Press Release

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Alstom signs contract with global company E.ON to build chilled ammonia based CO₂ capture plant in Sweden for oil and gas

Alstom has signed a joint development contract with E.ON, one of world's largest power and gas providers, to launch a 5MW CO2 capture demonstration plant at Karlshamn Power Plant in southern Sweden. The demonstration plant will use Alstom's new chilled ammonia-based technology and is expected to begin operation in 2008. The companies plan to introduce the technology in other Swedish power plants after technical evaluation.

Because CO2 is recognised as the main greenhouse gas contributing to global warming, development of this technology is an important milestone towards reducing power industry carbon emissions. Alstom's chilled ammonia technology uses ammonia to capture CO2 emissions that would normally escape into the atmosphere and holds great promise for achieving CO2 capture economically and with low energy loss. This unprecedented demonstration will apply the technology to oil and natural gas fuels and furthers Alstom's overall technology development portfolio.

Research suggests that chilled ammonia-based CO_2 capture can remove up to 90% of the CO_2 from flue gases. Although there are several proposed techniques that can separate carbon dioxide from the other gases, Alstom's chilled ammonia process greatly reduces the amount of energy used to capture CO_2 . This energy is referred to as an *energy loss* because the plant's energy output is reduced by the amount of energy needed to remove the CO_2 . Studies demonstrate that Alstom's technology results in an energy loss of approximately 10% versus other methods of post-combustion CO_2 separation, which result in losses of nearly 30%.

The Alstom/E.ON contract follows a similar agreement made between Alstom and AEP (American Electric Power) in the U.S. to develop a demonstration plant at a coal-fired power plant in West Virginia and has a start date of 2008. A full scale CO2 capture demonstration plant is scheduled to follow at an AEP site in Oklahoma in 2011. The Alstom chilled ammonia CO2 capture technology will also be demonstrated with We Energies at a 15,000 tonnes per year pilot plant project at its Pleasant Prairie plant, Wisconsin, in the US.

Philippe Joubert, President of Alstom Power Systems, = d: "This contract with E.ON is further proof of Alstom's leadership in CO2 capture technologies. The challenge to produce clean power from fossil fuels is a global priority and one that determines the technology development choices at Alstom."



E.ON is one of the world's largest investor-owned energy services providers. Its 81,000 employees generated just under EUR68 billion in sales in 2006. It is focused on core power and gas business and its target markets: central Europe, the United Kingdom, northern Europe and the midwestern United States.

Alstom sets the benchmark for innovative, environmentally friendly technologies in the world of power and rail transport infrastructure. Alstom built the fastest train and the highest capacity automated metro in the world, and provides turnkey integrated power plant solutions and associated services for a wide variety of energy sources, including hydro, gas and coal. The Group employs more than 65,000 people in 70 countries, and had sales of ϵ 14.2 billion in 2006/07.

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