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## Air Liquide accelerates its development in biogas purification

Air Liquide announces the commissioning of 12 biogas purification units in the last 12 months in Europe. With these new units, Air Liquide triples its biogas purification capacity on the European continent. Overall, Air Liquide has designed and deployed worldwide 50 biogas purification units in order to transform biogas into biomethane and inject it into the natural gas networks.

The 12 new biogas purification units commissioned by Air Liquide are located in France, in the United Kingdom, in Hungary and in Denmark. Five of these units, representing a total investment of 12 million euros, are operated by Air Liquide. They generate long-term contracts for the production of biomethane for Europe's natural gas grids, which supply notably the transportation fleets that run on bio-NGV (Natural Gas for Vehicles).

**World leader in the supply of biogas purification technologies** with an installed capacity of 160 000 m<sup>3</sup>/h, Air Liquide has developed **technologies and expertise that span the entire biomethane value chain**: purification of biogas into biomethane, injection into the natural gas network, liquefaction, distribution for clean transportation fleets.

The purification and biogas valorization is a very promising example of a circular economy, which helps reduce greenhouse gas emissions and which could contribute to solutions for the zero emission transportation of tomorrow.

François Darchis, Senior-Vice President, member of the Air Liquide group's Executive Committee supervising Innovation, commented: "These new biomethane production contracts illustrate the ability of Air Liquide to leverage its technologies to incubate new businesses. By positioning on the entire chain from biogas purification to distribution with bio-NGV stations, Air Liquide is contributing to meeting energy and environmental challenges."

**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).

**Bio-NGV**, like hydrogen, is a clean transportation solution. This fuel, of non-fossil origin, is part of a circular economy (from the conversion of waste to the mobility of the vehicle). Using biogas in a reformer will also enable the production of carbon-free hydrogen, in line with the Group's Blue Hydrogen commitment for 2020.

**In 2014, Air Liquide acquired FordonsGas**, Sweden's leading distributor of bio-NGV, which operates nearly 50 stations in Sweden. These bio-NGV stations enable taxis, corporate fleets, buses and passenger cars to procure environmentally friendly fuel that is nearly 70% produced from renewable energies.

## **CONTACTS**

**Corporate Communications** 

Caroline Philips +33 (0)1 40 62 50 84 Aurélie Wayser-Langevin +33 (0)1 40 62 56 19

**Investor Relations** 

Aude Rodriguez +33 (0)1 40 62 57 08 Erin Sarret +33 (0)1 40 62 57 37 Louis Laffont +33 (0)1 40 62 57 18 Communications, Air Liquide Advanced Business & Technologies Nathalie Simon de Kergunic +33 (0)1 40 62 55 06

World leader in gases, technologies and services for Industry and Health, Air Liquide is present in 80 countries with more than 50,000 employees and serves more than 2 million customers and patients. Oxygen, nitrogen and hydrogen have been at the core of the company's activities since its creation in 1902. Air Liquide's ambition is to be the leader in its industry, delivering long-term performance and acting responsibly.

Air Liquide ideas create value over the long term. At the core of the company's development are the commitment and constant inventiveness of its people.

Air Liquide anticipates the challenges of its markets, invests locally and globally, and delivers high-quality solutions to its customers and patients, and the scientific community.

The company relies on competitiveness in its operations, targeted investments in growing markets and innovation to deliver profitable growth over the long-term.

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