



Houston & Paris, October 7, 2010

## Air Liquide to participate in major U.S. Carbon Capture & Storage project

*press release*

### Group Corporate Communications

Corinne Estrade-Bordry  
+ 33 (0)1 40 62 51 31  
Garance Bertrand  
+ 33 (0)1 40 62 59 62

### Investor Relations

Virginia Jeanson  
+33 (0)1 40 62 57 37  
Annie Fournier  
+33 (0)1 40 62 57 18

### U.S. Corporate Communications

Michael Rosen  
+ 1 713 624 8023

### Oxy-combustion

uses **oxygen** instead of air for combustion. Combined with an innovative CO<sub>2</sub> purification process, it results in a **relatively pure stream of CO<sub>2</sub> ready for capture, storage or direct use**. Air Liquide's teams contribute their know-how and expertise in oxy-combustion in a number of applications such as fossil fuel energy production, metals, glass and cement manufacturing.

Air Liquide has **developed highly specialized expertise** in the oxy-combustion field, with **over 800 combustion-related patents** to its credit.

### Air Liquide Engineering

designs, develops and builds gas production units for the Group or for its customers. It comprises **3,200 employees**, spread over **ten Engineering & Construction centres**, covering its major markets.

The 2007 integration of Lurgi, a leading technology company operating worldwide, provides enhanced expertise in the fields of process engineering and plant contracting for the refining and petrochemicals markets.

**Air Liquide Process & Construction, Inc.** (Air Liquide), part of the Air Liquide Engineering & Construction organization, has been named by the U.S. Department of Energy (DOE) to participate in the development of **FutureGen 2.0 – the world's first full scale oxy-combustion power plant incorporating permanent CO<sub>2</sub> capture and storage (CCS)**.

The recently executed cooperative agreement between the DOE and Ameren Energy Resources Company, LLC (AER) is part of a commitment by the DOE to **award 1 billion dollars in U.S. federal funding for the clean coal power project**, which includes sub-awards to Air Liquide and its technology partner Babcock & Wilcox Power Generation Group, Inc. (B&W PGG).

Capture and storage of CO<sub>2</sub> is critical to reducing greenhouse gas emissions from power plants and making clean energy a reality. This project represents the **first full-scale production initiative for clean coal energy using oxy-combustion technology and CCS**. The project is designed to capture and store approximately **1.3 million tons of CO<sub>2</sub> each year, 90% of the plant's CO<sub>2</sub> emissions**.

The project began its first phase on October 1, 2010, which includes engineering studies and economic analysis to re-power **AER's Meredosia, Illinois 200 MW power plant using clean-coal technology**. Subsequent phases of the project will address further engineering and construction activities.

The **oxy-combustion process** being deployed is a result of **innovative technology** developed by Air Liquide and B&W PGG, which substitutes **oxygen and recycled flue gases** for normal combustion air in coal-fired boilers and incorporates an innovative CO<sub>2</sub> purification process to produce a stream of CO<sub>2</sub> suitable for direct capture and storage. **The process helps reduce greenhouse gases from industrial activities that use carbon-based fossil fuels.**

Air Liquide has been investing in oxy-combustion technology **for more than a decade** through R&D and successful participation in pilot projects in the **U.S., France and Australia** that demonstrate its technological viability. These include the operation of a 30 MW unit in collaboration with B&W PPG in Alliance, Ohio; the successful implementation of natural gas oxyburners and key CO<sub>2</sub> purification equipment for the **Lacq project** with Total in southern France; and partnership in the **Australian Callide**

## Air Liquide in the U.S.

Air Liquide companies in the U.S. employ more than **4,000** employees in over **200 locations**, and offers industrial gases, equipment and related services to customers in the large industries, industrial merchant, electronics and healthcare markets to help them maximize productivity, operate more efficiently and reduce their environmental footprints.

**oxyfuel project**, designed to demonstrate integrated CO<sub>2</sub> purification. Oxy-combustion is one of many innovations from Air Liquide designed to help meet the world's clean energy needs, including products and technologies in biofuels, photovoltaics and hydrogen.

**Michael J. Graff**, President & CEO of American Air Liquide Holdings, Inc. and member of Air Liquide Group's Executive Committee in charge of the Americas, commented, ***"We thank the U.S. Department of Energy for the opportunity to apply our clean energy technology. Air Liquide looks forward to working with its partners and the State of Illinois on this extraordinary project. Oxy-combustion is one of the main paths for reducing CO<sub>2</sub> emissions from coal and other combustion processes. FutureGen 2.0 will help set the stage for future applications of this promising carbon capture technology.***

***With the Environment as a growth driver for Air Liquide, we are proud to contribute to helping the global industrial community meet its energy needs while reducing its carbon footprint."***

***Air Liquide is the world leader in gases for industry, health and the environment***, and is present in over **75 countries** with **42,300 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 2009, the Group's revenues amounted to **€12 billion**, of which almost 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.