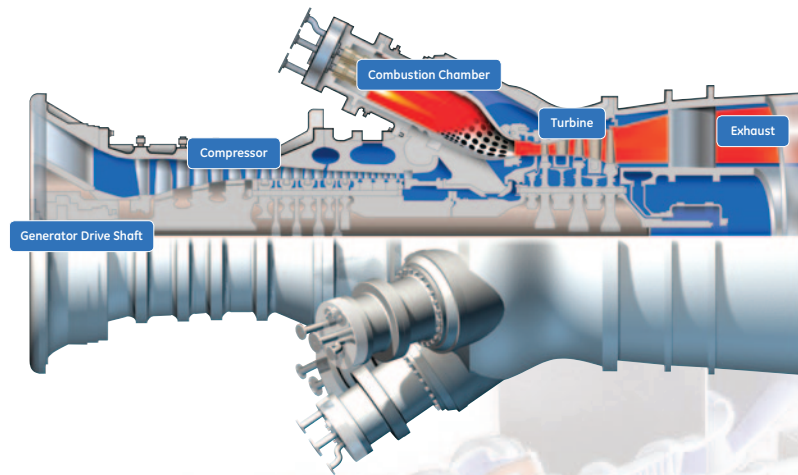


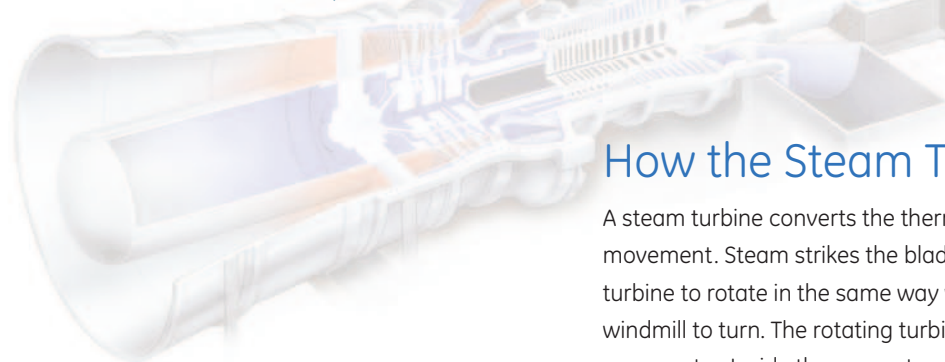
Fuel Efficient Combined-Cycle Power Generation System

How the Gas Turbine Works

A gas turbine compresses air and mixes it with fuel. The fuel is burned and the hot air-fuel mixture is expanded through turbine blades, making them spin. The spinning turbine drives a generator which converts the spinning energy into electricity.



- Fuel is burned in the gas turbine
 - The resulting energy in the gas turbine turns the generator drive shaft
 - Exhaust heat from the gas turbine is sent to a heat recovery steam generator (HRSG)
- The HRSG turns the gas turbine exhaust heat into steam and feeds it to the steam turbine
- The steam turbine delivers additional energy to the generator drive shaft
- The generator converts the energy into electricity



How the Steam Turbine Works

A steam turbine converts the thermal energy in steam to rotational movement. Steam strikes the blades of a turbine, causing the turbine to rotate in the same way wind causes a windmill to turn. The rotating turbine shaft drives a generator. Inside the generator, a spinning magnet surrounded by coils of copper wire creates a magnetic field which charges electrons in the copper wire and produces electricity.

