

**Guidelines for grant of one-time financial support under Environment Protection Charge (EPC) Funds for establishment of pelletisation and torrefaction plants to promote utilisation of paddy straw**



**Central Pollution Control Board**

## 1. BACKGROUND

Burning of paddy straw, and its contribution to air pollution in Delhi has been a major concern in winter season with its contribution to PM<sub>2.5</sub> reaching to even 58% in 2018. About ~ 27 Million tons of paddy straw is generated in the States of Punjab and Haryana, out of which around 75% is non-basmati. Additionally, 0.66 Million tons of basmati paddy straw and 0.005 Million tons of non-basmati paddy straw is generated in the NCR districts of UP. In view of this, the Government has taken various steps to tackle the issue of stubble burning.

Steps have been taken to promote its use as fuel in industries. In this regard, directions have been issued to 11 power plants located within 300 km of Delhi to initiate immediate steps to co-fire biomass based Pellets, Torrefied Pellets/Briquettes (with focus on paddy straw) with Coal (up to 5-10%). Further, directions have been issued to industries operating in NCR other than GNCT of Delhi to switch over to PNG or biomass fuels during 2022.

Considering 10% replacement of coal with paddy straw in coal based thermal power plants in Delhi, and industries operating on coal in NCR, the annual requirement of paddy straw is estimated to be approximately 75.5 Lakh MT.

While tenders have been floated for demand of biomass (paddy straw) by the power plants, it has been observed that the supply is on lower side which is due to slow/ limited growth of aggregators/ suppliers. Therefore, there is a need to facilitate setting up of paddy straw based pelletisation plants so that it is utilized and issue of crop residue burning and pollution is further addressed. Hence, CPCB with concurrence of MoEF&CC has introduced these guidelines which provide assistance towards capital investment for setting up of such plants.

## **2. OBJECTIVES**

- Enable reduced burning of paddy straw, in the NCT of Delhi, States of Punjab & Haryana, and NCR districts of Rajasthan & Uttar Pradesh, by facilitating establishment of pelletisation and torrefaction plants for paddy utilization.
- Reduce usage of fossil fuels in industries and boilers, by promoting usage of pelletised/torrefied paddy straw.

## **3. DETAILS OF PELLETTORREFIED PELLET MANUFACTURING FACILITY**

Pellet manufacturing process generally consists of 4 basic processes namely, shredding, drying, grinding, and pellet making. In case of paddy straw pelletisation, the paddy straw is first shredded in shredder. This is followed by drying to reduce moisture content to below 10%. Subsequently, it is subjected to grinding where straw size is further reduced. Thereafter, the straw is fed to the pellet machine. This is followed by cooling of the pellets and storage. Air Pollution Control Device (APCD) is also required, in the grinding, shredding (to control fine particles generated) and drying sections (control of emissions from hot air generator furnace). Considering the operational sensitiveness and in order to avoid any damage to plant machinery, automation system is also an important component of the plant.

In case torrefied pellets are to be made, torrefaction process is to be adopted. In the torrefaction process, biomass is processed at the temperature of 250-350°C in the absence of oxygen, decomposing the biomass components, and preserving energy content so that the energy density of the torrefied biomass is much higher. The major difference between the pelletisation and torrefaction units is the presence of a torrefaction reactor, in case of latter.

#### **4. APPLICABILITY**

New Units set up by individual entities/entrepreneurs/ companies after the issuance of these guidelines who will be using only paddy straw generated in the NCT of Delhi, States of Punjab & Haryana, and NCR districts of Rajasthan & Uttar Pradesh, and supply pellets/torrefied pellets to Power Plants and/or Industries, will be eligible for availing one-time financial support under Environment Protection Charge (EPC) funds. Other biomass use is permitted but only to an extent of 20% of total feedstock, in case needed. Individual industries interested in setting up captive pellet plants are also eligible to apply for one-time financial support under the guidelines.

#### **5. SCRUTINY OF APPLICATIONS**

Scrutiny of applications received for funding under the guidelines and recommendations for sanction of funds will be done by a Committee comprising representatives from CPCB, Ministry of Environment Forest and Climate Change, Ministry of Agriculture & Farmers' Welfare, National Mission on use of Biomass in Thermal Power Plants (SAMARTH), Commission on Air Quality Management in NCR and Adjoining Areas and one-two representatives from SPCB/PCC from NCR, and would be chaired by Member Secretary, CPCB.

#### **6. TOTAL COST**

The total funding is of Rs. 50 Crores, out of which Rs. 40 crores is earmarked for establishment of non-torrefied pelletisation plants, and Rs. 10 crores for establishment of torrefaction cum pelletisation units.

## **7. FINANCING STRUCTURE**

In case of pelletisation plant, a maximum amount of Rs. 28 lakhs per ton plant production capacity per hour, or 40% of the capital cost considered for plant and machinery of a 1 TPH plant, whichever is lower, shall be given as one-time financial support by CPCB, subject to a maximum total financial support of Rs. 1.4 crore per proposal. This is, considering a cost of Rs. 35 lakhs for shredding, drying, grinding, and pellet making sections of a 1TPH plant, and additional cost of Rs. 35 lakhs for automation component and APCDs for grinding, shredding and drying sections.

In case of torrefaction plant, a maximum amount of Rs. 28 lakhs per ton plant production capacity per hour, or 40% of the capital cost considered for plant and machinery of a 1 TPH plant, whichever is lower, shall be given as one-time financial support by CPCB, subject to a maximum total financial support of Rs. 1.4 crore per proposal.

## **8. APPROVAL AND CLEARANCES**

All mandatory approvals and clearances will be the responsibilities of the applicant.

## **9. TERMS AND CONDITIONS**

- The Guidelines are applicable to only new Pelletisation Units / Torrefaction Units.
- Applications will be considered on first-come-first-serve basis.
- Other biomass use is permitted but only to an extent of 20% of total feedstock, in case needed.
- Cost of land for setting up of pelletisation plant including other civil works is to be borne by the applicant. Land possession letter/ lease agreement

shall be submitted along with the application for financial assistance under the guidelines. The applicant must have submitted his application for CTE to the concerned SPCB/PCC before applying for financial assistance under these guidelines.

- The applicant shall submit a bank guarantee, equivalent to the amount of the financial support released, in name of SPCB, with a validity of minimum 01 year.
- The bank guarantee shall be released back to the applicant, after start of commercial production, i.e. submission of first invoice for sale of product.
- The application must have the recommendations of the State Pollution Control Board.
- Preference shall be given to those units which have agreement with farmers located in NCT of Delhi, States of Punjab & Haryana, and NCR districts of Rajasthan & Uttar Pradesh, to ensure assured supply of paddy straw.
- Preference shall also be given to those units that have entered into a formal agreement for offtake of paddy straw pellets from their units.
- Further, units proposing to install equipment that have been manufactured in India, thereby promoting Make In India, would also be preferred while sanctioning.
- No assistance shall be provided for meeting recurring or operation and maintenance or any other costs.
- CPCB shall not have any liability towards time and cost over runs.
- Applicant may avail financial grant for pellet plant from other schemes, however, 40% cost of total plant and machinery is required to be borne by the applicant, so as to ensure responsible ownership and operation of the unit.
- An undertaking shall be given by the applicant that their Unit is not receiving cumulative grant support of over 60%.
- The funds shall be transferred to applicant through State Pollution Control Board. Machinery should be purchased and plant shall be made

operational within three-six months of transfer of funds. Bills/ invoices shall be submitted to SPCB subsequently.

- CPCB shall have the powers to modify the guidelines in any manner as may be deemed necessary for its successful implementation and for removing any difficulties in its operationalization.

## **10. SCOPE OF SPCB**

- The SPCB should appraise the application and forward it to CPCB along with its recommendations within 15 days of receipt of application.
- SPCB shall release the financial support amount within 15 days of receipt of funds from CPCB directly into the earmarked account. However, funds should only be released once the SPCB has granted CTE to the applicant.
- Once sanctioned, SPCBs should monitor the progress of the project and ensure its timely completion. SPCB shall also submit completion/ commissioning report to CPCB.
- Post-commissioning, SPCB should periodically monitor paddy straw utilization in the pelletisation plant and ensure that any other crop residue except paddy straw is not used, and that plant is producing pellets only, and not briquettes. Other biomass use is permitted but to an extent of 20% of total feedstock, in case needed.
- SPCB/PCC shall have the powers of physical inspection of the Units after its commercial operation to ensure effective implementation of the guidelines and carry out independent third party audit to ascertain effective utilisation of the funds given to the Unit and take such remedial action including recommendation of withdrawal of the financial support as may be deemed appropriate. Copy of the Annual Audit Report shall be submitted to CPCB before 31<sup>st</sup> May every year.

## **11. SCOPE OF CPCB**

- The applications shall be evaluated by a committee constituted by CPCB within 15 days of receipt of the application from SPCB.
- The views of the committee shall be forwarded to Competent Authority, CPCB, for approval for release of funds, if application is recommended.
- After obtaining the approval of Competent Authority, CPCB shall release the funds to SPCB within 15 days.
- CPCB may at any time withdraw the financial support and forfeit the bank Guarantee if it is satisfied that the Project Proponent has violated the terms and conditions of financial support or has mis-utilised the financial support.

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**CPCB**

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