HYDRO POWER
in partnership with river

MADHYA BHARAT POWER CORPORATION LTD.

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Ref No.:MBPCL/2023-2024/158
Date : 12.03.2024

The Secretary
Central electricity Regulatory Commission
3rd& 4th Floor, Chandralok Building
36, Janpath Road, New Delhi -110001

Sub : Comments and suggestions on draft CERC (Terms and conditions for tariff determination from Renewable Energy Sources) Regulations, 2024

Ref : Public Notice No. RA-14026(11)/1/2023-CERC dated 17.02.2024

Hon'ble Sir,

With reference to the captioned subject, we wish to draw your kind attention to the below facts:

The growth in Small Hydro sector has lagged behind the Solar Energy generation growth. As solar power is available only during sunshine hours, need for balance between solar and hydro capacity addition has become inevitable. Further, Small Hydro projects do not involve any submergence hence human displacement is totally avoided. The projects can be built up in much lesser time than Large Hydro. The project implementation in case of small hydro projects is simpler and faster than Large Hydro.

Considering above, the growth rate of Small Hydro sector can be accelerated with greater policy /regulatory support. Kindly consider below suggestions in the draft Regulations:

1. **Capital cost:**

Draft Regulation 27: Commission's Proposal:

(1) The normative capital cost for small hydro projects during the first year of the Control Period, i.e. the financial year 2024-25, shall be as follows:

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Region	Project Size	Capital Cost (Rs. lakh /MW)
Himachal Pradesh, Uttarakhand, West Bengal, Union Territory of Jammu and Kashmir, Union Territory of Ladakh and North Eastern States	Below 5 MW	1200
	5 MW to 25 MW	1200
Other States	Below 5 MW	890
	5 MW to 25 MW	1027

Suggestions:

we request the Hon'ble Commission to kindly consider normative capital cost of Rs. 14.00 Cr/MW for SHP of 5 MW to 25 MW in other States.

The cost of construction of small hydro projects between 5 MW to 25 MW in Central India has increased significantly due to rise in the cost of construction material like Cement, steel and labour cost. It may kindly be observed that the cost of basic construction material has increased substantially as tabulated below:

Material	WPI/CPI (2018)	WPI/CPI (2022)	% Increase
Cement	111.8	132.9	19
Mild Steel	109.0	149.4	37
Steel structures	116.1	133.8	15
Bitumen	85.0	131.4	55
Diesel	88.4	191.4	117
Paint	111.2	143.7	29
Plain bricks	94.0	96.0	2
Industrial workers	104.8	131.7	26

As civil cost has increased substantially, the capital cost of a project is increased. There is minimal disparity in topographical challenges between plain and hilly regions, that could be the reason that the capital costs for hydro power projects in both plain and hilly regions are converging to become equivalent. Also, in the 'Actual

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project cost approach' IREDA gave the capital cost information for SHP Projects is as follows:

Capital Cost information for Small Hydro Projects as per IREDA

Region	Project Size	No. of Projects	Capital Cost (Rs. Cr /MW)
Hilly Regions	Below 5 MW	1	11.94
	5 MW to 25 MW	3	9.58 to 12.22
Other States	Below 5 MW	-	-
	5 MW to 25 MW	3	10.41 to 11.12

The anticipated capital cost of our projects which are <25 MW installed capacity, falls under the category of other states which are of Low Head and high discharge projects, estimated to be in the vicinity of Rs 13 Cr/MW. The project cost is experiencing escalation due to following reasons:

i. As the width of the river in Central India region is too large, the substantial width of the river necessities the construction of significant scale of civil infrastructures (like barrage and non-over flow sections (NOF)), thereby leading to escalated capital cost.

ii. For low head and high discharge projects, the RPM is low. The lower RPM and larger turbine components necessitate heavier civil structures, such as the tunnel and penstock, are much more extensive in comparison with high head and low discharge projects.

2. Capital cost Indexation:
Clause (2) of draft Regulation 27 provides as below:

The capital cost for small hydro projects as specified for the first year of the Control Period shall remain valid for the entire duration of the Control Period unless reviewed earlier by the Commission.

Suggestions:

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We respectfully submit this formal request Commission to**modify this clause and incorporate provision for capital cost indexation mechanism based on whole sale price index**for arriving at the capital cost of the projects which commission during the second and third year of the control period.

3. Auxiliary Consumption:

Draft Regulation 29: Commission's Proposal:

Normative auxiliary consumption for the small hydro projects shall be considered as 1.0%.

Suggestions:

We request the Hon'ble Commission to allow auxiliary consumption as 1.50%.

The projects in hilly regions have higher PLF as they operate in non -monsoon seasons also. Whereas the projects located in plain regions have the required discharge only in the monsoon season. Since the projects in plain region can operate efficiently in monsoon seasons, the auxiliary consumption is increasing in order to operate the plant in non-monsoon seasons for low discharge.

4. Operation and Maintenance expenses:
Draft regulation 30: Commission's Proposal:

(1) Normative O&M Expenses for the first year of the Control Period, i.e. financial year 2024-25 shall be as under:

Region	*Project Size*	*Capital Cost (Rs. lakh /MW)*
Himachal Pradesh, Uttarakhand, West Bengal, Union Territory of Jammu and Kashmir, Union Territory of Ladakh and North Eastern States	*Below 5 MW*	*49.54*
	5 MW to 25 MW	*37.15*

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Other States	*Below 5 MW*	*39.90*
	5 MW to 25 MW	*28.90*

Suggestions:

We request the Commission, to consider normative O&M expenses for project of 5 MW to 25 MW in 'Other States' as Rs. 34 lakh/MW.

Re-consider the proposed norms for O&M expenses in case of small hydro plants due to following factors:

i. Hiring the skilled personnel's for operation and maintenance tasks such as turbine maintenance and electrical troubleshooting incur higher labour charges as the cost of labour is increased significantly in the last five years. And to retains the skilled labour at remote project sites; they have to be provided with good remuneration.

ii. For ensuring the safety and reliability of hydro power plant, Investing in emergency response equipment like backup generators, flood protection measures whose cost is increased results in increase of o&m charges.

5. Return on Equity

Draft regulation 16: Return on Equity

Commission's Proposal:

The normative Return on Equity for renewable energy projects other than small hydro projects shall be 14%, and that for the small hydro projects shall be14.5%.

Suggestions:

We request to increase the pre-tax ROE to minimum 16% for small hydro power projects.

Considering the difficulties faced by the developers in implementing and operating hydro power projects, unless a higher ROE is assured, this sector cannot expect better investment opportunities. Amongst all RE projects, hydro projects are the riskiest assets. Apart from execution challenges, the risk of unforeseen natural calamities causing catastrophic damage to the plant has become very common. No investor shall

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undertake investment decision unless optimum return is assured. Merely, additional allowance of 0.50% for hydro projects proposed in the draft regulations is not at all justified.

We request the Hon'ble Commission to please consider our above submissions for determination of tariff for small hydro plants.

Thanking You,

Yours Faithfully,

For, Madhya Bharat Power Corporation Limited,

Director
(P.S.Dutta Gupta)

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