

PETROLEUM MINISTER TO LAUNCH SATAT INITIATIVE TO PROMOTE COMPRESSED BIO-GAS AS AN ALTERNATIVE, GREEN TRANSPORT FUEL

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Ministry of Petroleum & Natural Gas

Petroleum Minister to launch SATAT initiative to promote Compressed Bio-Gas as an alternative, green transport fuel

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Shri Dharmendra Pradhan, Union Minister of Petroleum and Natural Gas & Skill Development and Entrepreneurship will kick off an innovative initiative in New Delhi on 1st October, 2018, with PSU Oil Marketing Companies (OMCs ,i.e. IOC, BPCL and HPCL) inviting Expression of Interest (EoI) from potential entrepreneurs to set up Compressed Bio-Gas (CBG) production plants and make available CBG in the market for use in automotive fuels. This significant move has the potential to boost availability of more affordable transport fuels, better use of agricultural residue, cattle dung and municipal solid waste, as well as to provide an additional revenue source to farmers.

Titled *SATAT*, the initiative is aimed at providing a Sustainable Alternative Towards Affordable Transportation (SATAT) as a developmental effort that would benefit both vehicle-users as well as farmers and entrepreneurs.

To be launched on the penultimate day of the ongoing *Swachhta Hi Seva* fortnight, a mass movement to fulfil Mahatma Gandhi's vision of a Clean India, this initiative holds great promise for efficient municipal solid waste management and in tackling the problem of polluted urban air due to farm stubble-burning and carbon emissions. Use of CBG will also help bring down dependency on crude oil imports and in realising the Prime Minister's vision of enhancing farmers' income, rural employment and entrepreneurship.

Background

Bio-gas is produced naturally through a process of anaerobic decomposition from waste / bio-mass sources like agriculture residue, cattle dung, sugarcane press mud, municipal solid waste, sewage treatment plant waste, etc. After purification, it is compressed and called CBG, which has pure methane content of over 95%. Compressed Bio-Gas is exactly similar to the commercially available natural gas in its composition and energy potential. With calorific value (~52,000 KJ/kg) and other properties similar to CNG, Compressed Bio-Gas can be used as an alternative, renewable automotive fuel. Given the abundance of biomass in the country, Compressed Bio-Gas has the potential to replace CNG in automotive, industrial and commercial uses in the coming years.

There are multiple benefits from converting agricultural residue, cattle dung and municipal solid waste into CBG on a commercial scale:

- Responsible waste management, reduction in carbon emissions and pollution
- Additional revenue source for farmers

- Boost to entrepreneurship, rural economy and employment
- Support to national commitments in achieving climate change goals
- Reduction in import of natural gas and crude oil
- Buffer against crude oil/gas price fluctuations

The potential for Compressed Bio-Gas production from various sources in India is estimated at about 62 million tonnes per annum.

Compressed Bio-Gas plants are proposed to be set up mainly through independent entrepreneurs. CBG produced at these plants will be transported through cascades of cylinders to the fuel station networks of OMCs for marketing as a green transport fuel alternative. The 1,500-strong CNG stations network in the country currently serves about 32 lakh gas-based vehicles. The Working Group on Biofuels, set up under the National Policy on Biofuels 2018, is in the process of finalising a pan-India pricing model for Compressed Bio-Gas.

The entrepreneurs would be able to separately market the other by-products from these plants, including bio-manure, carbon-dioxide, etc., to enhance returns on investment.

It is planned to roll out 5,000 Compressed Bio-Gas plants across India in a phased manner, with 250 plants by the year 2020, 1,000 plants by 2022 and 5,000 plants by 2025. These plants are expected to produce 15 million tonnes of CBG per annum, which is about 40% of current CNG consumption of 44 million tonnes per annum in the country. At an investment of approx. Rs. 1.7 lakh crore, this initiative is expected to generate direct employment for 75,000 people and produce 50 million tonnes of bio-manure for crops.

The National Policy on Biofuels 2018 emphasises active promotion of advanced bio-fuels, including CBG. The Government of India had launched the GOBAR-DHAN (Galvanising Organic Bio-Agro Resources) scheme earlier this year to convert cattle dung and solid waste in farms to CBG and compost. The scheme proposes to cover 700 projects across the country in 2018-19. The programme will be funded under Solid and Liquid Waste Management (SLWM) component of *Swachh Bharat Mission-Gramin* (SBM-G) to benefit households in identified villages through Gram Panchayats. The Ministry of New and Renewable Energy has notified Central Financial Assistance (CFA) of Rs. 4 crore per 4,800 kg of CBG per day generated from 12,000 cubic metres of biogas per day, with a maximum of Rs.10 crore per project.

Compressed Bio-Gas can be produced from various bio-mass/waste sources, including agricultural residue, municipal solid waste, sugarcane press mud, distillery spent wash, cattle dung and sewage treatment plant waste. The other waste streams, i.e, rotten potatoes from cold storages, rotten vegetables, dairy plants, chicken/poultry litter, food waste, horticulture waste, forestry residues and treated organic waste from industrial effluent treatment plants (ETPs) can be used to generate biogas.

Going forward, Compressed Bio-Gas networks can be integrated with city gas distribution (CGD) networks to boost supplies to domestic and retail users in existing and upcoming markets. Besides retailing from OMC fuel stations, Compressed Bio-Gas can at a later date be injected into CGD pipelines too for efficient distribution and optimised access of a cleaner and more affordable fuel.

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