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## **Alstom and American Electric Power sign agreement to bring CO<sub>2</sub> capture technology to commercial scale by 2011**

Alstom and American Electric Power (AEP) today signed a Memorandum of Understanding to bring Alstom's chilled ammonia process for CO<sub>2</sub> capture to full commercial scale of up to 200 MW by 2011. This is a major step in demonstrating post-combustion carbon capture. The technology has the great advantage versus other technologies of being fully applicable not only for new power plants, but also for the retrofit of existing coal-fired power plants.

The project will be implemented in two phases. In phase one, Alstom and AEP will jointly develop a 30 MWth product validation plant that will capture CO<sub>2</sub> from flue gas emitted from AEP's 1300 MW Mountaineer Plant located in New Haven, West Virginia. It is targeted to capture up to 100,000 tonnes of carbon dioxide (CO<sub>2</sub>) per year. The captured CO<sub>2</sub> will be designated for geological storage in deep saline aquifers at the site. This pilot is scheduled for start-up at the end of 2008 and will operate for approximately 12-18 months.

In phase two, Alstom will design, construct and commission a commercial scale of up to 200 MW CO<sub>2</sub> capture system on one of the 450 MW coal-fired units at its Northeastern Station in Oologah, Oklahoma. The system is scheduled for start-up in late 2011. It is expected to capture about 1.5 million tonnes of CO<sub>2</sub> a year, commercially validating this promising technology. The CO<sub>2</sub> captured at Northeastern Station will be used for enhanced oil recovery.

Alstom's post-combustion process uses chilled ammonia to capture CO<sub>2</sub>. This process dramatically reduces the energy required to capture carbon dioxide and isolates it in a highly concentrated, high-pressure form. In laboratory testing sponsored by EPRI and others, Alstom's process has demonstrated the potential to capture over 90% of CO<sub>2</sub> at a cost that is far less expensive than other carbon capture technologies. The isolated CO<sub>2</sub>, once captured, can be used commercially or stored in suitable underground geological sites.

Philippe Joubert, President of Alstom Power Systems, said: "We are extremely proud that AEP has chosen Alstom's clean coal technology for this major project. Our partnership with AEP will result in the world's first clean coal power plant and will be applicable not only for new plants but also for existing power plants".

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