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A Milestone for Cleaner Coal Technology: Key Equipment Arrives Duke Energy's IGCC Plant in Indiana

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ATLANTA--(BUSINESS WIRE)--Marking a significant step forward in the use of cleaner coal technology to help meet the country's future energy requirements, the first major pieces of equipment have arrived at Duke Energy's Integrated Gasification Combined-Cycle (IGCC) plant in Edwardsport, Ind. Using GE IGCC technology, the plant is expected to be the largest cleaner coal IGCC facility of its type in the world when it is complete.

"Half of all U.S. electricity comes from coal, and the demand for electricity globally is expected to double by 2030. Meeting U.S. and global energy needs will require innovative technology and a portfolio of energy options including solar, wind, nuclear, natural gas and coal," said Monte Atwell, general manager, IGCC technology, GE Energy.

"Thanks to IGCC, today it is possible to use coal to generate large amounts of electricity from coal while attaining lower levels of emissions than previously possible," he added. "IGCC plants already have demonstrated the capability to significantly reduce emissions, compared to conventional coal-fired plants, and gasification technology has been used at commercial scale to separate carbon."

Working from GE Energy's specifications, Belleli Energy of Italy manufactured a radiant syngas cooler (RSC); the first sections arrived at the site last week. The remaining pieces will arrive later in the year. GE Energy is supplying gasification, power generation and controls equipment and services for the design and startup of the IGCC plant, which will generate approximately 630 megawatts of power when it enters service in 2012.

In an IGCC plant, coal is heated to high temperature to create a synthesis gas or syngas, which is then processed to remove many emissions—NOx, SOx, mercury and particulate matter—before the gas is burned in a specially designed gas turbine to generate electricity. The RSC is under the gasifier and cools the syngas, creating steam, which powers a steam turbine, increasing plant efficiency. Construction of the RSC will take place on-site using mostly local labor and is expected to be completed by the end of 2010.

Atwell called for the energy industry and U. S. policy makers to work together to define a clear path for the future of coal. "Duke Energy's project at Edwardsport will further prove that IGCC is a viable technology that can foster the use of coal to help meet future energy needs—which will include replacing older, retired plants as well as meeting new growth demands—with fewer emissions and the ability to capture carbon for storage," he said.

GE Energy has been at the forefront of IGCC technology for more than two decades. GE technology was involved in several milestone IGCC projects, including the pilot IGCC plant, Coolwater, in Barstow,

Calif.; and the Polk Tampa Electric IGCC plant in Florida that helped to demonstrate the commercial feasibility of IGCC. Today, 65 gasification facilities operate under GE gasification licenses, including 33 GE-licensed gasification plants using commercial technology to separate carbon.

About GE Energy

GE Energy (www.ge.com/energy) is one of the world's leading suppliers of power generation and energy delivery technologies, with 2008 revenue of $29.3 billion. Based in Atlanta, Georgia, GE Energy works in all areas of the energy industry including coal, oil, natural gas and nuclear energy; renewable resources such as water, wind, solar and biogas; and other alternative fuels. Numerous GE Energy products are certified under ecomagination, GE's corporate-wide initiative to aggressively bring to market new technologies that will help customers meet pressing environmental challenges.

About GE

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