



## ORIENT GREEN POWER COMPANY LIMITED

29.04.2015

Shri.S.K Chatterjee

Joint Chief (Regulatory Affairs)

CENTRAL ELECTRICITY REGULATORY COMMISSION (CERC)

3rd & 4th Floor, Chandralok Building, 36, Janpath, New Delhi 110 001

Dear Sir,

Sub: Submission of suggestions-reg

Ref: Public Notice No. : L-1/94/CERC/2011, Dated: 16 April, 2015

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Further to the notice under reference, we Orient Green Power Company Limited, Chennai owning and operating about 100 MW biomass based power generation plants across the country, wish to submit the following for the kind perusal of the Honorable Commission.

The gross station heat rate of a biomass power plant is a factor governed by the boiler efficiency, Turbine efficiency and Net station heat rate is a factor of auxiliary power consumption also in addition to boiler and turbine efficiencies. In India the biomass boilers are all designed for a fuel of GCV 3600 kcal/kg but in reality the average GCV of biomass fuels as received/fired is around 2500 kcal/kg only barring some rare fuels like mustard husk. This has a huge impact on the boiler efficiency and has been brought to the notice of the Honorable Commission earlier also.

As the calorific value of fuel as fired is far below the designed value, primarily due to moisture, the heat of evaporation and the heat carried away by water vapor along with flue gas and the subsequent reduction in residence time of combustion products within the heat transfer spaces results in reduction of boiler efficiency heavily.

The maintenance of steam parameters is also difficult with the poor quality fuels that the specific steam consumption in the turbine also is increasing.

Both boiler and turbine efficiencies getting affected, the Gross station heat rate is always more, even with most efficient monitoring and control of parameters. The power consumption also goes up due to increased air and flue gas volumes handled and auxiliary power consumption also goes up resulting in the increase in the net station heat rate.



The new Station Heat Rate for Biomass based power plants using Travelling grate as well as AFBC boiler is worked out in the proposed Amendment. Accordingly the normative SHR for Biomass projects using AFBC boilers and Travelling Gate boilers is arrived at to be 4062.19 kcal/kWh and 4125.94 kcal/kWh respectively.

While we totally agree with all the workings, that SHR will come down with increased GCV of fuel mix, our suggestion and submission is that any reduction in fuel GCV will drastically result in increased SHR and is the reality in the operating plants.

While the Honorable Commission has reworked the SHR based on coal inclusion in the fuel mix, our suggestion is that the price of fuel also should include the coal price to the proportionate level of permitted use.

We sincerely request the Honorable Commission that

1. The average GCV of Biomass should be considered as 2500 kcal/kg
2. The Station heat rate should be considered as 4750 kcal/kwh (Considering 3082 kcal/kwh as turbine heat rate and 65% boiler efficiency for a fuel mix of 85% biomass and 15% coal
3. The revised tariff should be worked out taking the price of permitted fuel mix.

Thanking you,

Yours truly,

**For Orient Green Power Company Limited,**

  
R.Kulothungan

Sr.Vice President (Biomass Business)