# Versa Power Systems to Develop Solid Oxide Fuel Cells for New U.S. Energy Department Effort to Develop Coal-Based Multi-Megawatt Power Plant

***Team led by FuelCell Energy to develop large-scale solid oxide fuel cell/turbine hybrid plant with near-zero emissions to efficiently convert coal to electricity for central power generation***

**LITTLETON, Colo. – Mar. 3, 2006** – Versa Power Systems, Inc., a leading developer of Solid-Oxide Fuel Cells (SOFC), today announced that it will provide the core fuel cell technology for a new U.S. Department of Energy project to develop a clean, multi-megawatt coal-fueled power plant. The 10-year, three-phase Fuel Cell Coal-Based System program award, valued at approximately $85 million is subject to negotiation of a final agreement.

The program's goal is to develop a large scale solid oxide fuel cell turbine (SOFC/T) power system of 100 megawatts and larger, permitting an overall efficiency of at least 50 percent in converting coal to grid electrical power. This compares to today's average U.S. coal-based power plant reaching an electrical efficiency of approximately 35 percent. In addition, the program seeks to capture 90 percent or more of system's carbon dioxide emissions and meet a cost target of $400 per kilowatt (exclusive of coal gasification and carbon dioxide separation subsystems).

"Coal technology development is a keystone of the President's new Advanced Energy Initiative," said Wayne Surdoval, DOE National Energy Technology Laboratory's Solid State Energy Conversion Alliance (SECA) Technology Manager. "The clean and efficient use of coal is vital to our nation's energy security. Research conducted under DOE's Fuel Cell Coal-Based Systems Program should ultimately lead to fuel cell power plants that use this abundant and cost-effective resource with near-zero emissions."

Versa Power, a development stage corporation, focuses on planar solid oxide fuel cell power systems. The company previously teamed with FuelCell Energy to win a DOE SECA contract to develop a 5-10 kW system fueled with natural gas. Tests of the first prototype of that system have now exceeded 2,000 hours under Phase I of that project.

"Being part of this new DOE program will enable us to begin scale-up of our 5 to 10 kilowatt SOFC stack that has demonstrated successful performance under the SECA program," said Robert Stokes, Versa Power's President and CEO. "We look forward to continuing our successful collaboration with FuelCell Energy to develop the technology required for large central power stations to produce affordable, efficient and environmentally-friendly electricity from coal."

FuelCell Energy will be responsible for the overall systems development of the coal-based multi-megawatt SOFC/T power plant. Versa Power will provide state-of-the-art SOFC stack technology development; Gas Technology Institute (GTI) will provide pressurized testing of fuel cells; and Nexant will bring coal gasification expertise to the project.

"Versa Power has been an excellent partner for us in our SECA program, and we congratulate them on the progress they have made in advancing their core SOFC technology," said R. Daniel Brdar, President and CEO of FuelCell Energy. "We expect this to be a solid foundation for this larger scale, coal-based SOFC system and we look forward to continuing our relationship with them on this new and exciting project."

The objective of Phase I, a 3-year, $10.5 million program, is to focus on the design, cost analysis, fabrication and testing of large-scale SOFC stacks amenable for incorporation into 100-megawatt systems. Phases II and III will focus on fabricating and aggregating larger SOFC systems, as well as proof-of-concept systems to be field tested for a minimum of 25,000 hours.

Fuel cell systems are ideally positioned to capitalize upon the nation's coal resource. Fuel cells do not rely upon combustion, enabling them to produce affordable, highly efficient and environmentally friendly electricity from coal. As a result, fuel cells are one of the most attractive power generating technologies for the future.

Advances made under the Fuel Cell Coal-Based Systems program are expected to become key enabling technologies for FutureGen, a planned DOE demonstration of advanced power systems that emit near-zero emissions, have double today's electric generating efficiency, co-produce hydrogen and sequester carbon dioxide.

The FuelCell Energy/Versa team joins two other project teams -- one led by General Electric Hybrid Power Generation Systems and the other by Siemens Power Generation, Inc. -- to leverage knowledge gained in the DOE's Solid State Energy Conversion Alliance (SECA) Program, and extend coal-based SOFC technology to large central power generation stations.

**About Versa**

Versa Power Systems, Inc., with operations in Littleton, Colorado and Calgary, Alberta, is a premier developer of solid oxide fuel cell (SOFC) stacks and systems. The development stage corporation focuses on commercializing ultra-clean SOFC products for the stationary and mobile markets. SOFC power sources operate with virtually no emissions and at very high energy conversion efficiencies. The company's present 3 kW natural gas-fueled system operates at a gross DC efficiency of 40 percent and a net AC efficiency greater than 30 percent. Typical internal combustion engine generator sets of comparable size operate at net energy conversion efficiencies of less than 15 percent. For more information on the company and its products please see www.versa-power.com.

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