

**PUNJAB STATE ELECTRICITY REGULATORY COMMISSION
SCO NO. 220-221, SECTOR 34-A, CHANDIGARH**

**Petition No. 37 of 2013 (Suo-Motu)
Date of Order: 25-06-2013**

In the matter of: Determination of generic levellised generation tariff for Renewable Energy Power Projects for FY 2013-14

Present: Smt. Romila Dubey, Chairperson
 Shri Virinder Singh, Member
 Shri Gurinder Jit Singh, Member

ORDER

The Punjab State Electricity Regulatory Commission (Commission) in its Order dated 19.07.2012 in Petition No. 35 of 2012 (Suo-Motu) for adoption of Central Electricity Regulatory Commission (Terms & Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2012 (CERC RE Regulations, 2012) and determination of generic levellised generation tariff for Renewable Energy Power Projects for FY 2012-13, after due process, adopted the said Regulations with State specific modifications in respect of Non-fossil fuel based Co-generation Projects and also determined the generic levellised generation tariff for Renewable Energy Power Projects (RE Projects) for FY 2012-13.

2. Recently, Central Electricity Regulatory Commission (CERC) has, in due discharge of the mandate under Regulation 8 of the CERC RE Regulations, 2012 determined the generic tariff of RE Projects for the second year (FY 2013-14) of the five years control period in its Order dated 28.02.2013 in Petition No. 243/SM//2012 (Suo-Motu).

3. The Commission, in order to determine generic levellised tariff for RE Projects to be commissioned in FY 2013-14, directed that a Staff Paper on the same be prepared. Accordingly, the Staff Paper was prepared and a Public Notice published on 04.05.2013 in the leading newspapers namely The Tribune, Hindustan Times, The Indian Express and Punjabi Tribune inviting comments/suggestions from various stakeholders by 27.05.2013. Simultaneously, the Staff Paper was uploaded on the

website of the Commission. The Commission took on record and considered all the objections received. A Public Hearing in this regard was held by the Commission on 05.06.2013 after issuing a Public Notice which was published in the aforementioned newspapers on 22.05.2013. Copies of the Public Notices were also sent to Government of Punjab, Punjab State Power Corporation Ltd., Punjab State Transmission Corporation Ltd. and Punjab Energy Development Agency for obtaining their views/comments on the Staff Paper. The following firms/developers attended the Public Hearing and/or submitted their comments/suggestions:

- i) Viaton Energy Pvt. Ltd., Hyderabad.
- ii) Punjab Energy Development Agency, Chandigarh.
- iii) Purab Urja Pvt. Ltd., Amritsar.
- iv) Dee Development Engineers Ltd., Faridabad.
- v) JITF Urban Infrastructure Ltd., New Delhi.
- vi) Green Planet Energy Private Limited, Chandigarh.
- vii) Universal Bio-Mass Energy Pvt. Ltd., Ferozepur.
- viii) Punjab Bio-mass Power Limited, Distt. Patiala.

JITF Urban Infrastructure Ltd., New Delhi vide its letter dated 31.05.2013 withdrew their comments/suggestions whereas Punjab Bio-mass Power Limited, Distt. Patiala (PBPL) attended the Public Hearing but did not submit their comments/suggestions in writing. However, the comments/suggestions of PBPL, generally concerning determination of separate tariff for generating plants using paddy straw exclusively as fuel, have also been submitted by other objectors and Commission's view on the same has been expressed.

A summary of the issues raised and views of the Commission thereon are contained in Annexure-1 of this Order.

4. The Commission notes that the Staff Paper proposed to determine generic levellised tariff for RE Projects to be commissioned in FY 2013-14, and proposed 5% fuel cost escalation over the fuel cost for FY 2012-13 for fuel based RE technologies, as allowed by the Commission in the past from FY 2010-11 onwards. The Commission further notes that the objectors in their comments/suggestions requested the Commission to adopt fuel cost escalation as taken by CERC for determination of generic levellised tariff for various RE technologies for FY 2013-14. It has been submitted that landed cost of fuel has increased due to rise in (i) general inflation, (ii) cost of labour, (iii) transportation cost due to increase in diesel price every month and (iv) other incidental expenses, etc. **Considering the submissions**

made by the objectors and taking a holistic view, the Commission is inclined to accept the same and decides to allow fuel cost escalation as taken by CERC in tariff determination for FY 2013-14 which is based on the Fuel Price Indexation Mechanism specified in the CERC RE Regulations, 2012 for various fuel based RE technologies. Accordingly, the fuel price for FY 2013-14 for Biomass based Power Projects, Biomass Gasifier Power Projects and Biogas based Power Projects would be as per CERC Order dated 28.02.2013 in Petition No. 243/SM/2012 (Suo-Motu) in respect of Punjab. For Non-fossil fuel based Co-generation Projects, considering the fuel cost of ₹2357 per MT for such projects allowed by the Commission for FY 2012-13 in its Order dated 19.07.2012 in Petition No. 35 of 2012 (Suo-Motu), the fuel price works out to ₹2525.56 per MT for FY 2013-14 on the basis of the specified Fuel Price Indexation Mechanism.

5. In case of Biomass Gasifier Power Projects, a small correction is required to be applied in the working of 'Interest on Working Capital' component, wherein while calculating the 'fixed charges' component under the head 'Receivables', inadvertently variable charges were added to the fixed charges though the 'variable charges' component is also worked out separately in the calculation of 'Receivables'. Accordingly, the levellised fixed cost for Biomass Gasifier Power Projects reworks to ₹2.42 per kWh instead of ₹2.55 per kWh calculated by CERC in its ibid Order.

6. Further, the applicable levellised generic tariff for Non-fossil fuel based Co-generation Projects has been worked out on the basis of fuel cost as allowed in Para 4 above and taking the weighted average of various parameters for bagasse and biomass fuel, considering the number of operating days fixed by the Commission as 100 days on bagasse operation and the remaining period during the year on biomass fuel for operation of such plants at a PLF of 80%, in its Order dated 19.07.2012 in Petition No. 35 of 2012 (Suo-Motu).

7. As regards tariff for Wind Energy Projects, as per the Wind Power Density Map in the Indian Wind Atlas published by Centre for Wind Energy Technology in August 2010, there is no installable potential for wind energy in the State. The Ministry of New and Renewable Energy, Govt. of India (MNRE) vide circular no. 51/55/2011-WE dated 01.08.2011 has removed the restriction in respect of the minimum requirement of Wind Power Density of 200 watt/m² at 50 metre hub height for suitability of Wind Power Projects stating that this provision did not hold relevance any longer and with change in wind turbine technology and better efficiency, even the

lower wind regimes have become exploitable. Accordingly, in the event of such a project being established, tariff for Wind Zone-1, as determined by CERC in its ibid Order, shall be applicable.

8. In case of Biomass based Power Projects, Non-fossil fuel based Co-generation Projects, Biomass Gasifier Power Projects and Biogas based Power Projects, variable component of tariff is calculated based on the fuel cost for FY 2013-14. This variable component will change each year based on whether a Renewable Energy Power Project developer opts for fuel price indexation or escalation factor of 5% at the time of signing the PPA. Hence, while calculating the total applicable tariff for such projects, levellisation of only fixed component and the variable component for the first year of operation (i.e. 2013-14), are considered.

9. Accordingly, the generic tariffs for the various types of RE projects/technologies to be commissioned during the year 2013-14 will be as indicated in Table-1:

Table-1

Generic Tariff for RE technologies for FY 2013-14

Levelling Fixed Cost (₹/kWh)	Variable Cost (FY 2013-14) (₹/kWh)	Applicable Tariff Rate (₹/kWh)	Benefit of Accelerated Depreciation, if availed (₹/kWh)	Net Applicable Tariff Rate upon adjusting for Accelerated Depreciation benefit (3-4) (₹/kWh)
1	2	3	4	5
Biomass based Power Projects				
2.27	3.97	6.24	0.14	6.10
Non-Fossil Fuel based Co-Generation Projects				
2.04	3.66	5.70	0.13	5.57
Biomass Gasifier Power Projects				
2.42	4.10	6.52	0.12	6.40
Biogas based Power Projects				
3.30	3.61	6.91	0.24	6.67

Particulars	Applicable Tariff Rate (₹/kWh)	Benefit of Accelerated Depreciation, if availed (₹/kWh)	Net Applicable Tariff Rate upon adjusting for Accelerated Depreciation benefit (2-3) (₹/kWh)
1	2	3	4
Small Hydro Power Projects			
Below 5 MW	5.16	0.42	4.74
5 to 25 MW	4.40	0.38	4.02
Wind Energy Power Projects			
Wind Zone-1	6.29	0.49	5.80
Solar Power Projects			
Solar PV	8.75	0.88	7.87
Solar Thermal	11.90	1.21	10.69

10. The Commission observes that in accordance with Regulation 22 of the CERC RE Regulations 2012, any incentive or subsidy offered by the Central or State Governments if availed by a RE developer is to be deducted while determining tariff. Accordingly, any subsidy including capital subsidy/Central Financial Assistance or generation based incentive (which is a substitute for accelerated depreciation benefit) available to the developer shall require to be passed on to the utilities on actual disbursement basis. Although per unit reduction on account of accelerated depreciation benefit has been quantified, reduction in tariff on account of other incentives and subsidies has not been specified. However, such incentives/subsidies cannot be generically determined and will have to be worked out on the basis of project capacity.

In the circumstances, Punjab State Power Corporation Ltd. will, before signing the power purchase agreement with the developer, work out subsidy availed by the developer as per the formulae indicated in the applicable scheme framed by MNRE and reduce the tariff to that extent for a period of 12 years. However, for Biomass Gasifier Power Projects and Biogas based Power Projects, the subsidy granted by MNRE has already been accounted for, in the tariff calculations.

11. Further, Para 6.4 (2) of the Tariff Policy notified by Ministry of Power, Govt. of India on 06.01.2006 provides that procurement of electricity from renewable sources of energy for future requirements shall be done, as far as possible, through competitive bidding under Section 63 of the Electricity Act, 2003. Accordingly, the

Commission decides that if tariff based competitive bids are invited for purchase of electricity from RE Power Projects and the per unit tariff offered by the lowest bidder is less than the aforementioned tariff, a petition shall be filed by the procurer for consideration and adoption of tariff by the Commission under Section 63 of the Electricity Act, 2003. The Commission further decides that till such time tariff based competitive bidding is resorted to, bidding may be carried out on the basis of discount to be offered by the prospective bidders on the generic tariffs determined by the Commission in this Order, which would be the maximum/ceiling tariff for the purpose.

12. The Commission also observes that as per Regulation 21 of the CERC RE Regulations 2012, the proceeds of carbon credit from approved Clean Development Mechanism (CDM) project are to be shared between the generating company and concerned beneficiaries in the second year onwards after the Commercial Operation Date (COD) of the generating station. Thus 100% of the gross proceeds on account of CDM benefit are to be retained by the project developer in the first year after the COD and the share of beneficiaries shall be 10% in the second year and progressively increase by 10% every year till it reaches 50%, whereafter the proceeds are to be shared in equal proportion. It is, however, clarified that sharing of the CDM benefit, if any, shall be applicable after the sale proceeds from Carbon Emission Reductions (CERs) are received by the project developer and not from the date of commissioning.

Sd/-
(Gurinder Jit Singh)
Member

Sd/-
(Virinder Singh)
Member

Sd/-
(Romila Dubey)
Chairperson

Date: 25-06-2013
Place: Chandigarh

[Click here for Annexure](#)