

## Air Liquide to design and build its first landfill biogas purification plant in the U.S.

**Air Liquide announces plans to construct and operate a landfill gas (LFG) to renewable natural gas (RNG) purification plant in Walnut, Mississippi, which will enable the conversion of the methane emitted by waste to a renewable energy capable of heating an estimated 4,500 homes per year.**

Air Liquide will design, construct and operate its first landfill gas (LFG) to renewable natural gas (RNG) purification plant in the U.S.A at the Northeast Mississippi Landfill (NEML), in Walnut, Mississippi. The site, owned by the Northeast Mississippi Solid Waste Management Authority, is operated by national solid waste company, Waste Connections, Inc and receives approximately 350,000 tons of waste per year. The Northeast Mississippi Solid Waste Management Authority is the local governmental agency responsible for managing solid waste disposal and providing environmentally responsible programs and solutions to the 56,000+ residents of Tippah, Benton and Prentiss Counties.

**Bobby Thompson**, Chairman of the Northeast Mississippi Solid Waste Management Authority, commented, *“This project would not be possible without the collaborative efforts of Air Liquide, the City of Walnut, Waste Connections of MS, Inc., and the Waste Authority. We are certainly pleased to play a part in bringing this exciting renewable energy technology to our landfill operations in Walnut.”*

Using Air Liquide’s gas separation **membrane technology**, the plant will have the capability to purify the methane emitted by waste decay and make it suitable for use.

Expected to break ground in **Q1 of 2017**, the initial production capacity of the plant is planned to achieve **1,300 mmBTU/day**, with plans to expand.

In addition to the biogas purification plant, Air Liquide will build and implement a dedicated four mile pipeline that will feed the biogas into a natural gas pipeline in the area. Construction of this pipeline will also enable the town of Walnut to expand its utility services. Air Liquide has developed technologies and expertises that span the entire biomethane value chain.

**Chet Benham**, VP of Air Liquide Advanced Technologies U.S. LLC states that, *“The new biogas project will enable us to transform waste and unused energy resources into renewable, carbon-reducing energy for the community and surrounding cities. Air Liquide is actively working to continue our growth in biogas purification plants in the U.S., and to provide clean energy for sustainable communities.”*

The project will also provide numerous benefits to the surrounding communities such as short and long term local employment opportunities and reduction of local greenhouse gas emissions and air pollution.

**Vicki Skinner**, Mayor of Walnut, Mississippi, issued the following statement: ***“The new biogas purification plant is a beneficial project for the town of Walnut and our surrounding communities. The installation of the pipeline will enable us to expand our utility services to support our continued growth.”***

### **Biogas: From waste to renewable gases**

With over 50 biogas sites worldwide and more than 100 years of experience in gas separation, Air Liquide is the world leader in biogas purification, with a capacity of 160,000 m<sup>3</sup>/h. Since 2006, Air Liquide has upgraded 20 landfill biogas for grid injection in the U.S., with up to 20,000 Nm<sup>3</sup>/h of raw biogas.

### **Biogas Purification Technology**

Air Liquide's purification modules are able to separate methane and carbon dioxide using an innovative process involving patented polymeric membranes manufactured by Air Liquide Advanced Separations (ALaS). This efficient system generates high quality biomethane with methane content between 95% and 99%.

### **Air Liquide in the U.S.**

Air Liquide employs more than 20,000 people in the U.S. in over 1,300 locations. The company offers industrial and medical gases, technologies and related services to customers in energy, industrial, electronics and healthcare markets. [www.airliquide.com/USA](http://www.airliquide.com/USA)

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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 68,000 employees and serves more than 3 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 revenues amounted to €16.4 billion in 2015, and its solutions that protect life and the environment represented more than 40% of sales. On 23 May 2016, Air Liquide completed its acquisition of Airgas, which had revenues amounting to \$5.3 billion (around €4.8 billion) for the fiscal year ending 31 March 2016.

Air Liquide is listed on the Paris Euronext stock exchange (compartment A) and belongs to the CAC 40 and Dow Jones Euro Stoxx 50 indexes.

\* Following the acquisition of Airgas on 23 May 2016