

# RAJASTHAN BIOMASS POWER DEVELOPERS ASSOCIATION

Comments / Suggestions on

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

(Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2024.

issued by

**CENTRAL ELECTRICITY REGULATORY COMMISSION**

# USEFUL LIFE - request 30 years

- ❖ Should be revised from 25 years to 30 years.
- ❖ Earlier 20 years was decided arbitrary since there was no past experience in running biomass power plants.
- ❖ Technology for biomass fuel not developed and Standardized.
- ❖ Now the technology has been developed and the technique for using biomass as fuel is Standardized. Such plants will definitely run for 30 years.
- ❖ Min. of Power, GOI directed not to retire any thermal units even after its Useful Life in view of the growing demand for power.
- ❖ This policy may be made applicable to biomass based power plants which have similar technology and similar equipment.
- ❖ The biomass power plants require 3/4 years to develop biomass market for educating farmers to collect and transport biomass. Thus the total period of minimum 30 years is required to recover all costs.

# GCV OF BIOMASS

- ❖ The norm adopted by CERC for GCV of biomass is 3100 kcal/kg.
- ❖ Due to long 10 months storage period and exposure to wind, rain and self ignition, the GCV deteriorates.
- ❖ This is normal experience of GCV deterioration in storage.
- ❖ Most States have GCV of 3100 kcal/kg
- ❖ This norm may be applicable to all biomass power plants in all States of India by issuing suitable advisory to all State RECs

# Escalation Rate on O&M Expenses - 5.89%

- ❖ As per clause 5.2.4. of Explanatory Memorandum the escalation rate of 5.89% has been calculated.
- ❖ This rate is based on the five years' average CPI and WPI indices by considering the weightage of 60:40 for WPI and CPI 4l.
- ❖ Thus this rate of escalation is based on sound logical basis and may be made applicable to all biomass based power plants installed in different States of the country.
- ❖ Suitable advisory may kindly be issued, uniform escalation of 5.89% to be applicable to all State RECs.

# FUEL PRICE

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- ❖ The price of fuel applicable to the State of Rajasthan has been prescribed as Rs. 3958/MT for FY 2024-25.
- ❖ In addition to purchase price, cost of stacking and handling of Rs. 440/MT and losses in storage of Rs. 150/MT may be allowed.
- ❖ Due to increase in demand for biomass in the adjoining States, some traders have started purchasing the biomass, hoarding the same and transporting and selling it outside the State. This has resulted in non availability of biomass for power generation as well as other users in the State.
- ❖ Biomass prices are higher in all adjoining States of Rajasthan Surplus Biomass availability is far far better than Rajasthan but due to lack of proper & adequate supply chain mechanism in these States, the biomass of Rajasthan is exported to these states.
- ❖ The interstate transportation of biomass should be banned to avoid hike in its price.
- ❖ The availability of biomass is also affected by the variations in monsoon, Weather conditions, Natural calamities change in cropping pattern and consequent change in biomass availability and price.
- ❖ Unseasonal rainfall or storms lead to losses in storage.

# FUEL PRICE

- ❖ The price of biomass will further increase due to demand for co-firing by thermal projects.
- ❖ Request has been made to exempt Rajasthan State from implementation of co-firing since there is no surplus biomass available.
- ❖ It will be logical that the State wise biomass price decided by CERC should be made applicable to all biomass plants in the Country.
- ❖ Suitable advisory may kindly be issued.
- ❖ Biomass price should be compared with Imported Coal price.

# FUEL PRICE - Fuel Handling cost

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- ❖ Cost of stacking and handling of Rs. 440/MT and Losses in Storage of Rs. 150/MT may be allowed.
- ❖ Biomass fuel requires substantial costs for storage, preparation and feeding the same in the boiler. This preparation includes:
  - Stacking of biomass which is received in loose condition, with the help of tractors and dozers and Loaders.
  - Covering it by tarpaulins to avoid loss due to exposure to wind, sun, rain and fire.
  - Feeding biomass into the boiler by internal transportation from stacked biomass to the feeding point with the help of manual workers.
- ❖ In case of our Rajasthan State, once Hon'ble Rajasthan Commission had visited the biomass plants in Rajasthan and found that considerable cost is being incurred on cutting, storing and feeding of biomass.

# FUEL PRICE - Fuel Handling cost

- ❖ The Hon'ble Commission had also directed the State Nodal Agency to appoint a consultant once in two years for conducting biomass market survey for ascertaining the price trend, biomass availability and GCV of biomass fuel in the State.
- ❖ The consultant submits their findings by their reports on biomass availability, its delivered price and its GCV.
- ❖ It is expected that based on these parameters the variable tariff may be determined by the Hon'ble Commission. However, these prices are not being considered.
- ❖ Hence, it will be logical that the State wise biomass price as decided by CERC and additional Fuel Handling Cost & Losses in Storage should be made applicable to all biomass plants in the Country.
- ❖ Suitable advisory may kindly be issued.



# RPO

- ❖ Presently there is no separate RPO for purchase of biomass power.
- ❖ It is included under “Other RPO”
- ❖ The biomass power has additional element of variable cost and hence if no separate RPO is fixed, the other renewable power like solar will be purchased.
- ❖ Separate targets for biomass power will result in establishment of more power plants based on different kinds of biomass
- ❖ This will result in reduction of Air Pollution and generate additional income in the hands of farmers and rural workers.
- ❖ Biomass power has unique features like high PLF, no requirement of storage, additional income to farmers and direct-indirect employment in rural area and avoidance of air pollution.
- ❖ Hence separate RPO may be fixed for biomass power.

# Merits of biomass power generation

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- ❖ Biomass power is the only renewable power generated for 24 hrs/day and in all seasons of the year.
- ❖ The investment in biomass power plants results in higher power generation than other renewable sources like wind, solar and hydel.
- ❖ It may also be noted that the plant load factor for biomass based power is much higher at 75%-80% as compared to wind or solar power which is around 20%.
- ❖ Results in avoidance of air pollution caused by burning of biomass in open fields.
- ❖ The variable tariff in case of biomass is fully spent for purchase of biomass, the benefit of which goes to the farmers and village labour.

# Merits of biomass power generation

- ❖ The power generated by Biomass plants is consumed in the vicinity and hence transmission cost is negligible.
- ❖ The power generated by Biomass plants is evacuated within 10 km - evacuation investment and transmission losses are practically nil.
- ❖ The tariff for biomass based power generation is higher as compared to other renewable sources since it has element of variable charges. But variable charges is fully spent for purchase of biomass which generate additional income to the farmers and avoid air pollution.
- ❖ The tariff for biomass power should be compared with power generation based on imported coal, since substantial quantities of coal are being imported at a very high price.

# Merits of biomass power generation - Rural Empowerment

- ❖ 100% income to farmers and transporters. Estimated additional income of Rs. 2.41 Cr/ MW of power generation to farmers and village labour. For generating 1 MW of power about 9474 mandays are required to cut, collect, load, transport, unload and stack biomass, which will further increase in future due to higher price of biomass.
- ❖ A typical 8 MW biomass based power plant requires 180-200 persons which includes qualified engineers, commercial managers and maintenance staff.
- ❖ In addition to this huge indirect employment for collecting the biomass in the fields, cutting it to proper size, loading in trailers - tractors, transporting it to biomass power plant and unloading in the premises of the plant.

# SUMMARY

- ❖ **USEFUL LIFE** - Should be revised from 25 years to 30 years.
- ❖ **GCV OF BIOMASS** - 3100 kcal/kg GCV of biomass norm may be applicable to all biomass power plants in all States of India by issuing suitable advisory to all State RECs.
- ❖ **ESCALATION RATE ON O&M EXPENSES** - Suitable advisory may kindly be issued, uniform escalation of 5.89% to be applicable to all State RECs.
- ❖ **FUEL PRICE** - State wise Biomass Price decided by CERC should be applicable to all biomass plants in the Country with additional Fuel handling charges.
- ❖ **FUEL PRICE - Fuel Handling cost** - Cost of stacking and handling of Rs. 440/MT and losses in storage of Rs. 150/MT in addition to Fuel Price may be allowed.
- ❖ **RPO** - Separate RPO target may be fixed for biomass power.

THANK YOU !