

World's first hybrid fuel cell turbine

Siemens Westinghouse Power Corporation, the United States, has built a new type of fuel cell power plant, which is scheduled to undergo one year of trials. The new advanced power plant is the first in the world to combine a state-of-the-art fuel cell with a gas turbine. When installed, the system is expected to generate electric power at 55 per cent efficiency. A conventional coal plant, by contrast, converts only 35 per cent of its fuel into electricity, while natural gas turbines average just over 50 per cent.

The advanced power plant depends on a solid oxide fuel cell, which is an assembly of ceramic tubes that operate like a battery. It has 1,152 individual tubular ceramic cells that make it capable of generating 200 kW of electricity. The plant is the world's first to operate cells under high pressures and to use the hot, pressurized exhaust gases to drive a microturbine generator, which will generate an additional 20 kW of electricity at full power.

The 220 kW system is the first of several solid oxide fuel cell systems that Siemens Westinghouse will develop and test over the next two years as part of the Department of Energy's advanced fuel cell programme. *Contact: Mr. Mike Asquino, Siemens Westinghouse, the United States. Tel: +1 (407) 2812 544.*

Website: http://www.fe.doe.gov/techline/tl_fc_solidox_fat.htm