



COMBINED HEAT AND POWER EDUCATIONAL SERVICES

University of Cincinnati

OWNER
University of Cincinnati

LOCATION
Cincinnati, Ohio, USA

PRODUCT
Two Titan™ 130 (12.5 MWe) Gas Turbines

CUSTOMER VALUE
Sustainable Energy Production

As energy prices continue to rise, and the failure of the aging and overtaxed electrical grid persists, more and more institutions are opting to build their own power generating systems. The University of Cincinnati chose a combined heat and power (CHP) central utility plant, in which waste heat generated from electricity production is recycled by routing the heat from a gas turbine through a recovery boiler to make steam, which is then used in heating and cooling applications.

At the heart of the new power plant is a pair of Titan 130 gas turbine generator set packages. The gas turbines are designed to run primarily on natural gas, but in case of an unforeseen interruption of supply, can also run on fuel oil. In addition to providing 90% of the electricity demands, the CHP plant produces 80,000 pph of unfired steam to heat a large portion of the university's 12,000,000 square feet in the winter and cool it in the summer. The plant operates at a very impressive 70% efficiency, uses 22% less fuel, and reduces green house gas emissions by over 34,000 tons per year. As a result of the more efficient production of electricity and essentially "free" heating and cooling, the CHP plant is projected to save the university \$5,000,000 per year.

In acknowledgment of their contribution to the nation's energy efficiency, the university was awarded a Certificate of Recognition by the United States Environmental Protection Agency and the United States Department of Energy.

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