“DISCUSSION PAPER ON REVISION OF FUEL COST FOR EXISTING BIOMASS POWER GENERATION PLANTS IN KARNATAKA”

1. Under the provisions of the Electricity Act 2003 and Regulations framed thereunder, the Commission had determined Tariff for Renewable Energy (RE) based power generation plants vide its Order dated 18.01.2005. In the said Order the Commission had determined the Tariff for Biomass based power projects at Rs. 2.85 per unit in the first year of commercial operation with an escalation of 2% per annum on the base tariff without compounding for the subsequent period of nine years. While determining the Tariff for Biomass, the Commission had considered a fuel price at Rs. 1000 per metric ton with an escalation of 5% per annum. The above tariff was applicable to all the Power purchase Agreements (PPAs) filed before the Commission on and after 10.6.2004. The tariff determined in the said Order was subject to review after five years. As such the Commission at the end of the control period had issued a revised Tariff for the RE sources on 11.12.2009.

2. In the RE Tariff Order dated 11.12.2009, the Commission had determined the Tariff for Biomass projects ranging from Rs.3.66 per unit in the first year to Rs.4.13 per unit in the tenth year. While determining the Tariff for Biomass projects the Commission had considered a fuel price at Rs. 1280 per metric ton with an escalation of 5% per annum. The above Tariff for the first year was applicable from the Commercial operation Date (CoD) for a period of ten years irrespective of the date of signing of PPA and was applicable to all PPAs submitted to the Commission on or after 01.01.2010. The tariff
determined in the said Order was subject to review after five years and is due in December, 2014. Meanwhile, the Commission has issued KERC (Power Procurement from Renewable sources by Distribution Licensee and Renewable Energy Certificate Frame work) Regulations, 2011 repealing the 2004 Regulations, wherein it is specified that, the Commission may determine at any time Tariff for purchase of Electricity from RE sources by Distribution licensees.

3. The Tariff for RE sources including Biomass power projects prior to 2005 was based on the MNES guidelines, wherein the base year Tariff was fixed at Rs.2.25 per unit for the year 1995 and an escalation of 5% per annum was allowed for the subsequent years. In some cases ESCOMs had negotiated the price and entered into PPA with RE generators at rates different from the rate based on MNRE guidelines.

4. Thus, depending upon the date of signing of the PPA and the commercial operation date, the Tariff for the Biomass plants now being paid varies from Rs. 3.58 to Rs.5.13 per Unit in the State of Karnataka.

5. In the mean while, M/s Koppal Green power Ltd and M/s Poweronics Ltd, Biomass based power plants with an installed capacity of 6MW and exportable capacity of 5.4 MW each, supplying power to GESCOM under the approved PPA route, have filed petitions for revision of Tariff. Among other things, they have requested the Commission to revise the cost of the fuel, including transportation costs, to Rs. 3000 per metric ton from the existing rate of Rs. 1280 per metric ton with 5% escalation every year as determined in the Tariff Order dated 11.12.2009.

6. KERC had, during 2013, commissioned the services of The Energy Research Institute (TERI) to conduct a study of the operation of the Biomass based power generation projects in the State. The study conducted by TERI has reported that, out of the nine plants commissioned so far, only six Biomass plants are in operation at present. Five out of the six plants are situated in
Paddy growing areas and are primarily using paddy (rice) husk as the major fuel. Due to alternative uses of rice husk by industries (like brick kilns), the price is reported to have increased from Rs. 1800 in FY09 to Rs. 2500 per metric ton in FY13. M/s TERI has also reported that, in the State of Karnataka the Biomass fuel price varied from Rs. 1400 per metric ton for chilli stalks to Rs. 2500 per metric ton for rice husk. Further, it has also stated that, fuels like Prosopis juliflora cost less than Rs. 1000 per metric ton. M/s TERI has also recommended two part tariff for Biomass projects keeping in view the variability of the fuel cost.

7. It is worthwhile to note that, Karnataka has an estimated Biomass power generation potential of 1000 MW in which power projects of only 90MW have been commissioned and over 300 MW has been allocated to prospective developers. Thus less than 10 % of the potential for power generation by Biomass has been realized so far in the State. Some of the Biomass units set up as early as 2006, have stopped their operations either due to non availability of fuel or on account of high cost of generation owing to increased fuel costs.

8. In the Order dated 11.12.2009, the Commission had approved the cost of fuel at Rs.1280 per metric ton with an annual escalation of 5%. Thus, for the current year 2014-15 the fuel cost works out to Rs.1634 per metric ton.

9. In the public hearing conducted by the Commission on 15.05.2014 while determining Tariff for Biomass based power generation plants using Air Cooled Condensers, it was submitted by some of the stakeholders that, the Biomass (cotton/ prosofis juliflora/ jowar stalks) was being supplied by farmers to a Biomass based unit near Haveri at Rs.1800 to Rs.2000 per metric ton.

10. Keeping in view the above situation, it is noted that sustainability of the existing Biomass plants in Karnataka, appears to depend upon determining
a viable price for Biomass fuel. In this context the fuel cost approved by the Commission in its Order dated 11.12.2009 appears to require a revision for the existing Biomass based electricity generation projects.

11. In the light of the above facts, the following issues are raised by the Commission inviting comments/suggestions/views from the Stake holders:

1) Whether the biomass fuel price needs to be revised upwards for all existing biomass power projects?

2) If the price has to be revised, what should be the base price in FY15?

3) Whether the existing annual escalation of 5% is to be continued or revised?

4) Whether biomass fuel price has to be indexed as specified by CERC instead of giving a flat rate of annual escalation? If so, what parameters need to be considered for indexation?

5) Whether the Tariff for Biomass power plants should be two part instead of existing single part tariff to account for variability in fuel cost?

The Commission invites written comments/suggestions/ views from stakeholders and interested persons so as to reach the Secretary, KERC, 6th & 7th Floor, Mahalaxmi chambers, 9/2, M.G. Road, Bangalore-560001, on or before 22nd August, 2014.

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