

# News Release



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## PRAXAIR TO SEEK DOE FUNDING FOR OXY-COAL PROJECT

DANBURY, Conn., August 21, 2008 -- In response to a Funding Opportunity recently issued by the U.S. Department of Energy's Clean Coal Power Initiative, Praxair, Inc. (NYSE:PX) will submit a proposal, working with the Jamestown Oxy-Coal Alliance and others, to demonstrate technology designed to capture carbon dioxide emissions from both new and existing coal-fired electricity-generating plants. If successful, the demonstration project would be the first of its kind in the United States, integrating several tested technologies for the first time.

The Department of Energy (DOE) is making available up to \$340 million to be distributed among selected recipients. The DOE will consider cooperative agreements between government and industry to demonstrate, at commercial scale, new technologies that capture carbon dioxide emissions from coal-fired power plants and either sequester the carbon dioxide or put it to beneficial use. Applications are due to the DOE by January 15, 2009.

The primary site for the demonstration project is the Jamestown Board of Public Utilities in Jamestown, New York. Over the past year, Praxair has been working with an alliance of industrial, engineering and academic partners to define the scope of the Jamestown project which would involve construction of a new 50-megawatt circulating fluidized bed (CFB) plant. The Jamestown Oxy-Coal Alliance members include the Jamestown Board of Public Utilities, Praxair, Dresser-Rand Group, Inc., Ecology and Environment, Inc., AES Corporation, Foster Wheeler North America Corp., Battelle and the State University of New York at Buffalo.

In June, New York Governor David Paterson indicated New York State support for the project, including up to \$6 million of state funding to support project development that is in addition to \$800,000 previously provided by the New York State Energy Research and Development Authority and the New York State Legislature.

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Consistent with the DOE solicitation requesting both a proposed and alternate site, Praxair's proposal will include an alternate site at the Holland Board of Public Works in Holland, Michigan, which will evaluate a 78-megawatt unit equipped with oxy-coal technology. On August 18, the Holland Board of Public Works approved agreements with Praxair to be included in the proposal and with Battelle and Black & Veatch to conduct preliminary assessment work.

Oxy-coal technology involves the introduction of pure oxygen instead of air into the utility boiler, creating a highly concentrated stream of carbon dioxide which is more economical to capture than emissions from existing systems. The technology is designed to capture more than 90% of the carbon dioxide generated, and also to further reduce emissions of sulfur dioxide, nitrogen oxides and mercury.

The proposed project would integrate Praxair's oxy-coal technology with a CFB boiler generating system to be supplied by Foster Wheeler. Praxair would provide oxygen supply facilities; oxygen mixing and injection technology; the downstream carbon dioxide capture and gas-processing equipment; and overall integration of control systems with the power systems.

"We are confident that our proposal will meet the DOE's goal to demonstrate, at a commercial scale, advanced coal-based, carbon-capture technologies," said Charles McConnell, Praxair's vice president for oxy-coal and gasification. "Demonstration projects such as these are fundamental to advancing the technology and know-how necessary to reduce greenhouse gas emissions."

Application criteria for DOE funding include:

- Carbon dioxide capture technologies must operate at 90 percent capture efficiency.
- At least 300,000 tons per year of carbon dioxide must be captured and sequestered or put to beneficial use.
- Projects must show significant progress toward carbon dioxide capture and sequestration with less than 10 percent increase in electricity costs.
- Projects must use domestic mined coal or coal refuse for at least 75 percent of energy input.
- At least 50 percent of the energy output must be in the form of electricity.

Praxair, a recognized leader in combustion technologies, holds 200 patents related to oxygen-based combustion technologies. These technologies have been used for decades by customers in the metals, glass, cement and other energy-intensive industries to reduce emissions and increase efficiency. Praxair is participating in additional oxy-coal projects in Spain and Germany.

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In July, the DOE awarded Praxair \$3.2 million to develop a near-zero emissions flue gas purification technology for existing pulverized-coal power plants retrofitted with oxy-fuel combustion technology. This technology, when developed, will enable Praxair to retrofit existing pulverized coal power plants with oxy-coal.

Praxair is the largest industrial gases company in North and South America, and one of the largest worldwide, with 2007 sales of \$9.4 billion. The company produces, sells and distributes atmospheric, process and specialty gases, and high-performance surface coatings. Praxair products, services and technologies bring productivity and environmental benefits to a wide variety of industries, including aerospace, chemicals, food and beverage, electronics, energy, healthcare, manufacturing, metals and others. More information on Praxair is available on the Internet at [www.praxair.com](http://www.praxair.com).

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