



## Air Liquide contributes to a large hydrogen filling station network in Germany

*press release*

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Air Liquide, together with its partners of the “**H2 Mobility**” initiative, has signed a term-sheet agreement to implement a major action plan for the construction of a nationwide hydrogen filling station network in Germany. **By 2023, the current German network of 15 hydrogen filling stations will be expanded to about 400 hydrogen stations covering the whole country.** The overall investment by all partners will be around **€350 million.**

This will ensure a need-related supply for the fuel cell electric vehicles available to the market in the coming years. A first step will be the deployment of **100 hydrogen stations** in Germany over the next 4 years.

Since 2010, Air Liquide has been a partner of the “**H2 Mobility**” initiative, aimed at evaluating and contributing to the development of a hydrogen infrastructure in Germany, to support the mass production of fuel cell electric vehicles. In 2012, Air Liquide opened its first hydrogen station for the general public in Düsseldorf, Germany. The Group is also a partner of comparable initiatives in **Great Britain, France, the Netherlands, Denmark, Sweden, Switzerland as well as in Japan.**

Air Liquide masters the entire supply chain of hydrogen, from production to storage, distribution and use by the end consumer. In the last decade, the Group has built **more than 60 hydrogen stations in the world.** Air Liquide stations allow to fill vehicles with gaseous hydrogen in less than 5 minutes.

Alongside the automotive industry, Air Liquide supplies hydrogen for forklift truck fleets for logistics warehouses in France, Canada and the US, as well as for municipal bus fleets.

**François Darchis**, Senior Vice-President and a member of Air Liquide's Executive Committee, commented: **“This agreement represents a major step forward in the construction of a hydrogen filling infrastructure in Germany and beyond in Europe. Hydrogen contributes to the challenges of sustainable mobility: reducing greenhouse gases and local pollution in our cities, and thus ultimately to the preservation of the environment. This project also highlights the commitment of the Air Liquide Group to develop and promote innovative technologies for the deployment of the ‘hydrogen energy’ infrastructure worldwide.”**

### Hydrogen, a clean energy carrier

Used in the fuel cell, hydrogen combines with oxygen from the air to produce electricity, **with water as the only by-product.**

Hydrogen can be produced from a various range of energy sources, natural gas in particular, but also from renewable energy sources. Hydrogen thus has great potential to provide clean energy and ensure reliability of supplies.

Air Liquide is present across the entire hydrogen energy chain (production, distribution, high-pressure storage, fuel cells and hydrogen filling stations).

Air Liquide revenue from hydrogen for refineries and petrochemicals markets in 2012: **€1.9 billion**

## Blue Hydrogen

With Blue Hydrogen, Air Liquide is moving towards a gradual decarbonization of its hydrogen production dedicated to energy applications.

In practical terms, Air Liquide takes a commitment to produce at least 50% of the hydrogen necessary for these applications through carbon-free processes by 2020, by combining:

- renewable energy sources, water electrolysis and biogas reforming,
- carbon capture and storage technologies during the hydrogen production process based on natural gas.

**Air Liquide is the world leader in gases for industry, health and the environment**, and is present in **80 countries** with **50,000 employees**. Oxygen, nitrogen, hydrogen and rare gases have been at the core of Air Liquide's activities since its creation in 1902. Using these molecules, Air Liquide continuously reinvents its business, anticipating the needs of current and future markets. The Group innovates for the good of society while delivering profitable growth and a consistent performance

**Innovative technologies** that curb polluting emissions, lower industry's energy use, recover and reuse natural resources or develop the energies of tomorrow, such as hydrogen, biofuels or photovoltaic energy... Oxygen for hospitals, home healthcare, fighting nosocomial infections... Air Liquide combines many products and technologies to develop valuable applications and services not only for its customers but also for society.

**A partner for the long term**. Air Liquide relies on employee commitment, customer trust and shareholder support to pursue its vision of sustainable, competitive growth. The **diversity** of Air Liquide's teams, businesses, markets and geographic presence provides a solid and sustainable base for its development and strengthens its ability to push back its own limits, conquer new territories and build its future.

**Air Liquide explores the best that air can offer to preserve life, staying true to its Corporate Social Responsibility and sustainable development approach**. In 2012, the Group's revenues amounted to **€15.3 billion** of which 82% were generated outside France. 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.