

**Southwest Research Institute** (SwRI) is an independent, nonprofit applied R&D (research and development) organization headquartered in San Antonio, Texas. The staff of more than 2,700 specializes in the creation and transfer of technology in engineering and the physical sciences. SwRI's technical divisions offer a wide range of technical expertise and services in such areas as engine design and development, emissions certification testing, fuels and lubricants evaluation, chemistry, space science, nondestructive evaluation, automation, mechanical engineering, electronics, and more. <http://www.swri.org/swri.htm>



**The Institute is a self-described “Disneyland for scientists and engineers.”**

Southwest Research Institute (SwRI) is leading a team to help formulate a plan for an oxy-combustion pilot plant under a \$3.3 million project from DOE's National Energy Technology Laboratory (NETL).

“Oxyfuel combustion has the potential to provide carbon emissions-free, high efficiency electricity in next-generation advanced power plants,” said Danny Deffenbaugh, Vice President of SwRI's Mechanical Engineering Division. “SwRI continues to develop key technology components to make this clean and inexpensive power possible.”

The objective of the project is to provide a detailed design, specifications, cost and construction schedule for a 10 MW scale combustion pilot plant, to be built under a separate DOE project, that will validate the performance of flameless pressurized oxy-combustion technology for a broad range of coals and provide an understanding of what is needed to build a commercial-scale unit.

Flameless pressurized oxy-combustion technology reduces the cost of coal-based power plants by 20%, compared to a standard coal plant. The pilot plant will prove that the high-firing temperature and pressure of a flameless combustor will allow the use of a wide range of high-to-low rank coals and lignite, while still meeting emission requirements. The project is expected to be underway in October 2016. For more information, contact [Deborah S. Deffenbaugh](#), (210) 522-2046.