SCHOOL OF CIRCULAR ECONOMY
AAETI

RESIDENTIAL TRAINING

COMPRESSED BIOGAS (CBG)

Potential, Technology, Policy, Operations and Economics

COURSE DATES
APRIL 11-13, 2023

Last date to apply
APRIL 2, 2023

Language of instruction
ENGLISH

Venue
ANIL AGARWAL ENVIRONMENT TRAINING INSTITUTE (AAETI), NIMLI, RAJASTHAN

India aims to attain 'net zero emissions' status by 2070 and reduce the emissions intensity of its GDP by 45 per cent by 2030. To achieve these targets, the nation needs a clear strategy – and tapping into the country's surplus biomass and organic waste to generate clean fuels such as Bio-CNG (Compressed Natural Gas) could certainly be explored as a key element of such a strategy.

According to the Ministry of New and Renewable Energy (MNRE), India's Bio-CNG production potential is estimated at around 62 million metric tonne (mmt). Of this, 15 mmt per annum will be tapped by the Sustainable Alternative towards Affordable Transportation (SATAT) scheme by 2024.

Several other policies and initiatives have been developed to expedite the implementation of Bio-CNG projects in India: these include the MNRE's Waste to Energy programme, the Swachh Bharat Mission (SBM), and the Galvanizing Organic Bio-Agro Resources (GOBAR)-DHAN scheme.

Beyond its environmental benefits, Bio-CNG has other advantages that can benefit India's long-term development goals, such as improving sanitation and waste management, providing affordable clean energy, and boosting job opportunities in the green economy.

Centre for Science and Environment (CSE) is offering a tailor-made three-day residential training programme on 'Bio-CNG: Potential, Technology, Policy, Operation and Economics'. The high-impact training has been conceived to provide an end-to-end solution to design and install a Bio-CNG plant that aligns with the principles of circular economy, energy transition and sustainable development. The programme is open to government officials, regulators, renewable energy nodal agencies, urban development authorities, civil society organisations, start-ups, researchers, private sector consultants and individual practitioners.

COURSE HIGHLIGHTS

Module 1: Assessment of Current Status

- Potential of Biogas Generation in India
- Current National and International Scenario
- Environmental, Economic and Social Benefits of Bio-CNG
- Current Challenges
- Initiatives and Policies Projected by the Government

Module 2: The Science and Technology of Bio-CNG Production

- The Process and the Science
- Various Designs of Biogas Digesters
- Factors Affecting Biogas Production
- Biogas to Bio-CNG Up-gradation Methods

Module 3: Feedstock Potential and Management

- Agricultural Waste
- Municipal Solid Waste
- Press Mud
- Wastewater Sludge
- Animal Waste
- Biomass Supply Chain Issues

Module 4: Recovery of High Value Green Fuels from Biogas

- Methane
- Hydrogen
- Liquid Petroleum Gas
- Ethanol

Module 5: Bio-CNG Digestate as Resource

- Composition of Digestate
- Key Characteristics of Digestate
- Ways to Upgrade and Market
- Standards and Regulations

Module 6: Site Selection Criteria and Regulatory Requirements

- Parameters to Identify Potential Sites
- Necessary Clearances Required
- Stakeholder Involvement

Module 7: Financing Options/Funding Assistance

- Priority Sector Lending by Banks, IREDA and SIDBI
- MNRE: National Bioenergy Programme
- The Gobar-Dhan Scheme
- The SATAT Programme by MoPNG
- CSR (Corporate Social Responsibility) Funds
- State-level Incentives

Module 8: Carbon Credits for Bio-CNG Plants

- Basics of Carbon Credits
- Steps to Avail Carbon Credits
- Revenue that could be Generated
- Examples of Plants Using Carbon Credits

Module 9: Success Stories and Key Learnings

- Projection of Different Feedstock-Based Models
- Implementation Challenges
- Examples of Successful Running Plants

Module 10: Bio-CNG Plant Exposure Visit

- Explanation of Plant Components
- Revenue Model
- Feedstock and Manpower Requirements
- Economic Viability

COURSE FEES

Government Officials: Registration fee is waived for Central and State Government officials*
Indian Participants: ₹21,000
Foreign Participants: US $300

**Cost of travel to Delhi and back for the nominated officials to be borne by the nominating government authority*

- The course fee is inclusive of travel from Delhi to the training institute, accommodation, food, resource person, and training kit.
- A discount of up to 50 per cent is available for NGOs, academic Institutions, students and farmers.

NOTE

- Confirmed participants must make their own travel arrangements in a way so that they can arrive in Delhi on April 10, 2023 by afternoon.
- After reaching Delhi, all participants should make their way to the CSE office at 41, Tughlakabad Institutional Area, near Batra Hospital (Mehrauli-Badarpur road), New Delhi-110062.
- From here, CSE buses will ferry them to the training campus of AAETI at Nimli, near Alwar. The time taken in this travel would be three hours approximately.
- Participants can make their return travel arrangements (departure from Delhi) for April 13. CSE buses will ferry them back.
- Accommodation for the complete training duration will be provided at AAETI. The AAETI canteen will be serving all meals to the participants.
- Participants should carry walking shoes.
- AAETI is a specially designed campus, conceptualized and built to facilitate a practice of sustainable living. Please follow the ground rules laid down for it.

SCHOOL OF CIRCULAR ECONOMY

AAETI

Centre for Science and Environment

41, Tughlakabad Institutional Area, New Delhi 110 062
Phones: 91-11-40616000 Fax: 91-11-29955879
Website: www.cseindia.org

FOR QUERIES, PLEASE CONTACT

RAHUL JAIN,
Deputy Programme Manager,
School of Clean Energy Transitions (AAETI)
Renewable Energy Unit, Centre for Science and Environment,
Mobile : +91 8901448131
Email: rahul.jain@cseindia.org