



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

Shram Shakti Bhawan, Rafi Marg,
New Delhi, dated the 07th November, 2025.

To,

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

Subject: Comprehensive Policy for Co-firing of Biomass pellets [including Torrefied Charcoal made from Municipal Solid Waste (MSW)] in Coal based Thermal Power Plants -reg.

Sir/Madam,

I am directed to refer to this Ministry's "Revised Policy for Biomass Utilisation for Power Generation through Co-firing in Coal based Power Plants" issued on 08.10.2021 and Modification thereon issued on 16.06.2023.

2. In order to include Torrefied Charcoal from Municipal Solid Waste (MSW) in the extant policy for Biomass Utilisation for power generation through co-firing in coal based TPPs, a comprehensive policy is formulated which **supersedes** all the aforementioned policies. The title of the policy shall be "Comprehensive Policy for Utilization of Biomass & Torrefied Charcoal made from Municipal Solid Waste for Power Generation through Co-firing in Coal based Thermal Power Plants", a copy of which is enclosed as **Annexure** for information and further necessary action please.

3. This issues with the approval of Hon'ble Minister of Power and Housing & Urban Affairs.

Yours sincerely


(Chittaranjan Acharya)

Under Secretary to the Government of India
Tele: 2371-9710

Copy to:

- (i) PS to Hon'ble Minister of Power and Housing & Urban Affairs.
- (ii) PS to Hon'ble MoS for Power

- (iii) Sr PPS to Secretary (Power)
- (iv) PPS to AS(SN), AS(PS)
- (v) All Joint Secretaries/JS&FA/Chief Engineer, Ministry of Power
- (v) In-charge, NIC, Ministry of Power- with a request to upload this document on the website of MoP.

Copy for information:

- (i) Secretary, Ministry of Environment, Forest & Climate Change
- (ii) Secretary, Ministry of Petroleum and Natural Gas
- (iii) Secretary, Ministry of Agriculture and Farmer Welfare.
- (iv) Secretary, Ministry of New & Renewable Energy
- (v) Chairperson, Commission for Air Quality Management in NCR and adjoining areas.


07/11/25

(Chittaranjan Acharya)

Under Secretary to the Government of India

Tele: 2371-9710

Comprehensive Policy for Co-firing of Biomass pellets [including Torrefied Charcoal made from Municipal Solid Waste (MSW)] in Coal based Thermal Power Plants

1. The current availability of biomass in India is estimated at about 750 million metric tonnes per year, out of this about 230 million metric tonnes per annum of biomass covering agricultural residues is estimated to be surplus.
2. It is estimated that about 1.5 lakh metric tonnes of municipal solid waste (MSW) per day is generated (2023) in urban cities in India, out of which approximately 75% is processed by various industries for miscellaneous uses. But approx. 25% i.e. about 14 million metric tonnes per annum of MSW is still left unmanaged.
3. Utilizing the surplus biomass along with agricultural residues and left over MSW in environment friendly manner will help in reducing overall GHG emission and also boost the Govt's objective of "Swachh Bharat Mission". For the above purpose and also keeping in view the issue of supply chain of biomass pellets, problem of stubble burning and the difficulty faced by some TPPs in co-firing a specific type of biomass pellets, a Comprehensive Policy for Utilisation of Biomass, primarily made of Agro residue & Torrefied Charcoal produced from Municipal Solid Waste (MSW) for Power Generation through Co-firing in Coal based Thermal Power Plants is revised, which will supersede the existing policy on "Biomass utilization for power generation through co-firing in coal based power plants" and revisions / modifications thereon issued by MoP from time to time.
4. The details of the Comprehensive Policy are given below:
 - (i) All Coal based Thermal Power Plants (TPPs) of power generation utilities in the NCR shall on annual basis **use 5% blend (by weight) of biomass pellets and additional 2% blend (by weight)** either from biomass pellets and/or torrefied charcoal made from Municipal Solid Waste (MSW) along with coal with effect from FY 2025-26.

However, TPPs in other regions shall on annual basis use 5% blend (by weight) either from biomass pellets and/or torrefied charcoal made from Municipal Solid Waste (MSW) along with coal with effect from FY 2025-26.
 - (ii) The biomass pellets may be non-torrefied or semi-torrefied (Volatile Matter in the range of >22-40%) or torrefied (Volatile Matter less than 22%) depending upon the suitability to the TPPs based on the recommendations of respective OEMs.
 - (iii) The percentage of co-firing of biomass pellets/ torrefied charcoal made from Municipal Solid Waste (MSW) shall be reviewed in future after assessing the availability of surplus biomass / charcoal made from Municipal Solid Waste (MSW).
5. Any TPP seeking exemptions / relaxation from the above co-firing may be considered on a case-to-case basis, based on recommendations of CEA. A Committee headed by Chief Engineer (TE&TD), CEA, including representatives from CAQM (for TPPs located in NCR and adjoining areas), NTPC, BHEL, CPRI, Ministry



of Agriculture and SAMARTH Mission shall examine the request of power plants for their exemption/relaxation from co-firing targets.

6. The policy for Biomass & Torrefied Charcoal (MSW) utilisation for power generation through co-firing in coal-based power plants is also applicable to the CFBC boilers in which biomass briquettes & Torrefied Charcoal (MSW) can also be utilized.

7. Provisions related to tariff determination and scheduling shall be as given below:

(i) For TPPs set up under Section 62 of the Electricity Act 2003, the increase in cost due to co-firing of biomass pellets / torrefied MSW charcoal shall be pass through in Energy Charge Rate (ECR).

(ii) For TPPs set up under Section 63 of the Electricity Act 2003, the increase in ECR due to co-firing of biomass pellets / torrefied MSW charcoal can be claimed under Change in Law provisions. It is clarified that for the projects established through competitive bidding under Section 63 (such as Case-2, Scenario-4) wherein 'fuel cost pass through' is provided in their PPAs, the cost of biomass pellets/ torrefied MSW charcoal shall also be pass through in the Energy Charge Rate.

(iii) However, the above additional impact on ECR shall not be considered in deciding Merit Order Despatch (MOD) of the TPP.

(iv) Obligated Entities such as Discoms can meet their Renewable Consumption Obligations (RCO) by buying such generation of co-firing.

8. Agro residues such as stubble/straw/stalk/husk which are surplus and not being used as animal fodder may be used for making the biomass pellets. This includes agro-residue obtained from crops like Paddy, Soya, Arhar, Gwar, Cotton, Gram, Jawar, Bajra, Moong, Mustard, Sesame, Til, Maize, Sunflower, Jute, Coffee, etc. as well as Groundnut Shell, Coconut Shell, Castor Seed Shell etc. In addition, pellets made from agro product/ crop/waste can also be used for co-firing in TPPs, viz. Bamboo and its by-products, Horticulture waste such as dry leaves and trimmings obtained from maintenance & pruning of trees and plants and other biomass such as Pine Cone/Needle, Elephant Grass, Sarkanda etc.

For TPPs located in the NCR and Adjoining Areas, it will be mandatory to use a minimum 50% of the raw material in pellets as stubble / straw / crop residue of rice paddy sourced exclusively from the NCR and Adjoining Areas.

9. To provide necessary facilitation to the TPPs in respect of Biomass co- firing, a **"Revised Model Contract for use of Biomass in Thermal Power Plants (TPPs)"** has been issued by MoP vide letter No. 11/86/2017-Th.II-Part(II) dated 06.01.2023. This model contract may be amended from time to time.

10. In order to accelerate the biomass pellet manufacturing, benchmark prices of biomass pellets for various regions are being / may be notified from time to time. The TPPs may procure biomass pellets at benchmark price or through a transparent competitive process.

