



ANDHRA PRADESH ELECTRICITY REGULATORY COMMISSION
11-4-660, 4th Floor, Singareni Bhavan, Red Hills, Hyderabad - 500 004

Commission Proceedings No.11/ 2015, dated 23-07-2015

Sub:- APERC - Approval of Terms and Conditions for Tariff determination for Wind Power Projects in the State of Andhra Pradesh for the period FY2015-16 to FY2019-20 - Reg.

A draft Regulation on the above subject was placed in the website of the Commission seeking views / objections / suggestions of the stakeholders and a Public Hearing was conducted on 04-07-2015 in the Court Hall of Andhra Pradesh Electricity Regulatory Commission, Hyderabad.

2) A meeting of the Commission was held on 22-07-2015 & 23-07-2015 to consider various issues raised and arising in this regard and finalise the Regulation and the following were present:

Commission:

- i) Justice Sri. G. Bhavani Prasad, Chairman
- ii) Dr. P. Raghu, Member
- iii) Sri. P. Rama Mohan, Member

Officers:

- i) Sri. M. Satyamurthy, Consultant
- ii) Sri. P. Solomon Herme, Joint Director (P&PP)
- iii) Dr.A.Srinivas, Secretary (i/c) & Joint Director (Law)

Reasoned Conclusions:

3) Regulation 1 (2) of the Draft stipulates that these regulations shall come into force from the date of their publication in the official gazette. Through written and oral submissions during Public Hearing many stakeholders have requested the Commission to make it applicable retrospectively from 01-04-2015. However, in view of the law laid down by the Hon'ble Supreme Court in Mahabir Vegetable Oils (P) Ltd., and another Vs State of Haryana and others, (2006) 3 SCC 620 and State of Rajasthan and others Vs Basant Agrotech (India) Ltd., (2013) 15 SCC 1, the request cannot be and hence, is not considered.

4) Regulation 10 of the Draft provides that the norms for Capital Cost shall be generally inclusive of capital work including plant and machinery, civil work, erection and commissioning, financing and interest during construction (IDC) and evacuation infrastructure up to the interconnection point with capital cost indexation mechanism as prescribed in the CERC RE tariff Regulations, 2012. Further, it also provided that, the Capital Cost for the base year i.e., FY2015-16 shall be specified by the Commission consistent with its earlier orders dated 15-11-2012 and duly taking into account the capital cost indexation mechanism as prescribed in the CERC RE tariff Regulations, 2012. This will effectively work out to about ₹590 lakhs / MW. During the Public Hearing, many stakeholders have sought for a capital cost of ₹619.52 lakhs /MW apparently based on CERC indexation methodology, though some have even pitched for a capital cost of ₹650 lakhs / MW. APDISCOMs have stated that the capital cost fixed by other state ERCs is less than or equal to ₹6 cr / MW and by giving certain other reasons as mentioned in their letter, finally requested the Commission to consider average capital cost of ₹6 cr / MW instead of indexation mechanism for the entire period of five years. The Commission has examined the matter. There appears to be enough justification for accepting the capital cost of ₹600 lakhs / MW (including evacuation cost in line with GoAP policy) for FY2015-16, as requested by APDISCOMs and as adopted in the neighbouring Karnataka. This will also satisfy the general request for additional provision in the capital cost for adopting advanced technology and LVRT compliant machines for achieving better CUFs. However, the contention that indexation mechanism should be given a go by does not appear to be acceptable in as much as the costs will change from year to year. Hence, the Commission hereby fixes a capital cost of ₹600 lakhs / MW (including evacuation cost in line with GoAP policy) for FY2015-16 and thereafter allow an indexation mechanism as provided in the regulation. The indexation mechanism as stated originally in the draft regulation is suitably clarified to avoid any ambiguity keeping in view the methodology adopted by CERC and Rajasthan Electricity Regulatory Commission.

5) Under Regulation 2 (p) of the draft, useful life of wind power project is defined as 25 years from the date of commercial operation (CoD). Regulation 11 prescribes a debt equity ratio of 70 : 30. Regulation 12 (1) provides a loan tenure of ten years. Regulation 12 (2) (c) provides that the repayment of loan shall be considered from the first year of commercial operation of the project and shall be

equal to the annual depreciation allowed. Regulation 13 (1) provides that the value base for the purpose of depreciation shall be the Capital Cost of the asset admitted by the Commission. The Salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the Capital Cost of the asset. Regulation 13 (2) provides that depreciation per annum shall be based on 'Differential Depreciation Approach' using 'Straight Line' method over the distinct periods comprising loan tenure and period beyond the useful life. A combined reading of the above provisions should lead to the depreciation rate for the first 10 years of the tariff period as 7% per annum and 1.33% for the remaining useful life of the project from 11th year onwards, whereas the draft Regulations provide for the depreciation rate for the first ten years of the tariff period as 4.5% per annum and 3% for the remaining useful life of the project from 11th year onwards. This inconsistency was brought to the notice of the Commission by the various stakeholders. While some developers requested for depreciation of 7% for the first ten years and 1.33% for next 15 years, some have requested for giving at least the depreciation allowed by the CERC at 5.83% for twelve years and 1.54% for the balance period. The Commission has examined the matter. The debt repayment period is fixed as ten years in the draft regulations. There was no serious objection to the said loan repayment period. In view of the above, the Commission, having considered the matter, hereby decides to provide the depreciation rate for the first ten years of the tariff period as 7% per annum and 1.33% for the remaining useful life of the project from 11th year onwards.

6) Regulation 14 (2) of the Draft Regulation provides a normative return on equity of 16% with MAT / IT as pass through. Many stakeholders have requested for an ROE of 20% pre-tax for the first 10 years followed by 24% pre-tax for the eleventh year onwards. The Commission has examined the matter and found that the difference between the pre-tax return and post-tax return is that while the pre-tax method assumes that the tax had already been paid by the developer (whether actually paid or not) and tariff worked out accordingly, whereas, the approach prescribed in the draft regulation is providing a clear return of 16% on equity and factoring the same into the tariff and providing for reimbursement of the MAT / IT, if paid outside the tariff. This assumes more significance in view of the prevailing tax holiday regime. Therefore, the Commission considers it appropriate to retain the provision in the draft regulation.

7) Regulation 16 (2) of the Draft Regulation provides that the O&M expenses shall be 1.25% of the capital cost which shall be escalated at the rate of 5.72% per annum over the five year period. Many of the stakeholders have requested for an O&M of ₹10.63 lakhs / MW as specified by CERC, whereas APDISCOMs suggested that the O&M of 1.25% of the capital cost of the project is acceptable and the O&M escalation is on a higher side and requested for adopting the O&M escalation at 5% per annum as per earlier order dated 15-11-2012. The Commission has examined the matter. Based on the capital cost of ₹600 lakhs / MW, the O&M for FY2015-16 works out to ₹7.5 lakhs / MW. Keeping in view the earlier order of the Commission, the O&M expenses of ₹7.4 lakhs / MW with 5% escalation as provided therein work out to ₹8.57 lakhs / MW for FY2015-16. It is not fair to give a lesser O&M for FY2015-16 than what was allowed in the earlier order dated 15-11-2012 even though the draft regulations provided that way. As such, the Commission has decided to allow an O&M of ₹8.57 lakhs / MW for FY2015-16, which shall be escalated at the rate of 5.72% thereafter.

8) Regulation 21 of the Draft Regulation provides that CUF of 23% is proposed to be retained for the wind energy projects in Andhra Pradesh. All the developers are generally in agreement with the above position. Whereas, APDISCOMs stated that in the earlier order dated 01-05-2009, the APERC adopted the capacity utilization factor as 24.5%. Further, they also stated that APERC, in its order dated 15-11-2012 duly curtailing the control period of 01-05-2009 order, adopted the CUF as 23% only. However, they also submitted that pursuant to the APERC order dated 15-11-2012, about 19 wind power developers with a total capacity of 173.60 MW have entered into PPAs with DISCOMs and supplying energy to grid. As per the statement of PLFs achieved by generators during the previous financial year (2014-15), the average CUF achieved by these projects with 80 meter hub height wind turbine works out to 24.79%. As such, they have requested to consider CUF of 25% as per the improvement in generation due to increase in hub height and advanced technology machines being used in the generation for determination of tariff for new / upcoming wind power projects. The Commission has examined the matter and decides to marginally increase the CUF to 23.5% due to increase in hub height and advanced technology machines used, keeping in view that the earlier adopted CUF of 23% was based on dependable information for a long period reducing from 24.5% and as the higher CUF for 2014-15 was only for one year.

- 9) The following provisions are also to be added to the final regulation:
- i) **Evacuation Guidelines:** The Evacuation Guidelines / practice directions issued by the Commission from time to time shall be applicable for all the wind power projects established since these regulations coming into force.
 - ii) **Model PPAs:** The model Power Purchase Agreements earlier approved by the Commission shall be applicable to all the wind power projects established since these regulations coming into force also to the extent they are in consonance with these regulations.
- 10) The Draft Regulation may be suitably modified accordingly and shall be notified expeditiously.

(By Order of the Commission)

Sd/-
Dr. A. Srinivas
Commission Secretary (i/c)