

Energy Sector Energy Service Division

Erlangen (Germany), July 19, 2010

Siemens Awarded USD8.9 million Grant from Department of Energy to Build its First CO₂ Capture Project for Coal-fired Power Plants in the U.S.A.

Project will demonstrate new POSTCAP technology, utilizing salt as a solvent for CO₂ absorption

Siemens Energy is planning to design, install, and operate a pilot plant for treating a slipstream (1 MW equivalent) at the Tampa Electric Big Bend Station to demonstrate POSTCAP technology for post-combustion CO₂ gas capture. The primary goal of this project will be to reduce the large amounts of energy traditionally needed to operate carbon capture technologies. But more importantly, Siemens' POSTCAP technology will utilize an amino acid salt formulation as a solvent for CO₂ absorption. The usage of this non-toxic, biodegradable solvent will result in a more environmentally friendly process.

Tampa Electric's coal-fired power plant is located in southeastern Hillsborough County, Florida, and has an installed capacity of 1,892 megawatt (MWe). This new carbon capture demonstration is expected to treat a slipstream of the flue gas from Tampa Electric's Big Bend Station and to capture 90 percent of its CO₂. This demonstration will be installed downstream of an existing Siemens Wet FGD System (processing 890 MW of Flue Gas in a single absorber). The piloting plant is scheduled to be in operation in 2013.

The Obama Administration has made a goal of developing cost-effective deployment of CCS technologies within 10 years, with an objective of bringing five to ten commercial demonstration projects online by 2016. This pilot plant was one of 10 selected by the DOE aimed at developing advanced technologies for capturing carbon dioxide from coal combustion. It will focus on improving efficiency and reducing the added costs to electricity at power plants with carbon capture systems to less than 30 percent for a new pulverized coal plant and to 10 percent for a new advanced gasification plant as required by DOE.

“We chose to partner with Siemens on its post-combustion carbon capture technology, not only because of its promise in terms of energy efficiency and emissions control, but also because the process utilizes non-toxic and biodegradable solvents,” said Gordon Gillette, Tampa Electric president. “Tampa Electric is a leader in CO₂ reduction and is proud to pilot this CCS technology at Big Bend.”

“Coal is still a major part of today’s energy mix – with nearly 50 percent our energy currently dependent on coal. There have been some great innovations occurring in coal over the past few years, and we are excited to be on the forefront of today’s “clean coal” technology. Partnering with Tampa Electric is a great opportunity for us to bring our newest amino-acid salt-based capture technology to commercial scale,” stated Randy Zwirn, CEO of Siemens Energy’s Service Division and president and CEO of Siemens Energy, Inc. “We greatly value Tampa Electric’s support on this important CCS demonstration project.”

In September 2009 Siemens put into operation its first pilot CO₂ capture plant for coal-fired power plants at the Staudinger power plant in Germany. The technology for CO₂ capture from the flue gas of power plants is an important feature of Siemens’ Environmental Portfolio. In fiscal 2009, revenue from the Portfolio totaled approximately EUR23 billion, making Siemens the world’s largest supplier of environmentally friendly technologies. In the same period, the company’s products and solutions enabled customers to reduce their CO₂ emissions by 210 million tons. This amount equals the combined annual CO₂ emissions of New York, Tokyo, London and Berlin.

The **Siemens Energy Sector** is the world’s leading supplier of a complete spectrum of products, services and solutions for the generation, transmission and distribution of power and for the extraction, conversion and transport of oil and gas. In fiscal 2009 (ended September 30), the Energy Sector had revenues of approximately EUR25.8 billion and received new orders totaling approximately EUR30 billion and posted a profit of EUR3.3 billion. On September 30, 2009, the Energy Sector had a work force of more than 85,100. Further information is available at: www.siemens.com/energy.