

Turning waste into best: UP emerges as country's CBG hub

Brajendra K Parashar

bkparashar@htlve.com

LUCKNOW: Uttar Pradesh could set a national model in waste-to-best transition with the state fast positioning itself as a national hub for compressed biogas (CBG), turning cattle dung, agro-residues and urban wet waste into fuel.

In terms of numbers of plants operational and in the pipeline as well as in terms of production, UP maintains a significant lead over all other states in the country—an achievement that experts attribute to easy availability of feed, demand for gas and the state government's attractive bio-energy policy that comes with several concessions and subsidies.

"UP is fast positioning itself as a national hub for compressed biogas (CBG), leveraging cattle

dung, agricultural residues and municipal wet waste to produce fuel and fertiliser," energy minister AK Sharma said, adding "The CBG plants are not only addressing the problem of crop burning but also generating additional income for farmers besides reducing carbon footprint."

According to the latest data available on GOBARdhan (Galvanizing Organic Bio-Agro Resources Dhan), the national portal, the state has 251 registered CBG projects—the largest pipeline in India. Of these, 34 plants are functional and 37 installed so far again the highest in the country, while another three are completed but not operational. The other top states like Gujarat, Haryana and Maharashtra are far behind.

The state also leads in projects under construction with 61 plants currently being built. "UP



The current 37 operational CBG plants in the state are producing a total 237 tons of gas per day

FILE

has emerged as the frontrunner in India's compressed biogas programme with the highest number of registered and operational plants in the country," additional chief secretary, energy, Narendra Bhushan said, adding efforts were being made to expedite plants in the pipeline.

According to director, UPNEDA, Indrajeet Singh of the approved bio energy projects so far by the government, 47 are for

OIL MAJORS LIKE IOC, HPCL, PETRONET, GAIL AND RELIANCE ARE SETTING UP PLANTS IN UTTAR PRADESH.

compressed biogas with a capacity of 407 tonnes per day (TPD) and an investment of Rs 2,590 crore. In addition, six bio-coal projects with a 253 TPD capacity (Rs 15 crore) and nine biodiesel plants with a combined 438 kilo litres per day (KLPD) capacity (Rs 72 crore) are also cleared, taking total approved investment to Rs 2,677 crore.

"Among the in-principle approvals, the state has lined up 117 compressed biogas plants (887 TPD, Rs 5,269 crore), 19 bio-

coal projects (1,248 TPD, Rs 205 crore), and 22 biodiesel plants (718 KLPD, ₹229 crore). This translates to an additional Rs 5,703 crore investment in the renewable energy sector," he said.

According to Ajay Kumar, project officer (NEDA), the current 37 operational CBG plants in the state are producing a total 237 tons of gas per day (TPD) that is used as an alternative to CNG in automobiles, industries and as cooking gas.

"A paddy stubble-based plant requires about 12.5 tonnes of Parali (crop residue) to produce one tonne of compressed biogas per day. CBG is used as a substitute for CNG, with both having the same methane content. The ministry of petroleum and natural gas (MoPNG) has mandated all oil and gas marketing companies to procure CBG. Its price

currently ranges between RS 68 and RS 72 per kg, depending on the region and prevailing CNG rates," Kumar explained.

Oil majors like IOC, HPCL, Petronet, GAIL and Reliance are setting up plants in Uttar Pradesh. According to officials, abundant feedstock—144 MMT agri waste per annum, 31 MMT municipal waste, 4 MMT press mud and 239 MMT animal waste underpins this growth, with over 20 lakh farmers already registered on UPNEDA's feedstock portal. IIT Delhi and IIT Kanpur are technical partners to boost project viability.

"I think, availability of surplus Parali and greater demand for gas makes UP an ideal place for setting up CBG plants," said Shruvedu, a retired HCL official who was part of the establishment and operation of the company's CBG plant in Badaun.