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# A first Air Liquide hydrogen filling station in the Netherlands

The European Union is supporting a hydrogen mobility deployment program

## press release

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## 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 byproduct.

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 announces that it is investing in, installing and commissioning a new **public hydrogen filling station in Rotterdam**, Netherlands, for fuel cell electric vehicles, in collaboration with the Dutch Ministry of Transport and the Environment.

This project has the financial backing of the European Union as part of the Trans-European Transport Networks (TEN-T) program. These TEN-T community funds constitute an important source of European Union funding for transport infrastructures. This is the first time that European TEN-T funding has been allocated to the development of hydrogen electric mobility.

This station will be the first Air Liquide hydrogen filling station located in the **Netherlands**. With the capacity to provide **fifty fills per day**, this dual-pressure station, which will operate at 350 and 700 bar, will supply hydrogen for fuel cell electric vehicles. **One fill will provide these vehicles with an autonomy of 500-600 km**.

This station will open to the public in late 2013 as part of a **European hydrogen infrastructure deployment project** run by Air Liquide and six other European partners\*. The project also includes studies on the opening of filling stations in four European countries: **France, Denmark, Sweden and the Netherlands.** 

François Darchis, Senior Vice-President and a member of Air Liquide's Executive Committee, commented: "Air Liquide is proud to be playing an active role in this new project supported by the European Union. This development demonstrates the Group's commitment to contributing to the deployment of the 'hydrogen energy' infrastructure worldwide. Hydrogen is one of the innovative solutions that offer a response in the short term to the challenges of sustainable mobility: reducing greenhouse gases, local pollution in our cities and dependency on oil-based fuels thus contributing to the preservation of the environment.

Following on from recent initiatives supported by the British and German governments, the 'hydrogen energy' drive continues to move forward in Europe."

### \*HIT, Hydrogen Infrastructure for Transport

This project is run by the Dutch Ministry for Transport and the Environment, Air Liquide, the Association Française de l'Hydrogène et des Piles à Combustibles ('French Hydrogen and Fuel Cell Association', AFHYPAC), the Copenhagen Hydrogen Network (CHN), the Association des Régions Européennes pour l'Hydrogène, les Piles à Combustibles et l'Electro-mobilité ('Association of Hydrogen, Fuel Cells and Electromobility for European Regions', HyER), Hydrogen Link Denmark and Hydrogen Sweden.

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 is making a commitment to produce at least 50% of the hydrogen necessary for these applications through carbon-free processes by 2020 by combining:

- the use of renewable energy sources, water electrolysis and biogas reforming,
- the use of 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 46,200 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 to enable progress, to achieve dynamic 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 sustainable development approach. In 2011, the Group's revenues amounted to €14.5 billion, of which more than 80% 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.