



## News Release

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## **BP and Powerspan Collaborate to Demonstrate and Commercialize CO<sub>2</sub> Capture Technology for Power Plants**

(Portsmouth, NH) BP Alternative Energy and Powerspan Corp. today announced their collaborative agreement to develop and commercialize Powerspan's carbon dioxide (CO<sub>2</sub>) capture technology, called "ECO<sub>2</sub><sup>TM</sup>," for power plants. The scope of the agreement includes financial and technical support for pilot demonstration and commercial scale-up activities, which may include joint development of large-scale demonstration projects that would capture CO<sub>2</sub> from power station flue gas. The captured CO<sub>2</sub> would be sent for secure, long-term storage deep underground. Use of ECO<sub>2</sub> for large scale capture and storage of CO<sub>2</sub> from power plants represents a major option for reducing greenhouse gases.

The ECO<sub>2</sub> process is a post-combustion CO<sub>2</sub> capture process for conventional power plants. The technology is suitable for retrofit to the existing coal-fired, electric generating fleet as well as for new coal-fired plants. The regenerative process is readily integrated with Powerspan's patented Electro-Catalytic Oxidation, or ECO<sup>®</sup>, process for multi-pollutant control of sulfur dioxide, nitrogen oxides, mercury, and fine particulate matter from power plants.

"We consider Powerspan's ECO<sub>2</sub> technology among the most promising solutions for post-combustion capture of CO<sub>2</sub>," said Jonathan Forsyth, CO<sub>2</sub> Capture Team Leader at BP Alternative Energy. "This is an opportunity for BP to broaden the scope of our low carbon power offering by including a CO<sub>2</sub> capture technology that is compatible with new and existing coal fired power stations. The priority in our collaboration with Powerspan is to successfully demonstrate the technology and advance it to full-scale commercial deployment as rapidly as possible."

“BP’s technical capability, experience with large projects, and commitment to advancing low carbon power solutions uniquely qualifies them to assist Powerspan in scaling up the ECO<sub>2</sub> technology for commercial application,” said Powerspan CEO Frank Alix. “We look forward to working with BP on the demonstration and commercialization of the ECO<sub>2</sub> technology.”

Pilot scale testing of ECO<sub>2</sub> technology is expected to begin at FirstEnergy Corp.’s R.E. Burger plant in Shadyside, Ohio, in early 2008. The ECO<sub>2</sub> pilot unit will process a 1-megawatt (MW) slipstream (20 tons of CO<sub>2</sub>/day) from the 50-MW Burger ECO unit. The plan is to provide the captured CO<sub>2</sub> for sequestration on-site in an 8,000-foot test well drilled at the Burger plant earlier this year. FirstEnergy is collaborating with the Midwest Regional Carbon Sequestration Partnership on the sequestration test project. The Burger pilot program could be the first such program to demonstrate both CO<sub>2</sub> capture and sequestration at a conventional coal-fired power plant.

The ECO<sub>2</sub> pilot program provides the opportunity to confirm process design and cost estimates. Initial estimates developed by the U.S. Department of Energy (DOE) indicate that the ammonia-based CO<sub>2</sub> capture process could provide significant savings compared to commercially available amine-based CO<sub>2</sub> capture technologies.

In May 2004, Powerspan and the DOE’s National Energy Technology Laboratory entered into a cooperative research and development agreement to develop a cost effective CO<sub>2</sub> removal process for coal-fired power plants. The regenerative process is readily integrated with Powerspan’s ECO process for multi-pollutant control, and uses an ammonia-based solution to capture CO<sub>2</sub> in flue gas and release it for enhanced oil recovery or other form of geological storage. The CO<sub>2</sub> capture takes place after the NO<sub>x</sub>, SO<sub>2</sub>, mercury and fine particulate matter are captured. Once the CO<sub>2</sub> is captured, the ammonia-based solution is regenerated to release CO<sub>2</sub> and ammonia. The ammonia is recovered and sent back to the scrubbing process, and the CO<sub>2</sub> is in a form that is ready for geological storage. Ammonia is not consumed in the scrubbing process, and no separate by-product is created. The process can be applied to both existing and new coal-fired power plants and is particularly advantageous for sites where ammonia-based scrubbing of power plant emissions is employed.

BP is one of the world's largest oil and gas companies with operations in more than 100 countries across six continents. The company's main businesses are exploration and production of oil and gas; refining, manufacturing and marketing of oil products and petrochemicals; transportation and marketing of natural gas; and a growing business in renewable and low-carbon power, BP Alternative Energy. BP's low carbon interests combined in BP Alternative Energy include: BP Solar; the company's fast growing interests in wind power; gas-fired power generation; and BP's interest in Hydrogen Energy. For further information see: [www.bp.com](http://www.bp.com) and [www.bpalternativenergy.com](http://www.bpalternativenergy.com).

Powerspan Corp., a clean-energy technology company based in Portsmouth, New Hampshire, is engaged in the development and commercialization of proprietary multi-pollutant control technology for the electric power industry. [www.powerspan.com](http://www.powerspan.com).

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