

- x. Sri. Raghunandan S.S, Karnataka Renewable Energy Association, has suggested to consider the Capital cost for SRTPV as detailed below:

Capacity	Capital Cost/kW including GST without maintenance
3 kW	Rs.77,600
5 kW	Rs.72,100
10 kW	Rs.62,400
17.5 kW	Rs.55,200
50 kW	Rs.52,200
100 kW	Rs.52,600

**Commission's Decision:**

The Commission takes note of the suggestions from the various stakeholders and also finds that there is increase in the cost of PV modules with other civil and electrical equipment.

The Capital cost of Rs.327.18 lakhs per MW was proposed in the discussion paper based on the market prices as on 19.01.2021 available on the website-i PV Insight, a network of reliable price information contributors of actual prices and sales contracts of Solar PV components. The average module cost was Rs.12.32 per watt. It is noted that most of the developers have shown serious concern about the increase in the cost of module/panel/inverter cost due to levy of safeguard duty and GST on the solar panels and have proposed a higher capital cost. The Commission has found that as per PV Insight report as on 09.08.2021, the average module cost is at Rs.14.45 per watt. The increase in the cost is also due to increase in the exchange rate of USD per MW. The average of 6 months USD rate as per RBI is considered. The Commission also notes that there is an increase in

the cost of works relating to civil, cost of mounting structure, power conditioning unit, evacuation lines and equipment and general works etc., which accounts for an increase by more than 8% to 10% as compared to the earlier costs adopted in the previous tariff year.

As per the Ministry of Finance Notification dated 29.07.2020, for the solar cells, the applicable rate of safeguard duty is 14.9% for imports during the period from 30.07.2020 to 29.01.2021, 14.5% for imports during the period from 30.01.2021 to 29.07.2021. After 29.07.2021 there is an uncertainty in the applicable rate of safeguard duty.

Considering the increase in the costs as discussed above, the Commission has considered capital cost of Rs.350.46 Lakhs per MW for determination of tariff, by considering the 'safeguard duty' at the rate of 14.5% till 29.07.2021 and GST as per the clarification issued by the Ministry of Finance (MoF) Government of India dated 22<sup>nd</sup> December, 2018, wherein 70% of the gross value shall be deemed as the value of supply of said goods attracting 5% rate and the remaining portion (30%) of the aggregate value of such EPC contract shall be deemed as the value of supply of taxable service attracting standard GST rate which needs to be considered for computation of GST. As per the notification dated 31.12.2018, issued by Ministry of Finance (MoF) Government of India, 18% of GST is considered for service by way of construction or engineering or installation or other technical services, provided in relation of setting up of solar power generating system.

The Commission further notes that the payment of the safeguard duty arises only in case of imported solar cells/modules and if the developer uses the

indigenous panels., they need not incur such duty. Without considering the source of procurement, the inclusion of safeguard duty will result in front loading of the duty in determination of the generic tariff and would also result in allowing extra tariff by way of safeguard duty, which the generator/developer will not have incurred, in the case of indigenous modules/panels. Thus, the Commission decides to keep the safeguard duty and applicable GST thereon separately from the capital cost while determining the generic tariff. If the generator/ developer imports the panel from outside India, the actual safeguard duty with GST on safeguard duty amount will be determined by the concerned ESCOM on production of bill of entry and documents thereon for actual reimbursement/payment of safeguard duty paid to the competent authority by the generators/developers. This amount will be paid to the generator/developer by the concerned ESCOM by spreading the actual safeguard duty incurred, over the Tariff period as per the PPA, every year by cash, on annuity basis during the month of April of the subsequent financial year.

In respect of SRTPV plants of 1 kW to 2000 kW, the capital cost of MW projects has been considered on a prorate basis and computed as Rs. 35,046 per kW (excluding safeguard duty). The payment of safeguard duty as applicable to MW scale project on annuity basis, shall also be applicable to roof to projects of 1kW to 2000 kW.

The Commission further notes that the increase in capital cost considering the economy of scale will not be applicable to small SRTPV projects of 1kW to 10kW. Hence, to encourage the domestic consumers to put up SRTPV projects, the Commission has considered capital cost of Rs.46500 per kW

which is inclusive of taxes, Duty and GST and extra premium to encourage small SRTPV projects.

Considering the above facts, the Commission decides to consider capital cost for ground mounted Solar projects as follows:

<b>Capital Cost for Solar Photovoltaic power plants.</b>		
<b>Sl. No.</b>	<b>Particulars</b>	<b>FY22 to 23</b>
1	Average Module cost-USD/Watt peak	0.196
2	Average of 6 months USD in Rs. as per RBI	73.74
3	Cost of Solar Module in Rs./Watt	14.45
4	Cost of Solar Module in Rs. lakhs /MW	144.53
5	As per the Ministry of Finance vide its notification dated 29.07.2020 the Commission has considered the rate of safeguard duty at rate 14.5%, imported during the period from 01.04.2021 to 29.07.2021.	20.96
6	Cost in Rs Lakhs /MW(Before GST)	165.49
7	Civil and General Works, Mounting Structure, Power Conditioning Unit, Evacuation Lines & Equipment's, preliminary and preoperative expenses IDC etc.,.... Rs Lakhs /MW	154.33
8	Total Capital Cost in Rs Lakhs /MW	319.82
9	GST of 5% for 70% of the total cost (Supply of solar modules and its accessories, as per clarification issued by Ministry of Finance (MoF) Government of India dated 22.12.2018 in Rs. Lakhs per MW	11.19
10	GST of 18% for 30% of the total cost of the project as per clarification issued by Ministry of Finance (MoF) Government of India dated 22.12.2018) in Rs Lakhs per MW	17.27
11	Total cost of the project on Rs Lakhs per MW	348.28
12	Land Cost @ Rs.5.00 Lakhs per acre (5 Acres per MW)	25.00
13	Total Cost of the project including land cost in Rs Lakhs.	373.28
14	Less: The safeguard duty and its GST on the capital cost Rs. 20.96 lakhs + Rs. 1.86 lakhs (Rs. 22.82 lakhs/tenure of PPA), to be reimbursed on production of proof of payment of the safeguard duty by the generators/developers in Rs Lakhs per MW.	22.82
15	<b>Total Capital cost considered for determination- in of Tariff in Rs. Lakhs per MW</b>	<b>350.46</b>

Accordingly, the Commission hereby decides to adopt the following capital cost for:

1. 1kW to 10kW SRTPV project (domestic consumer) of Rs.46500 per kW
2. 1 kW to 2000 kW SRTPV project (other than SRTPV consumer covered under (1)) Rs.35046 per kW.
3. Ground mounted solar projects of Rs. 350.46 Lakhs per MW.

**vii) Operation & Maintenance Cost:**

The Commission had proposed to allow O & M expenses at Rs.670/kW for SRTPV units and at Rs.5.03 lakh/MW for ground mounted Megawatt Scale solar plants to meet the inflationary cost.

**Commission's Decision:**

The Commission notes that the stakeholders have submitted the proposal for O & M expenses without substantiating the reasons and document for consideration. The operation and maintenance cost consists of employee cost, administrative & general expenses and Repairs & Maintenance expenses (O&M). The Commission, in its earlier Orders, had considered O&M expenses at Rs.600/kW for SRTPV units and at Rs.4.50 lakh/MW for ground mounted Megawatt Scale solar plants, with an annual escalation of 5.72%. The Commission after considering the inflation factor, decides to allow O&M expenses at Rs.670/kW for SRTPV units and at Rs.5.03 lakh/MW for ground mounted Megawatt Scale solar plants, with an annual escalation of 5.72%.

**viii) Interest and Tenure of Debt:**

The Commission, had proposed the normative tenure of long term debts/ loans as 13 years and to allow the interest on loan at 9.30% per annum. The following are some of the suggestions from the stakeholders: