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### **Siemens and Masdar Institute successfully complete first research collaboration project on carbon capture and storage**

**Siemens and Masdar Institute of Science and Technology, an independent research-driven graduate-level university focused on advanced energy and sustainable technologies, successfully concluded the first carbon capture and storage (CCS) research collaboration project. The R&D projects are focused on the improvement and adaptation of the proprietary Siemens Post-Combustion technology to the requirements of the local markets, i.e. CO<sub>2</sub> capture at gas fired power stations and utilization of CO<sub>2</sub> for enhanced oil recovery (EOR). Start of the first project on “Evaluation of CO<sub>2</sub> Purification Requirements and Evaluation of Processes for Impurities Removal from the CO<sub>2</sub> Product Stream” was in May 2011. The project evaluated the CO<sub>2</sub> purification requirements for the CO<sub>2</sub> pipeline transportation, EOR and CO<sub>2</sub> geological storage. Furthermore it assessed the CO<sub>2</sub> streams specifications and impurities combined with the selection and evaluation of the processes for CO<sub>2</sub> stream purification.**

The collaboration between Masdar Institute and Siemens continues with a second project that started in December 2011 which is focused on the evaluation of CO<sub>2</sub> capture process waste reuse and recycling in UAE. The Siemens Post Combustion technology offers a substantial advantage; a sellable sulphur product will be separated with the new solvent reclaimer technology. “Siemens has developed a new post-combustion carbon capture technology based on Amino Acid Salt formulations. This technology is environmentally very friendly and has the lowest investment and operation costs”, said Nicolas Vortmeyer, Head of New Technologies in the Siemens Energy Fossil Division. “The collaboration with Masdar Institute is very important for Siemens and the research projects will support the adaptation of the Siemens Post Combustion Technology to the requirements of the local market, i.e. retrofit of gas fired power stations and utilization of the CO<sub>2</sub>

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for Enhanced Oil Recovery. We are confident our partnership will extend to cover more areas in sustainable technology for the benefit of the wider community.”

“The research partnership with Siemens strongly reflects the extent of our cooperation with international companies. This is also part of our human capital building endeavor to facilitate a knowledge-based economy in the UAE,” said Fred Moavenzadeh, President of Masdar Institute. “We acknowledge Siemens’ contribution to the success of the first carbon capture project as we look forward to other potential areas for partnerships.”

The research and development aspect of the partnership with the Masdar Institute is one of Siemens largest global investments of its kind with a science and technology organization. It comprises R&D programs for Smart Grid, Smart Buildings, and Carbon Capture and Storage and includes grants, scholarships and educational programs for the advancement of the knowledge economy in the UAE.

The Siemens Post Combustion Technology from the flue gas of power plants is part of Siemens’ Environmental Portfolio. In fiscal 2011, revenue from the Portfolio totaled about €30 billion, making Siemens one of the world’s largest suppliers of ecofriendly technologies. In the same period, our products and solutions enabled customers to reduce their carbon dioxide (CO<sub>2</sub>) emissions by nearly 320 million tons, an amount equal to the total annual CO<sub>2</sub> emissions of Berlin, Delhi, Hong Kong, Istanbul, London, New York, Singapore and Tokyo.

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