



LPP Combustion, LLC

8940 Old Annapolis Rd. ♦ Suite K Columbia ♦ MD 21045 ♦ Tel: 410-884-3089 ♦ Fax: 410-884-3267 ♦ www.lppcombustion.com

Contact:

Chris Broemmelsiek

410-884-3089

broemmelsiek@lppcombustion.com

Fuel Preparation Technology Breaks Barrier on Liquid Fuels Use

December 14, 2010 – Columbia, MD -- LPP Combustion, LLC's revolutionary liquid fuel technology has successfully demonstrated the clean generation of electrical power using fourteen different liquid fuels in a commercial gas turbine. The fuels, all processed through the same LPP Combustion fuel skid prior to injection into the gas turbine as LPP Gas™, included conventional petroleum-based liquids, bio-fuels, and waste product solvents. No alterations to the dry, low NOx combustion system were made, and no instances of flashback or autoignition were observed in 125+ hours of operation. The skid-based technology vaporizes liquid fuels to form LPP Gas™, a substitute natural gas, which is used to power the gas turbine. No other commercial gas turbine has ever operated on such a variety of liquid fuels without alterations to the combustion system.

The LPP Combustion fuel preparation system overcomes the operational and emissions barriers between using liquid fuels and natural gas in gas turbines. The patented technology offers fuel flexibility, improved heat rate, and reduced maintenance without the 80% increase in emissions associated with conventional burning of liquid fuels. Air permitting can be greatly simplified because all emissions will be at or below natural gas firing levels. Moreover, this innovative technology can provide millions of dollars in fuel cost savings per year by allowing power generators to operate on either liquids or gas, whichever is less expensive, during seasonal fluctuations in energy prices.

LPP Combustion, LLC has installed and is operating a Capstone C30 gas turbine, designed for operation on natural gas, in its facility in Columbia, MD. The liquid fuels tested include ASTM spec biodiesel, non-ASTM spec biodiesel, anhydrous ethanol, aqueous ethanol (up to 25% water), #2 distillate, gasoline, kerosene, naphtha, JP-8 jet fuel, S-8 synthetic jet fuel, acetone, isopropyl alcohol, toluene, and simulated natural gas condensate. Emissions (15%O₂) from the C30 gas turbine, operating at full load on LPP Gas™, are 5 ppm (or less) NOx with CO at less than natural gas operation, regardless of the liquid fuel used. The same vaporization skid was used to run all fuels by varying the heat input and nitrogen dilution. The LPP system offers the cleanest use of conventional and renewable liquid fuels, and can be easily retrofitted to gas turbines and other existing gas-fired equipment without modifications to the combustion hardware. Learn more at www.lppcombustion.com.

###