

NOTES ON PADDY STRAW TO BIOCNG ECONOMY

Paddy Straw can be readily converted into BioCNG (CBG) thereby mitigating the problem of the burning of paddy straw.

The technology is well proven with a large plant working for the last three years at M/s Sampurna Agriventures Pvt. Ltd. facility at Faizalka , Punjab and converts 40 Tons/day of Paddy Straw into 4 tons/day of BioCNG (CBG) which has been reviewed by PRESPL.

It has been estimated that 70 tons/day of Paddy Straw plant is financially viable using this process technology being licensed by **M/s CH4 Biotech Pvt. Ltd.** The setting up of the plant will generate an IRR of over 15 % thereby making it a sound investment while reducing the problem of paddy straw disposal which has crippled like in North India.

The plant cost will be approx. Rs. 40-45 crores, including the cost of 5 acres of land required for setting-up the plant. It will take 8-10 months to setup the plant.

One such plant will consume 22,000 tons of paddy straw per year. MoPNG, under the SATAT scheme has estimated setting-up 5000 such plants. Even if 1000 such plants are set-up across North India, the quantity of paddy straw that can be processed shall be 22 million tons per year. **These 1000 plants will produce 2.2 million tons of Bio-CNG, valued at Rs. 10,100 crores at the price of Rs. 46/kg guaranteed by the OMCs.**

Financing Option: *The cost of these plants will be Rs. 40,000 crores only. Out of this if the Government can give soft loans of half of the amount than the other half can be contributed by individual entrepreneurs. The amount of Rs. 20,000 crores loaned by the GOI can be paid back through an escrow account set-up by the OMCs who will be purchasing the Bio-CNG (CBG).*

An additional benefit will be the co-production of Bio-manure that is excellent for soil rejuvenation and that will substantially reduce the use of chemical fertilizers. This will be excellent for the degenerated soil that is the bane of the Indian Agriculture sector.

Thus, the following important objectives of the GOI shall be met:

- 22 million tons of paddy straw yearly consumed thereby eliminating the pollution effect & open field burning.
- 2.2 million tons of Bio-CNG (CBG) produced that will off-set the import dependence and help towards energy security of the country.
- No subsidy required, only soft loan that will be recovered through BioCNG (CBG) purchase by OMCs.
- Job generation of around 70,000 directly, and over 500,000 indirectly by way **(biomass supply chain management)** of paddy straw aggregation, transportation, BioCNG transportation/ dispensing and installations of the factories, etc.
- Well disbursed geographically thereby improving village economy and the farmer's income.
- 8.8 million tons of Bio-Manure will reduce import bill for chemical fertilizers and rejuvenate the soil.
- This Bio-Manure can replace over 2.5 million tons of chemical fertilizers that are mostly imported.

Note By:

Lt Col Monish Ahuja (Retd)

Managing Director, PRESPL

Email: monishahuja@prespl.com

Mob: +91 88980 57100 / +91 90046 73858

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