

**CENTRAL ELECTRICITY REGULATORY COMMISSION**

**NEW DELHI**

**Petition No. 242/SM//2012 (Suo-motu)**

**Coram: Dr. Pramod Deo, Chairperson  
Shri S. Jayaraman, Member  
Shri V.S. Verma, Member  
Shri Deena Dayalan, Member**

**Date of hearing: 8<sup>th</sup> January, 2013**

**Date of Order: 28<sup>th</sup> February, 2013**

**IN THE MATTER OF**

Determination of Benchmark Capital Cost Norm for Solar PV power projects and Solar Thermal power projects applicable during FY 2013-14

**ORDER**

1. The Commission notified the Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2012 (hereinafter “the RE Tariff Regulations”) on February 6, 2012. The first proviso of the Regulation 5 of the RE Tariff Regulations provides that the Commission may annually review the benchmark capital cost norm for Solar PV and Solar thermal power projects.
2. The Benchmark Capital Cost Norms as stipulated under Regulation 57(1) for Solar PV power project and under Regulation 61(1) for Solar thermal power project are applicable for solar power projects for the year FY2012-13.
3. In exercise of the power under Regulation 5 of RE Tariff Regulations, the Commission vide Order dated 25<sup>th</sup> October, 2012 , proposed to determine the Benchmark Capital Cost Norm for Solar PV power projects and Solar thermal power projects for the year 2013-14 (Petition No. 242/SM/2012 - Suo-Motu) and invited Comments / suggestions /objections from the stakeholders.

module cost level, solar PV project based on thin film modules could be higher due to higher non module cost.

22.3 The table below presents the breakup of benchmark capital cost norm for Solar PV projects for the FY 2013-14:

Sr. No.	Particulars	Capital Cost Norm for Solar PV project (₹ Lakh/MW)
1	PV Modules	325.92
2	Additional module cost as against degradation	009.79
3	Land Cost	016.80
4	Civil and General Works	094.50
5	Mounting Structures	105.00
6	Power Conditioning Unit	060.00
7	Evacuation Cost up to Inter-connection Point (Cables and Transformers)	105.00
8	Preliminary and Pre-Operative Expenses including IDC and contingency	080.00
	<b>Total capital Cost</b>	<b>797.01</b>

22.4 In view of the above, the capital cost of Solar Photo Voltaic power projects is arrived after rounding off at ₹ 800.00 Lakh /MW as benchmark project cost of Solar PV projects for determination of tariff.

$$\begin{aligned} \text{Per MW Cost in USD} &= 800/53 \\ &= 15.09 \text{ lacs} \\ &= 1.50 \text{mn USD/MW} \end{aligned}$$

### Capital Cost of Solar Thermal projects

## 23. Comments

23.1 Since no CSP project has been commissioned, there is no adequate basis to justify reduction in capital cost as considered for the FY 2012-13. It is suggested that an additional capital cost of ₹ 0.25 Crore/MW should be allowed considering exchange rate at ₹ 55/ US\$ instead of ₹ 53/ US\$ as considered by the Commission. It is also suggested that the cost for township development should be considered as part of capital cost at ₹ 0.25 Crore/MW. Taking both of the above into account, the capital cost for solar thermal project should be increased to ₹ 13.50 Cr per MW. **(Association of Power Producers)**