MPL/FY26/26-03/013 Date: 21.03.2026

To,
The Chief Engineer (Commercial),
Damodar Valley Corporation,
DVC Towers,
VIP Road, Kolkata,
West Bengal-700054

Reference: Ministry of Power's notification 11/86/2017-Th. II dated 08.10.2021.

CERC Suo moto petition 12/SM/2019 dated 26.11.2019.

Subject: Regarding firing of agro based biomass pellets in boilers

Dear Sir,

In compliance to Ministry of Power's notification 11/86/2017-Th.II dated 08th October 2021 regarding mandatory firing of Biomass pellet in all coal fired boiler. It is hereby notified that MPL with bowl mill is required to blend 5% of agro based biomass pellets in its boilers to comply to the notification.

Further CERC in its Suo moto order 12/SM/2019 dated 26.11.2019 had ordered that"

"Generator shall also inform beneficiaries about the time period during which it intends to co-fire bio-mass with coal by putting this information on its web-site. Representatives of the beneficiaries shall be allowed inspection during the period biomass is being co-fired. At the end of the time period during which bio-mass cofiring has been carried out, petitioner shall indicate the quantum of bio-mass fired and the energy generated from bio-mass based on the methodology specified above."

In order to comply to the above orders, Maithon Power would be blending agro based biomass pellets on a trial basis tentatively during the period 24.03.2026 to 26.03.2026. The beneficiaries are requested to inspect this operation of Maithon Power Limited.

Sudip Dash
Head - Commercial Eastern Region (Gen)

Enclosed: 1. CERC petition 12/SM/2019 dated 26.11.2019
2. MOP's notification 11/86/2017-Th. II dated 08.10.2021

MAITHON POWER LIMITED
(A Joint Venture of Tata Power & DVC)
Registered Office: Corporate Center, 34 Sant Tukaram Road, Carnac Bunder, Mumbai 400 009, Tel: 91 22 67171232
Works: Village Dambhui, P.O.Barbindia, P.S.Nirsa, District Dhanbad 828 205, Jharkhand
Tel: +91 6540 278001/27 Fax: +91 6540 278040/ +91 8860075658
Corporate Identity Number (CIN):U74899MH2000PLC267297, **Website Address:**www.tatapower.com/mpl

CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Suo Motu Petition No. 12/SM/2019

Coram:

Shri P.K.Pujari, Chairperson
Dr. M.K.Iyer, Member
Shri I.S.Jha, Member

Date of Order: 26.11.2019

In the matter of

Proposed Methodology for Estimation of Electricity Generated from Biomass in Biomass Co-fired Thermal Power Plants.

1. Ministry of Power, Government of India, vide letter No. 11/86/2017-Th11 dated 17th Nov'2017 has issued the "Policy for Biomass Utilization for Power Generation through Co-firing in Pulverized Coal Fired Boilers" wherein it is envisaged that fluidized bed and pulverized coal units shall endeavour to use 5-10% blend of biomass pellets made, primarily of agro residue along with coal.

2. Subsequently, Central Electricity Authority (CEA) issued advisory to thermal power plants for utilizing biomass in coal based thermal power plants on 24.11.2017.

3. Regulation 19(2)(k) and Regulation 43(4) of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 has provided for the regulatory framework for allowing use of biomass in coal based thermal generating station.

4. National Thermal Power Corporation Ltd. (NTPC) undertook a pilot study for firing bio-mass in one of its thermal units with pulverized coal fired boiler. NTPC has successfully co-fired about 10% blend of biomass pellets with coal in trial mode in its 210 MW pulverized coal fired unit at Dadri Plant. This pilot study has demonstrated that the blend of coal and biomass pellets can be safely fired in pulverized coal power plants.

5. Subsequently, in order to promote co-firing of biomass in thermal power plants, Ministry of New and Renewable Energy (MNRE), Government of India, vide its notification dated 26.9.2019 has clarified that the power generated from co-firing of biomass in thermal power plants is renewable energy and is eligible for meeting non-solar Renewable Purchase Obligation (RPO) and has requested this Commission to formulate and notify the procedure/methodology for quantifying the energy produced from biomass in biomass co-fired thermal power plants in a reliable and accurate manner.

6. Accordingly, a draft methodology for quantifying the energy generated from co-firing of bio-mass in thermal power plants with coal has been formulated, which is placed at Annexure-I attached with this order.

7. The suggested methodology to estimate the energy generated from co-firing of biomass has been framed on the actual consumption of biomass and coal rather than on normative operational parameters of Station Heat Rate and Auxiliary Power Consumption. Such a methodology, which does not use normative operational parameters, can be applied both to thermal plants whose tariff is determined by “Appropriate Commission” under Section 62 as well as thermal plants whose tariff is

adopted by the “Appropriate Commission” under section 63 of the Electricity Act, 2003.

8. Comments/suggestions are invited from the stakeholders on the suggested procedure/methodology as given in Annexure-I, attached with this Order. A public hearing on this issue shall be held on 17.12.2019.

Sd/-	Sd/-	Sd/-
(I. S. Jha)	**(Dr. M. K. Iyer)**	**(P. K. Pujari)**
Member	**Member**	**Chairperson**

Annexure-I

Methodology for estimation of electricity generated from biomass in biomass co-fired thermal power plants:

Step-1:

For a month, the electrical energy generated at generator terminal corresponding to biomass fuel input can be estimated as follows:

$$E_b = (Q_b \times G_b \times E_T) / \{(Q_c \times G_c) + (Q_b \times G_b)\}$$

Where

E_b = Electrical energy generated by bio-mass at Generator terminal during the month (kWh)

Q_b = Quantity of bio-mass burnt during the month (kg)

G_b = weighted average GCV of bio-mass burnt during month (kCal/kg)

E_T = Total electrical energy generated at generator terminal during the month (kWh)

Q_c = Quantity of coal burnt during the month (kg)

G_c = weighted average GCV of coal burnt during the month (kCal/kg)

The product (Q_b x G_b) i.e the heat input through bio-mass during the month shall be arrived as follows:

Q_b x G_b (kCal)={opening balance of bio-mass (kg) X weighted average GCV of opening balance of bio-mass (kCal/kg)} + {quantity of bio-mass received during the month(kg) X weighted average GCV of bio-mass received during the month (kcal/kg)} - {closing stock of bio-mass (kg) X weighted average GCV of the closing balance of bio-mass (kCal/kg)}

And

The product ($Q_c \times G_c$) **i.e** Heat input through coal during the month (kcal) shall be arrived as follows:

$Q_c \times G_c$ (kCal) = {opening balance of coal (kg)X weighed average GCV of opening balance of coal (kCal/kg)} + {quantity of coal received during the month(kg) X weighted average GCV of coal received during the month (kCal/kg)} – {closing stock of coal (kg) X weighted average GCV of the closing balance of coal (kCal/kg)}

Step-2:

Electrical energy generated by bio-mass (ex-bus) shall be arrived as follows:

$E_{b\ ex\text{-}bus} = E_b \{1- [(E_T- E_{Tex\text{-}bus})/ E_T] \}$

Where

$E_{b\ ex\text{-}bus}$ = Electrical energy generated by bio-mass ex-bus during the month (kWh)

E_b = Electrical energy generated by bio-mass at Generator terminal during the month arrived at Step-1(kWh)

E_T = Total electrical energy generated at generator terminal during the month (kWh)

$E_{Tex\text{-}bus}$ = Total electrical energy generated ex-bus during the month (kWh)

NOTE: Information to be shared by the Generator with Beneficiaries/Public:

The generators shall maintain separate fuel accounts for coal and bio-mass which shall include opening balance of fuel, fuel received during the month and closing balance of fuel, in kg. Similarly, generator shall maintain separate GCV (in kCal/kg) accounts for coal and bio-mass which shall include weighted average GCV of the opening stock, weighted average GCV of the fuel received during the month and weighted average GCV of the closing balance at the end of the month.

These accounts (four nos.) i.e. fuel and GCV accounts shall be signed by the generation head on monthly basis. Generator shall put up these accounts on its website along with the bills towards purchase of coal and bio-mass.

These fuel and GCV accounts shall be made available to authorized representative/s of beneficiaries and RLDC/SLDC on demand. Any representative of beneficiaries, on production of authority letter from the beneficiary, shall be allowed to witness the GCV testing.

Generator shall also inform beneficiaries about the time period during which it intends to co-fire bio-mass with coal by putting this information on its web-site. Representatives of the beneficiaries shall be allowed inspection during the period bio-mass is being co-fired. At the end of the time period during which bio-mass co-firing has been carried out, petitioner shall indicate the quantum of bio-mass fired and the energy generated from bio-mass based on the methodology specified above.

No. 11/86/2017-Th.II
Government of India
Ministry of Power

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Shram Shakti Bhawan, Rafi Marg,
New Delhi, dated the 8th October, 2021

To,

1. Principal Secretary/Secretary in charge of Energy/Power Departments, All States/UTs
2. Chairman, CEA
3. CMDs of all CGSs

Subject: Revised Policy for Biomass Utilisation for Power Generation through Co-firing in Coal based Power Plants

Sir/Madam,

The undersigned is directed to refer to this Ministry's "Policy for Biomass Utlisation for Power Generation through Co-firing in Pulverised Coal Fired Boilers" issued in November, 2017

2. In order to further promote use of biomass pellets in coal based thermal power plants, the above Policy is further modified. A copy of "Revised Policy for Biomass Utlisation for Power Generation through Co-firing in Coal based Power Plants" is enclosed for information and necessary action please.

Yours faithfully

Encls: As Above

Kumar Saurabh
Deputy Director(Thermal)
Ministry of Power

Copy to:
(i) PS to Hon'ble Minister,
(ii) PS to Hon'ble MoS for Power,
(iii) Sr. PPS to Secretary(Power),
(iv) PPS to AS(SKGR), PPS to AS&FA, PPS to AS(VKD)
(v) All Joint Secretaries/EA/Chief Engineer, Ministry of Power
(vi) Incharge, NIC, Ministry of Power - with a request to upload this document on the website of MoP.

REVISED POLICY OF MINISTRY OF POWER FOR BIOMASS UTILIZATION FOR POWER GENERATION THROUGH CO-FIRING IN COAL BASED POWER PLANTS

1. The current availability of biomass in India is estimated at about 750 million metric tonnes per year. The estimated surplus biomass availability is at about 230 million metric tonnes per annum covering agricultural residues.

2. Ministry of Power (MoP) vide its policy dated 17-11-2017 on biomass utilization for power generation had advised that all fluidized bed and pulverized coal units (coal based thermal power plants) except those having ball and tube mill, of power generation utilities, public or private, located in India, to use 5-10% blend of biomass pellets made, primarily, of agro residue along with coal after assessing the technical feasibility, viz. safety aspect etc.

3. In order to further promote use of biomass pellets in coal based thermal power plants, the above Policy is further modified. The modifications in the above Policy are as under:

(i). All coal based thermal power plants of power generation utilities with **bowl mill**, shall on annual basis mandatorily use 5 percent blend of biomass pellets made, primarily, of agro residue along with coal with effect from one year of the date of issue of this guideline. The obligation shall increase to 7 percent with effect from two years after the date of issue of this order and thereafter.

(ii). All coal based thermal power plants of power generation utilities with **ball & race mill**, shall on annual basis mandatorily use 5 % blend of biomass pellets (torrefied only) made, primarily, of agro residue along with coal. This is to be complied within one year starting from this order. Two years from the date of issue of this order and thereafter the obligation will increase to 7 percent.

(iii). All coal based thermal power plants of power generation utilities with **ball & tube mills**, shall on annual basis mandatorily use 5 % blend of torrefied biomass pellets with volatile content below 22%, primarily made of agro residue along with coal. This is to be complied within one year.

(iv). Generating Utilities having certain units under Reserve Shutdown or not being despatched due to MOD (Merit Order Despatch) consideration would ensure to increase the percentage of co-firing up to 10 % in their other operating units/ plants (5 % in plants having ball and tube mills).

(v). Any power plants seeking exemptions / relaxation from co-firing may be considered on case to case basis, based on recommendations of CEA. A Committee headed by Chief Engineer (TE&TD), CEA, including representatives from NTPC, BHEL, CPRI, Ministry of Agriculture and Mission

Directorate shall examine the request of power plants for their exemption/relaxation from mandatory co-firing of biomass, as mentioned at para (i) to (iv) above.

(vi). The policy for co-firing of biomass would be in force for 25 years or till the useful life of the thermal power plant whichever is earlier. The minimum percentage of biomass for co-firing will be reviewed from time to time.

(vii) The minimum contract period for procurement of biomass pellets by generating utilities shall be for 7 years so as to avoid delay in awarding contracts by generating companies every year and also to build up long term supply chain. There may be provision of firm price of biomass pellets for the first year of the contract and yearly rate variation from second year onwards where rates can vary as per terms and conditions of the contract. In order to enable its implementation, a model RfP and contract shall be issued by MOP by 15.11.2021 for adhering to by all generating utilities. However, the ongoing process of contracting for biomass co-firing by generating utilities shall not be affected till issue of Model Contract.

(viii). Provisions related to tariff determination and scheduling shall be as given below:

a. For projects set up under Section 62 of the Electricity Act 2003, the increase in cost due to co-firing of biomass pellets shall be pass through in Energy Charge Rate (ECR).
b. For projects set up under Section 63 of the Electricity Act 2003, the increase in ECR due to biomass co-firing can be claimed under Change in Law provisions.
c. Such additional impact on ECR shall not be considered in deciding Merit Order Despatch (MOD) of the power plant.
d. Obligated Entities such as Discoms can meet their Renewable Purchase Obligations (RPO) by buying such generation of co-firing.

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