

M.P. Electricity Regulatory Commission

Approach paper on Fixation of norms for determination of tariff for procurement of power from Wind Electric Generators

February 2013

LEGISLATIVE PROVISIONS

- 1.1 Section 86(1) (e) of the Electricity Act 2003, mandates the State Electricity Regulatory Commissions to promote co-generation and generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid and sale of electricity to any person. The Regulatory Commissions are also required to specify, for the purchase of electricity from such sources, a percentage of the total consumption of electricity in the area of a distribution Licensee. Further the Act, under Section 62, empowers the Commissions to determine the tariff for the supply of electricity by a generating company to a distribution Licensee in accordance with the provisions of the Act. Also, Section 61 provides that the Commissions specify the terms and conditions for the determination of tariff and, in so doing, be guided by the principles listed in Clauses (a) to (i) of that Section.
- 1.2 As per section 6.4 of Tariff Policy, it has been recognised that it will take some time for the non-conventional energy sources to compete with conventional sources of energy, hence its procurement shall be done at preferential tariffs to be determined by the Commissions and states as under:
- (2)Such procurement by Distribution Licensees for future requirements shall be done, as far as possible, through competitive bidding process under Section 63 of the Act within suppliers offering energy from same type of non-conventional sources. In the long-term, these technologies would need to compete with other sources in terms of full costs.*
- (3)The Central Commission should lay down guidelines within three months for pricing non-firm power, especially from non-conventional sources, to be followed in cases where such procurement is not through competitive bidding.*
- 1.3 The Central Electricity Regulatory Commission has issued revised guidelines vide notification dated 06.02.2012 specifying the norms for various non-conventional sources of energy including power from wind electric generators.
- 1.4 In exercise of the powers vested under Section 86(1)(a), (b) and (c) read with (e), and Section 62(1) of the Electricity Act, 2003 (EA, 2003) and all other powers enabling it in this behalf, Madhya Pradesh Electricity Regulatory Commission (Commission), through this paper, proposes to fix norms for determination of tariff and related dispensation for the purchase of power by Distribution Licensees from wind electric generators in the State.

1. PROCEDURAL HISTORY

- (a) Earlier, the Commission had issued a tariff order for procurement of power from wind electric generators on 11.6.2004. The control period was ended on 31.3.07. Thereafter, the Commission vide order dated 23.4.2007 issued a direction that the same provisions of tariff order dated 11.6.04 shall continue till the issue of tariff order for the next control period. The Commission then issued the second tariff order for procurement of power from wind electric generators on 21.11.2007. The control period was to expire on 31.3.2012. However, the tariff order was revised vide order dated 14.05.2010. The control period shall expire on 31.03.2013.
- (b) On 06.02.2012, the Central Electricity Regulatory Commission (CERC) had issued revised regulations on terms and condition for determination of tariff from new and renewable sources of energy. A comparison of CERC terms and conditions viz-a-viz the Commission's terms and conditions in respect of wind electric power shows that the CERC regulations results in better tariff.
- (c) Accordingly, the Commission has considered the guidelines issued by the CERC and proposes to revise the existing norms for determination of tariff for procurement of power from wind electric generators w.e.f. 01.04.2013.

2. REGULATORY PROCESS FOR NEXT CONTROL PERIOD

- (a) The Commission shall invite comments/suggestions from all stakeholders and hold a public hearing, if necessary, at the Commission's Office. After analyzing the comments, the tariff shall be determined for the revised control period.

3. APPLICABILITY OF THE ORDER

- (a) The tariff Order to be issued by the Commission based on revised norms will be applicable to all wind electric generation projects in the State of Madhya Pradesh commissioned on or after the date of issue of the order for sale of electricity to the distribution licensees within Madhya Pradesh.

4. TARIFF REVIEW PERIOD/CONTROL PERIOD

- (a) The control period will start from the date of issue of the revised tariff order and will close at the end of FY15-16 i.e. 31.3.2016. The tariff decided in this particular control period shall apply to all projects which are commissioned within that period and the tariff determined for a project shall remain in effect for the whole project life of 25 years from the date of grid connectivity.

5. MECHANISM FOR TARIFF DETERMINATION

- (a) The Commission shall adopt levelized tariff approach to determine tariff for procurement of power from wind electric generators.

6. TARIFF DESIGN

- (a) The following is the comparison among the existing norms as specified by the CERC Regulations dated 06.02.2012, Commission's Tariff order dated 14.05.2010 and the revised norms proposed by the Commission:

Key elements of norms	CERC Regulations dated 06.02.2012	MPERC Order dated 14.05.2010	Proposed Revised Norms
Capital Cost	5.75 Cr/MW for FY 12-13 plus indexation on changes in WPI for steel and electrical machinery (inclusive of Power Evacuation Cost)	5.00 Cr/MW (Inclusive of Power Evacuation Cost)	5.75 Cr./MW (Inclusive of Power Evacuation Cost)
Plant Life (years)	25	25	25
CUF	Minimum 20%	20 %	20%
Return on Equity	20% Pre Tax – First 10 Yrs. 24% Pre Tax – 11 th Yr. Onwards	16 % Pre Tax	20% Pre Tax
O&M Expenses	9.0 Lacs/MW and with a Simple escalation of 5.72% per annum	1% of the capital cost in the first year and thereafter a simple escalation of 5.72% per year	1% of the capital cost in the first year and thereafter a simple escalation of 5.72% per year
Interest on working Capital	Average SBI Base rate plus 350 basis point on (A) Operation & Maintenance expenses for one month (B) Receivables equivalent to 2 (Two) months of energy charges on sale of electricity calculated on the normative CUF. (C) Maintenance spare @ 15% of operation & maintenance expenses.	12.75 % on (A) Operation & Maintenance expenses for one month (B) Receivables equivalent to 2 (Two) months of energy charges on sale of electricity calculated on the normative CUF. (C) Maintenance spare @ 15% of operation & maintenance expenses.	13.25 % on (A) Operation & Maintenance expenses for one month (B) Receivables equivalent to 2 (Two) months of energy charges on sale of electricity calculated on the normative CUF. (C) Maintenance spare @ 15% of operation & maintenance expenses.
Interest on Debt	Average Base rate of SBI + 300 basis points	12%	12.75 %
Debt-equity ratio	70:30	70:30	70:30

Discounting factor (%)	---	10.01	10.20
Depreciation	5.83% per annum for first 12 years and remaining is spread over the remaining useful of Plant from 13 th year onwards	7% per annum for the first 10 years and remaining 20 % is spread over the remaining useful of Plant from 11 th year onwards	7% per annum for the first 10 years and remaining 20 % is spread over the remaining useful of Plant from 11 th year onwards

7. OTHER TERMS AND CONDITIONS

- a) The tariff shall be inclusive of all charges/taxes.
- b) The tariff shall be firm for the project life and will not vary with fluctuations in exchange rate or on account of changes in taxes or for any other reason, whatsoever.
- c) The wind generators with collective capacity of 10 MW and above connected at 33 kV level and above shall be responsible for forecasting their generation upto an accuracy of 70% on the terms and conditions of the Indian Electricity Grid Code, as amended.
- d) The reactive energy charges would also be payable by/to the developer as the case may be.
- e) The distribution company in whose area the energy is consumed shall deduct 2% of the energy injected towards wheeling charges in terms of units.
- f) At present, in case of third party sale/captive consumption the cross subsidy surcharge is not payable. However, it may be made applicable as and when decided by the Commission.
- g) The plant would be entitled to draw power from the distribution licensee's network during start-up/shutdown period of its plant or during other emergencies. The supply availed would be billed at the temporary rate applicable to HT Industrial category notwithstanding any contrary provisions that may exist in the agreement already executed by the developer with the licensee.
- h) The banking shall be applicable as per the provisions of MPERC (Cogeneration and generation of electricity from renewable sources of energy) (Revision-I) Regulations, 2010 as amended.
- i) The developer shall be required to share CDM benefits with the distribution licensee as decided by the Commission.
- j) Sale of Renewable Energy Certificate (REC) shall be as per Regulations of CERC notified from time to time.
