8.2 Tariff

The Commission had proposed the tariff in respect of Solar Thermal Plants as Rs. 14.86/ kWh in its draft Order dated 05.09.2024.

Based on the approved capital cost and in accordance with the norms specified in RE Regulations, 2023, the applicable gross tariff for FY 2024-25 has been determined as Rs. 12.20/kWh and accelerated depreciation of Rs. 0.54/kWh as depicted in Annexure-III enclosed.

9. Generic Tariffs

Based on the revised capital cost, as proposed above, the Commission has determined the generic tariff to be applicable for projects to be commissioned in FY 2024-25 which is as follows:

Table 4: Approved Generic Tariff for FY 2024-25 in comparison to FY 2023-24

Particulars	Solar PV Plant (Rs./kWh)		Solar Thermal Plant (Rs./kWh)	
	FY 2023-24	FY 2024-25	FY 2023-24	FY 2024-25
Gross Tariff	4.64	4.43	14.34	12.20
Less: Acc Dep Benefit	0.18	0.18	0.63	0.54
Net Tariff	4.46	4.25	13.70	11.66

**Table 5: Approved Generic Tariffs for Grid connected Rooftop & Small Solar PV Plants for
FY 2024-25 in comparison to FY 2023-24 (Rs./kWh)**

Particulars	Upto 10 kW		Above 10 kW to 100 kW		Above 100 kW to 500 kW		Above 500 kW upto 1 MW	
	FY 2023-24	FY 2024-25	FY 2023-24	FY 2024-25	FY 2023-24	FY 2024-25	FY 2023-24	FY 2024-25
Levelling Tariff considering nil Subsidy								
Gross Tariff	6.29	6.08	5.71	5.52	5.33	5.14	5.11	4.93
Less: Acc Dep Benefit	0.25	0.24	0.23	0.22	0.22	0.20	0.21	0.20
Net Tariff	6.04	5.84	5.49	5.30	5.11	4.94	4.90	4.73

The above ceiling tariff shall be applicable on the projects commissioned or to be commissioned on or after 1st April, 2024 and shall remain applicable till further reviewed by the Commission.

(Anurag Sharma)
Member (Law)

(M.L. Prasad)
Member (Technical)- Chairman (I/c)

TARIFF DETERMINATION FOR SOLAR PV POWER PLANTS OF UTTARAKHAND FOR FY 2024-25

Units Generation	Unit	Year-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Generation	MU		1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66
Aux Consumption	%		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Saleable Energy	MU		1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66

Cost of Generation	Unit	Year-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Depreciation	Rs. Lakh		14.38	14.38	14.38	14.38	14.38	14.38	14.38	14.38	14.38	14.38	14.38	14.38	14.38	14.38	14.38	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16
O&M Expenses	Rs. Lakh		17.17	18.15	19.19	20.29	21.45	22.67	23.97	25.34	26.79	28.32	29.94	31.66	33.47	35.38	37.41	39.55	41.81	44.20	46.73	49.40	52.23	55.21	58.37	61.71	65.24
Interest on term loan	Rs. Lakh		24.49	22.80	21.11	19.43	17.74	16.05	14.36	12.67	10.98	9.29	7.60	5.91	4.22	2.53	0.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Return on Equity	Rs. Lakh		17.85	17.85	17.85	17.85	17.85	17.85	17.85	17.85	17.85	17.85	17.85	17.85	17.85	17.85	17.85	19.76	19.76	19.76	19.76	19.76	19.76	19.76	19.76	19.76	19.76
Interest on working Capital	Rs. Lakh		1.63	1.65	1.67	1.69	1.72	1.74	1.78	1.81	1.85	1.89	1.94	1.99	2.04	2.10	2.17	2.15	2.25	2.35	2.47	2.59	2.71	2.84	2.99	3.13	3.29
Total Cost of generation	Rs. Lakh		75.52	74.83	74.20	73.63	73.13	72.69	72.33	72.05	71.85	71.73	71.71	71.78	71.96	72.24	72.64	67.62	69.98	72.48	75.12	77.91	80.86	83.98	87.28	90.77	94.45
Per unit Cost of generation	Rs./kWh		4.54	4.50	4.46	4.42	4.39	4.37	4.35	4.33	4.32	4.31	4.31	4.31	4.32	4.34	4.36	4.06	4.20	4.35	4.51	4.68	4.86	5.05	5.24	5.45	5.67

Levelised Tariff	Rs./kWh	4.43
Accelerated Depreciation	Rs./kWh	0.18
Net Tariff	Rs./kWh	4.25

TARIFF DETERMINATION FOR ROOFTOP SOLAR PV PLANTS (INSTALLED CAPACITY UPTO 10 KW WITH NIL SUBSIDY) FOR FY 2024-25

Units Generation	Unit	Year--->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Generation	kWh		1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40
Aux Consumption	%		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Saleable Energy	kWh		1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40

Cost of Generation	Unit	Year--->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Depreciation	Rs.		2010	2010	2010	2010	2010	2010	2010	2010	2010	2010	2010	2010	2010	2010	2010	861	861	861	861	861	861	861	861	861	861
O&M Expenses	Rs.		2272	2402	2539	2685	2838	3000	3172	3353	3545	3748	3962	4189	4429	4682	4950	5233	5532	5849	6183	6537	6911	7306	7724	8166	8633
Interest on term loan	Rs.		3424	3188	2952	2715	2479	2243	2007	1771	1535	1299	1063	826	590	354	118	0	0	0	0	0	0	0	0	0	0
Return on Equity	Rs.		2495	2495	2495	2495	2495	2495	2495	2495	2495	2495	2495	2495	2495	2495	2495	2895	2895	2895	2895	2895	2895	2895	2895	2895	2895
Interest on working Capital	Rs.		222	224	227	230	233	236	241	245	250	255	261	268	275	282	290	290	303	317	332	348	364	381	400	420	441
Total Cost of generation	Rs.		10423	10318	10223	10135	10055	9985	9924	9874	9835	9806	9791	9788	9798	9823	9863	9279	9592	9922	10271	10641	11031	11444	11881	12342	12830
Per unit Cost of generation	Rs./kWh		6.26	6.20	6.14	6.09	6.04	6.00	5.96	5.93	5.91	5.89	5.88	5.88	5.89	5.90	5.93	5.57	5.76	5.96	6.17	6.39	6.63	6.88	7.14	7.42	7.71

Levelised Tariff	Rs./kWh	6.08
Accelerated Depreciation	Rs./kWh	0.24
Net Tariff	Rs./kWh	5.84

TARIFF DETERMINATION FOR ROOFTOP SOLAR PV PLANTS (INSTALLED CAPACITY ABOVE 10 KW & UPTO 100KW WITH NIL SUBSIDY) FOR FY 2024-25

Units Generation	Unit	Year-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Generation	kWh		1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40
Aux Consumption	%		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Saleable Energy	kWh		1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40

Cost of Generation	Unit	Year-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Depreciation	Rs.		1844	1844	1844	1844	1844	1844	1844	1844	1844	1844	1844	1844	1844	1844	1844	790	790	790	790	790	790	790	790	790	790
O&M Expenses	Rs.		2021	2137	2259	2388	2525	2670	2822	2984	3154	3335	3525	3727	3940	4166	4404	4656	4922	5204	5501	5816	6149	6500	6872	7265	7681
Interest on term loan	Rs.		3141	2925	2708	2491	2275	2058	1841	1625	1408	1191	975	758	542	325	108	0	0	0	0	0	0	0	0	0	0
Return on Equity	Rs.		2289	2289	2289	2289	2289	2289	2289	2289	2289	2289	2289	2289	2289	2289	2289	2656	2656	2656	2656	2656	2656	2656	2656	2656	2656
Interest on working Capital	Rs.		201	203	205	208	210	213	217	221	225	229	235	240	246	253	260	259	271	283	297	311	326	341	358	375	394
Total Cost of generation	Rs.		9497	9397	9305	9220	9143	9073	9013	8962	8920	8888	8868	8859	8861	8876	8906	8361	8639	8933	9244	9573	9920	10287	10676	11087	11521
Per unit Cost of generation	Rs./kWh		5.71	5.65	5.59	5.54	5.49	5.45	5.42	5.38	5.36	5.34	5.33	5.32	5.32	5.33	5.35	5.02	5.19	5.37	5.55	5.75	5.96	6.18	6.41	6.66	6.92

Levelised Tariff	5.52
Accelerated Depreciation	0.22
Net Tariff	5.30

TARIFF DETERMINATION FOR ROOFTOP SOLAR PV PLANTS (INSTALLED CAPACITY ABOVE 100 KW & UPTO 500 KW WITH NIL SUBSIDY) FOR FY 2024-25

Units Generation	Unit	Year-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Generation	kWh		1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	
Aux Consumption	%		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Saleable Energy	kWh		1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	

Cost of Generation	Unit	Year-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Depreciation	Rs.		1739	1739	1739	1739	1739	1739	1739	1739	1739	1739	1739	1739	1739	1739	1739	745	745	745	745	745	745	745	745	745	745
O&M Expenses	Rs.		1843	1948	2060	2177	2302	2434	2573	2720	2875	3040	3214	3398	3592	3797	4015	4244	4487	4744	5015	5302	5605	5926	6265	6623	7002
Interest on term loan	Rs.		2963	2759	2555	2350	2146	1942	1737	1533	1328	1124	920	715	511	307	102	0	0	0	0	0	0	0	0	0	0
Return on Equity	Rs.		2160	2160	2160	2160	2160	2160	2160	2160	2160	2160	2160	2160	2160	2160	2160	2506	2506	2506	2506	2506	2506	2506	2506	2506	2506
Interest on working Capital	Rs.		187	188	190	192	195	197	201	204	208	212	216	221	227	233	239	238	249	260	272	285	298	312	328	344	360
Total Cost of generation	Rs.		8892	8794	8703	8619	8541	8471	8409	8356	8311	8274	8249	8233	8229	8236	8255	7734	7987	8255	8538	8838	9155	9489	9844	10218	10614
Per unit Cost of generation	Rs./kWh		5.34	5.28	5.23	5.18	5.13	5.09	5.05	5.02	4.99	4.97	4.96	4.95	4.94	4.95	4.96	4.65	4.80	4.96	5.13	5.31	5.50	5.70	5.91	6.14	6.38

Levelised Tariff	5.14
Accelerated Depreciation	0.20
Net Tariff	4.94

TARIFF DETERMINATION FOR ROOFTOP SOLAR PV PLANTS (INSTALLED CAPACITY ABOVE 500 KW & UPTO 1MW WITH NIL SUBSIDY) FOR FY 2024-25

Units Generation	Unit	Year-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Generation	kWh		1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40
Aux Consumption	%		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Saleable Energy	kWh		1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40	1664.40

Cost of Generation	Unit	Year-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Depreciation	Rs.		1689	1689	1689	1689	1689	1689	1689	1689	1689	1689	1689	1689	1689	1689	1689	724	724	724	724	724	724	724	724	724	724
O&M Expenses	Rs.		1717	1815	1919	2029	2145	2267	2397	2534	2679	2832	2994	3166	3347	3538	3741	3955	4181	4420	4673	4940	5223	5521	5837	6171	6524
Interest on term loan	Rs.		2877	2679	2480	2282	2083	1885	1687	1488	1290	1091	893	694	496	298	99	0	0	0	0	0	0	0	0	0	0
Return on Equity	Rs.		2097	2097	2097	2097	2097	2097	2097	2097	2097	2097	2097	2097	2097	2097	2097	2433	2433	2433	2433	2433	2433	2433	2433	2433	2433
Interest on working Capital	Rs.		178	179	181	183	185	187	190	193	197	200	205	209	214	219	225	224	234	244	256	268	280	293	307	322	338
Total Cost of generation	Rs.		8558	8458	8366	8279	8199	8125	8059	8001	7951	7909	7877	7855	7842	7840	7851	7335	7571	7820	8085	8364	8659	8971	9301	9649	10018
Per unit Cost of generation	Rs./kWh		5.14	5.08	5.03	4.97	4.93	4.88	4.84	4.81	4.78	4.75	4.73	4.72	4.71	4.71	4.72	4.41	4.55	4.70	4.86	5.03	5.20	5.39	5.59	5.80	6.02

Levelised Tariff	4.93
Accelerated Depreciation	0.20
Net Tariff	4.73

TARIFF DETERMINATION FOR SOLAR THERMAL POWER PLANTS OF UTTARAKHAND FOR FY 2024-25

Units Generation	Unit	Year-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Generation	MU		1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66
Aux Consumption	%		10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%
Saleable Energy	MU		1.498	1.498	1.498	1.498	1.498	1.498	1.498	1.498	1.498	1.498	1.498	1.498	1.498	1.498	1.498	1.498	1.498	1.498	1.498	1.498	1.498	1.498	1.498	1.498	1.498

Cost of Generation	Unit	Year-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Depreciation	Rs. Lakh		56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	56.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00
O&M Expenses	Rs. Lakh		23.41	24.75	26.16	27.66	29.24	30.91	32.68	34.55	36.53	38.61	40.82	43.16	45.63	48.24	51.00	53.91	57.00	60.26	63.70	67.35	71.20	75.27	79.58	84.13	88.94
Interest on term loan	Rs. Lakh		95.41	88.83	82.25	75.67	69.09	62.51	55.93	49.35	42.77	36.19	29.61	23.03	16.45	9.87	3.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Return on Equity	Rs. Lakh		69.53	69.53	69.53	69.53	69.53	69.53	69.53	69.53	69.53	69.53	76.97	76.97	76.97	76.97	76.97	76.97	76.97	76.97	76.97	76.97	76.97	76.97	76.97	76.97	76.97
Interest on working Capital	Rs. Lakh		5.78	5.71	5.64	5.58	5.52	5.47	5.42	5.37	5.33	5.30	5.43	5.41	5.40	5.39	5.39	4.80	4.96	5.12	5.29	5.47	5.67	5.87	6.09	6.31	6.55
Total Cost of generation	Rs. Lakh		250.12	244.81	239.58	234.44	229.38	224.42	219.56	214.80	210.16	205.64	208.84	204.57	200.45	196.47	192.65	159.69	162.92	166.35	169.97	173.79	177.84	182.11	186.64	191.41	196.47
Per unit Cost of generation	Rs. /kWh		13.79	13.50	13.21	12.93	12.65	12.38	12.11	11.85	11.59	11.34	11.52	11.28	11.05	10.83	10.62	8.81	8.98	9.17	9.37	9.58	9.81	10.04	10.29	10.56	10.83

Levelised Tariff	12.20
Accelerated Depreciation	0.54
Net Tariff	11.66