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# Electronics: launch of a new offer

press release

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## Air Liquide Electronics

With over 3,000 employees and revenue of €1,177 million in 2010, Air Liquide Electronics has activities in ultra-pure and specialty gases, new molecules, related equipment and customized services.

The Electronics division management is

based in Tokyo, bringing management closer to the Semiconductor, Flat Panel Display and Photovoltaic markets of Asia.

# The use of fluorine gas in the flat panel & photovoltaic industries

Fluorinated gases are used in chamber cleaning for critical manufacturing steps in the electronics industry:

- Fluorine (F2) is the only fluorinated gas without Global Warming Potential (GWP).
- Fluorine requires reliable and proven industrial management solutions.

In recent years, demand from the electronics industry for cleaning gases for large flat panel display and silicon thin film photovoltaic manufacturing has grown significantly.

To meet industry demand, Air Liquide has decided to **broaden its offer** by proposing an **alternative** to existing cleaning gases for its **customers**. In addition to carrier and specialty gases and precursor materials used in the manufacturing process, it will also supply **fluorine cleaning gas solutions**.

Starting in 2012, flat panel display and silicon thin film photovoltaic manufacturing sites will have access to this environmentally-friendly gas. Fluorine will become an alternative to nitrogen trifluoride gas (NF3), which is a commonly used cleaning application in this industry. It will be produced directly by large on-site facilities, offering a cost effective and reliable approach to cleaning applications that will also allow customers to benefit from productivity enhancement.

**Air Liquide** is joining forces with the **Solvay Group** in a **worldwide joint venture** to bring this offer to market, an undertaking that involves **building**, **owning and operating** the next generation of on-site fluorine solutions.

Air Liquide brings its global presence, infrastructure and existing gas supply relationships with leading manufacturers to the joint venture, a partnership that will also leverage Solvay's 45 years of experience in running large-scale fluorine production and raw material supply chains.

Establishment of the joint venture is subject to the approval of the appropriate antitrust authorities.

François Darchis, a member of Air Liquide's Executive Committee, commented: "This new step will allow Air Liquide to expand its offer in this fast growing electronics market. Solvay brings its field-proven fluorine production technology and expertise. By developing this non-greenhouse cleaning solution alternative for our customers, Air Liquide reiterates its commitment to environmental preservation. High-Tech solutions and the Environment are two of the Air Liquide Group's growth drivers."

Vincent De Cuyper, Group General Manager of the Chemicals Sector and Member of the Executive Committee of Solvay said: "This partnership will help satisfy growing world demand for cleaning gases. The combination of market experience and know how from Air Liquide, the market leader in gases for the electronic industry, and Solvay's proprietary breakthrough modular technology, will enable our partnership to offer significant economic benefits to its customers and bring at the same time advantages for the environment."

Air Liquide is the world leader in gases for industry, health and the environment, and is present in 80 countries with 43,600 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, homecare, 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 2010, the Group's revenues amounted to €13.5 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.