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DEPARTMENT OF MECHANICAL ENGINEERING

Since its inception in 1955, the Department of Mechanical Engineering has a wide reputation for the quality of teaching and research it offers. It has been awarded top grades for both teaching and research activities from independent and government bodies. The excellent laboratory facilities, modern computer clusters, systematically designed curriculum, and dedicated faculty members make this Department a dynamic place to study. Today the department is recognized as one of the leading departments in its domain with infrastructure and facilities to match the very best in the country. Mechanical Engineering Graduates from BIT Mesra are sought after by many prestigious companies. There is also an excellent careers center on campus, which helps the students to get entry into multinational companies.

BIRLA INSTITUTE OF TECHNOLOGY, MESRA RANCHI (INDIA)

The Birla Institute of Technology (BIT) Mesra, Ranchi was founded by the Philanthropist, Industrialist Mr. B.M. Birla, in the year 1955, as part of his lifelong commitment towards building a technologically advanced and industrially strong India. The achievements of the Institute, both in terms of research and excellent standards of academic programmes led to its attaining the status of a Deemed University under the UGC Act of the Government of India, in 1986, and one of the top Technical Institutes of the country. Today, BIT offers undergraduate, postgraduate as well as doctoral level programmes in all major branches of engineering and technology, architecture, pharmaceutical sciences as well as management. The Institute has laterally expanded through establishment of several extension centres, both in India and abroad.

Two Days Symposium
On

Futuristic Engineering Design, Fabrication, Commissioning and Execution of Compressed Biogas (CBG) and Bio-CNG Plants for Heating, Power and Automotive Applications Using Organic Waste

23-24 October 2026



**Department of Mechanical
Engineering**

**Birla Institute of Technology
Mesra, Ranchi-835215, Jharkhand**
<http://www.bitmesra.ac.in>

Importance and Scope of the Program

The Two days symposium on “Futuristic Engineering Design, Fabrication, Commissioning and Execution of Compressed Biogas (CBG) and Bio-CNG Plants for Heating, Power and Automotive Applications Using Organic Waste”. This symposium focuses on reduction of LPG usages for Cooking /Heating activities and reduction in Petrol and Diesel consumption through the effective production and utilization of Bio-CNG for automotive applications. It aims to promote the production and utilization of CBG and Bio-CNG as an alternative to traditional fossil fuels. CBG and Bio-CNG is a biofuel produced using organic waste, left over foods from kitchens, hostels mess, hotels kitchen waste, cow dung, vegetables waste, municipal solid organic waste, press mud from the sugar industry and cattle dung or poultry litter. It is chemically similar to natural gas and can be used for heating / cooking, automotive and industrial applications. With a vision to reduce dependence on imported crude oils, tackle pollution, and create economic opportunities, CBG and Bio-CNG serves as an essential step toward achieving India's broader goal for energy sustainability and environmental protection.

Symposium Objective

1. To disseminate better production, purification and bottling of Biogas technologies to Urban and Rural Communities
2. Responsible waste management, alternative for LPG, reduction in carbon emissions and pollution.
3. Reduction in imports of natural gas and crude oil
4. Boost to entrepreneurship, rural economy and self - employment.
5. Additional revenue source for farmers by using the digested slurry
6. Buffer against crude oil/gas price fluctuations
7. Support to national commitments in achieving climate change goals

Symposium Content

The symposium content outline for two days on “Futuristic Engineering Design, Fabrication, Commissioning and Execution of Compressed Biogas (CBG) and Bio-CNG Plants for Heating, Power and Automotive Applications Using Organic Waste”:

Day1: 23.10.2026 - Fundamentals on Biogas Generation, Utilization and Reduction in LPG requirement through Compressed Biogas and Bio-CNG

- Overview of Global Energy Scenario and Challenges
- Principles of Biogas and Compressed Biogas (CBG)
- Role of Sustainable Engineering Design of Biogas in Heating, Automotive and Industrial Applications
- Design, Operations, Commissioning, Maintenance and Utilizations of Compressed Biogas (CBG) and Bio-CNG
- Visit to installed Biogas plant at BIT Mesra

Day 2: 24.10.2026 - Design, Site Selection and Installation of CBG, Bio-CNG Plant

- Area required for different capacity of CBG, Bio-CNG plant
- Household, Hostels Kitchen, Hotels, and Industrial Energy Utilization through CBG
- Automotive applications through Bio-CNG
- Integration of Renewable Energy Systems through blending of CBG, Bio-CNG

Important Dates:

Registration	14/10/2026 to 22/10/2026
Workshop	23/10/2026 to 24/10/2026

Accommodation:

Nominally paid accommodation will be arranged for outstation participants in the institute guest house or hotels, subject to prior request and availability.

Speaker: Eminent academicians, industry experts, and distinguished researchers from leading industries and universities.

Who Should Attend: Municipal Corporation, Municipal Commissioner, Engineers of PED, Urban Development Agencies, Faculty members, Startups, Industry Professionals, Energy Utilizers in place of LPG / Petrol / Diesel, Scholar/Students with an active interest in energy utilization, conservation, generators and sustainable engineering designers are encouraged to apply.

Two days Symposium on “Futuristic Engineering Design, Fabrication, Commissioning and Execution of Compressed Biogas (CBG) and Bio-CNG Plants for Heating, Power and Automotive Applications Using Organic Waste” Date: 23-24 October 2026

Registration Details:

Participants are required to complete the registration process on or before **22nd October, 2026.**

Registration Fees:

Industry: - Rs.25000/-+GST

Startups/Establishers of the Plant: Rs.11000/- + GST

Institutions: Rs.2500/- + GST

This includes seminar kit, lunch, and high tea.

Sponsors by Industries: Rs.25000/-

Cheque should be made in Favour of: BIRLA INSTITUTE OF TECHNOLOGY

Step-by-Step Payment Instructions

Please follow the steps below to complete the payment for registration of Symposium 2026:

1. Click on the payment link from SBI Collect:
2. On the webpage, click on “Educational Institutes”.
3. In the search box, type “Birla Institute of Technology”.
4. Select Birla Institute of Technology (State: Jharkhand) from the list displayed.
5. On the Payment Category page, select “CBCCNG-2026” from the dropdown menu.
6. Fill in the required details and complete the payment process.

Participants are advised to keep a copy of the payment receipt for future reference.

Complete Registration Form Link:

<https://docs.google.com/forms/d/e/1FAIpQLSfCkhOCPvILk0phXLS75cvbEhIBsw0C179ABccjSE7CCqOrIQ/viewform?usp=publish-editor>