Commission's Decision:

The Commission, in its earlier Orders has adopted the levellised tariff for a period of 25 years, in order to ensure certainty of revenue streams to the investors.

The Commission, therefore, decides to adopt levellised tariff for a period of 25 years.

iii) Degradation Factor:

The Commission has not proposed allowing any degradation factor in the discussion paper. But the Commission has been considering the degradation factor in its earlier Orders. The Commission notes that, there is no reliable data on degradation, as solar power generation in the country is in growing stage. The stakeholders have also not proposed any degradation factor for determination of tariff.

Commission's Decision:

The Commission in its earlier Order has considered reduction of 0.5% of net generation as annual degradation factor commencing from fifth year onwards, for MW scale projects. The Commission, therefore, decides to allow degradation factor of 0.5% of the net generation, as annual degradation from the fifth year onwards only in respect of MW scale projects.

iv) Capacity Utilisation Factor: (CUF)

In the Discussion Paper, the Commission had proposed a CUF of 19% for all the Solar Power Plants. The following are the suggestions from the stakeholders:

a) BESCOM has suggested to consider the CUF of 20% for MW scale projects.

b) Powergate Energy (Mysore) Pvt Ltd., has suggested to consider CUF of 17.5% for SRTPV.

c) KREA has also suggested, to consider CUF of 17.5% for SRTPV.

d) PCKL has suggested to consider the CUF of 27% for MW scale projects.

e) Sri. Raghunandan S.S, Karnataka Renewable Energy Association, has suggested to considered the CUF of 17.5% for SRTPV.

f) Sri. C.S Gopinath, GTSS infrastructure, has suggested to consider the CUF of 17.5% for SRTPV.

g) Sri. Sunil Mysore, Hinren Engineering, Bengaluru, has suggested to consider the CUF of 17.5% for SRTPV.

h) Sri. Kesari, Power Gate Energy, Mysore, has suggested to consider the CUF of 17.5% for SRTPV.

Commission's Decision:

The Commission, in its earlier tariff Orders had considered CUF of 19% for solar photovoltaic plants. In the CERC (Terms and Conditions for Tariff Determination from Renewable Energy Sources) Regulations, 2020, notified on 23.06.2020, it has allowed the minimum CUF for Solar PV Power Projects as 21%. The Commission notes that the CUF of Solar Plants would vary based on the irradiation profile and other parameters prevailing in the locations. It is always advisable to assume that solar power projects are taken up based on the initial studies of specific locations and their economic viability. Selection of locations with higher CUF would benefit the grid and also the investor. Commissioning of the Solar Power Plants in suboptimal locations results in a lower CUF which is not in the interest of the investors/ other stakeholders. In any case, while determining generic tariff, locational disadvantages of a few plants cannot be generalised and factored.

The Commission is of the view that, since the available technologies are yet to establish the exact CUF and the degradation factor and since adequate

data is not available, the Commission has to consider a reasonable CUF to balance the interest of the investors as well the consumers., Hence, based on the earlier orders of the Commission it decides to adopt a CUF of 19% for solar Plant (both ground mounted and SRTPV Plant).

v) Debt Equity Ratio:

For determination of Generic Tariff, this Commission in its earlier Tariff Orders and the CERC has considered 70:30 as the Debt Equity ratio. The Commission proposes to continue to consider the debt equity ratio of 70:30 for all the Solar Power Plants.

vi) Capital Cost:

a. The Commission, in its earlier Solar Generic Tariff Orders had considered the Capital Cost as follows:

   i. 1kW to 10 kW (domestic consumer) at Rs.45,000 per kW;

   ii. 1kW to 2000 kW-at Rs.32,800 per kW for SRTPV plants (other than SRTPV consumer covered under (i)) and;

   iii. Rs.340 lakhs per MW for MW scale and ground mounted solar power plants.

b. The Commission had proposed to consider the following latest market rates as compared to the capital cost considered in its earlier Generic Tariff Order:

   i. 1kWto 10 kW (domestic consumer) at Rs. 43,760 per kW;

   ii. 1kW to 2000 kW-at Rs. 30,218 per kW for SRTPV plants (other than SRTPV consumer covered under (i)) and;

   iii. Rs.327.18 lakhs per MW for MW scale and ground mounted solar power plants.

c. Suggestions from the Stakeholders:

i. Powergate Energy Pvt Ltd., (Mysore), has suggested that the capital cost for 1 kW to 10 kW domestic-as Rs.54000 per kW and suggested for 1 kW to 2000 kW (non-domestic) as detailed below.

Capacity	Cost per kW
1-4 kWp	Rs.60,000
5-14 kWp	Rs.52,000
15-48kWp	Rs.46,000
49 – 2000 kWp	Rs.41,000

ii. AMP Energy India Private Limited has suggested that the Capital cost of SRTPV has increased in the past 3 months, post lock down due to shortage of raw materials (like toughened glass, metal etc.) and disruption in supply chain globally (module delivery etc.). Also the Govt. of India is contemplating levy of basic Custom Duties on solar cells and solar modules, which will likely to increase the cost of Indian and International modules, in this year and the next financial year.

iii. KREA has suggested to consider capital cost of Rs.54,000 per kW for the 1-10 kWp category. And for the 1-2000 kWp SRTPV category, as weighted average cost based on the installed capacities in each category with ranges 1-5 kW-Single Phase, 5-17.5 kW Three Phase LT, 17.5 kW to 50 kW Three Phase LT and 51 – 2000 kW.

iv. Tata Power solar, has suggested the capital cost for SRTPV as detailed below;

Category	Benchmark Price (Rs./Wp)
Up to 2	60
>2 to 4 kW kW	58
5 kW – Single Phase	54

5 kW – Three Phase	58
6 kW – to 10 kW	54
> 10 to 100 kW	44
> 100 to 500kW	40

And MW Scale and ground mounted solar power plants – Rs.360 Lakhs per MW.

v. Federation of Karnataka Chambers of Commerce & Industry, has suggested to retain the capital cost for SRTPV for capacity 1 kW to 2000 kW as Rs.32800 per kW.

vi. KPTCL has requested to explicitly indicate that the Capital Cost considered includes the cost of dedicated evacuation line from the power plant to KPTCL Sub-station and the O&M cost allowed also includes O&M charges payable to KPTCL for maintenance of bays and lines as per the KERC order dated 14.12.2018.

vii. Balark Solar Pvt Ltd., has suggested to increase the capital cost at least 15% to 20%.

viii. PCKL has suggested the capital cost for 1 kW to 500 kW as detailed below.

Capacity Range	Bench mark Cost (Rs. per Watt)
1kW	47
>1 to 2kW	43
>2 to 3 kW	42
>3 to 10kW	41
>10 to 100 kW	38
>100 to 500kW	36

ix. Sri. Ramesh Shivanna, Chairman, Energy Committee, FKCCI, has suggested the capital cost for 1 kW to 10 kW at Rs. 50000/- per kW, 1 kW to 2000 kW - Rs.40000 per kW and for MW scale- Rs.360 lakhs per MW.