

Air Liquide doubles its biomethane production capacity

Since the beginning of 2018, Air Liquide has commissioned three new biomethane production units, in the United States, in France, and in the United Kingdom. With these units, Air Liquide has doubled its biomethane production capacity, which now stands at 60 MW, the equivalent of 500 GWh for a full year of production. Over the course of the last four years, the Group has decided around 100 million euros in investments in biomethane production. Today, the Group operates 10 production units around the world, designed to purify biogas in order to transform it into biomethane and inject it into the natural gas network.

The **three new biomethane production units** commissioned by Air Liquide are located in the United States (Walnut, Mississippi), in France (Cestas, near Bordeaux), and in the United Kingdom (Northwick, near Birmingham).

The new biomethane production unit in the United States is located in the Northeast Mississippi Landfill (NEML) site. This is the first large-scale unit built by Air Liquide in the United States. It purifies the biogas that results from **household waste treatment sites** and transforms it into biomethane.

In Europe, the units purify the biogas from **farm waste** and transform it into biomethane. Part of this biomethane is used for trucks fueled by bio-NGV (Natural Gas for Vehicles), a clean non-fossil fuel with no fine particulates emissions.

Air Liquide has developed technologies and expertise that cover **the entire biomethane value chain**: the purification of biogas for its transformation into biomethane, injection into the natural gas networks in collaboration with local players, liquefaction, distribution for clean vehicle fleets fueled by bio-NGV.

François Darchis, Senior Vice President, member of the Air Liquide Executive Committee supervising innovation, commented: ***“The commissioning of these new biomethane production units, whether in the United States or in Europe, illustrates the strong growth in new markets related to the energy transition. In transforming the biogas produced by waste into biomethane using its patented separation and purification technologies, Air Liquide contributes to reducing greenhouse gas emissions and improving air quality.”***

Global Markets & Technologies

The Global Markets & Technologies (GM&T) World Business Unit delivers technological solutions (molecules, equipment and services) to support the new markets in energy transition, maritime logistics via cryogenic transportation, and scientific exploration in order to accelerate Air Liquide's sustainable growth. GM&T employs 1,800 people worldwide and generated a 2017 revenue of €372 million.

Biogas is produced during the treatment of waste (coming from farming, household waste and industrial activities). Biogas purification technology is based on the use of patented polymer membranes manufactured by Air Liquide. This powerful system separates the components of biogas, and generates a biomethane that can be injected into the natural gas network. Used as fuel in vehicles, bio natural gas or biomethane is also called bio-NGV (Natural Gas for Vehicles).

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The world leader in gases, technologies and services for Industry and Health, Air Liquide is present in 80 countries with approximately 65,000 employees and serves more than 3.5 million customers and patients. Oxygen, nitrogen and hydrogen are essential small molecules for life, matter and energy. They embody Air Liquide's scientific territory and have been at the core of the company's activities since its creation in 1902.

Air Liquide's ambition is to lead its industry, deliver long term performance and contribute to sustainability. The company's customer-centric transformation strategy aims at profitable growth over the long term. It relies on operational excellence, selective investments, open innovation and a network organization implemented by the Group worldwide. Through the commitment and inventiveness of its people, Air Liquide leverages energy and environment transition, changes in healthcare and digitization, and delivers greater value to all its stakeholders.

Air Liquide's revenue amounted to 20.3 billion euros in 2017 and its solutions that protect life and the environment represented more than 40% of sales. Air Liquide is listed on the Euronext Paris stock exchange (compartment A) and belongs to the CAC 40, EURO STOXX 50 and FTSE4Good indexes.