

COMPRESSED BIOGAS PLANT BY-PRODUCT DETAILS

The main by-products of a **Compressed Biogas (CBG) plant** are:

1. Digestate (Organic Fertilizer)

- **Solid Digestate:** The solid residue left after the anaerobic digestion process is rich in nutrients like nitrogen, phosphorus, and potassium. It can be used as an organic fertilizer or soil conditioner in agriculture.
- **Liquid Digestate:** The liquid portion of the digestate can also be used as a nutrient-rich bio-fertilizer, promoting sustainable agriculture or alternatively can be used for slurry preparation for fresh feed and makes the plant ZLD.

2. Carbon Dioxide (CO₂)

- During the biogas purification process, a significant amount of **CO₂** is separated from the methane. This **CO₂** can be captured and utilized in various industries, such as food and beverages, or for industrial applications like dry ice production.

These by-products contribute to the overall sustainability of the CBG plant, supporting circular economy principles through the reuse of waste materials and the generation of useful secondary products.

Fertilizer Control Order (FCO)

- **Ministry Involved:** Department of Fertilizers.
- **Purpose:** Under the FCO, bio-fertilizers and organic fertilizers, including those derived from CBG plants, are categorized and regulated. This regulation helps in the certification, standardization, and marketing of the bio-fertilizers produced as a by-product of CBG plants.
- **Marketing Support:** The recognition and certification of organic fertilizers under the FCO make it easier for CBG plants to market their digestate as organic fertilizer in the agricultural sector. Also 1500 Rs / Ton is subsidy on account of Marketing development assistance.