



Clean Energy Systems

“Power without Pollution”

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CES PURCHASES BIOMASS POWER PLANT TO DEMONSTRATE ZERO EMISSION TECHNOLOGIES

RANCHO CORDOVA, CA - Clean Energy Systems, Inc. (CES) announced today the purchase of an idle six megawatt biomass power plant near Bakersfield, CA. In a related transaction, CES entered into a long-term lease for approximately 37 acres at the site. CES plans to re-power the plant initially with natural gas as a fuel, to generate steam using its recently tested zero-emission electric power generation system. The re-powered plant will be used to demonstrate the company's patented technologies and associated advanced system components as they become available. The gas generator technology enables the generation of electric power without pollution. The system emits no nitrogen oxide, sulfur dioxide, particulate matter or any of the other harmful elements often associated with conventional power systems.

The facility, named the Kimberlina Power Plant, is an ideal site to demonstrate and further develop CES technologies because of the existing infrastructure, availability of water and multiple fuels, and close proximity to gas and oil fields, which can beneficially use the carbon dioxide captured in the power generation process.

“Initial efforts will focus on the CES gas generator system operating on natural gas and the use of conventional steam turbines for power generation,” said Keith Pronske, CEO of Clean Energy Systems. “Future work will include demonstration of advanced, higher temperature, more efficient turbines, and could include the use of gasified biomass as a fuel.”

The power plant was purchased from a wholly-owned subsidiary of the AES Corporation, a leading independent power producer with more than 55,000 MW in 28 countries. As a result of this transaction, AES will have a minority ownership position in CES.

The gas generator technology is derived from the aerospace industry and results from more than eight years of effort by a team led by experienced aerospace scientists and engineers. Successful testing of a commercial scale gas generator was completed in February 2003

The gas generator, which replaces the boiler in a conventional power plant, can combine any one of a range of alternative fuels with oxygen and cooling water to produce a working fluid of steam and carbon dioxide (CO₂). This working fluid drives turbines, which generate electricity. The steam is then cooled in a condenser to a liquid water state, and the CO₂ is extracted as a gas for conditioning for sale or other disposition. The CES technology offers the power industry the most cost-effective means of 100 percent CO₂ separation and capture.

The gas generator was manufactured to develop advanced power generation systems and was built and tested under the United States Department of Energy's Vision 21 Program. DOE's National Energy Technology Laboratory (NETL) funded 67% of the \$3.6 million project. CES is also currently developing a small, near-zero emissions demonstration power plant, with the participation of the California Energy Commission, America Air Liquide, and the Mirant Corporation.

In July 2003, the Norwegian Oil and Energy Department (OED) indicated that CES and partners, led by CO₂-Norway, have been selected for partial funding to study the "Zero Emission Norwegian Gas" (ZENG) Project. This project was proposed by CO₂ Norway, Clean Energy Systems Inc., Lyse Energi AS and the Energy Park in Stavanger, Norway.

CES is a privately held California corporation. For additional information please visit the company website at www.cleanenergysystems.com.

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