

Powering the Global Energy Demand

## Shands HealthCare Cancer Hospital

**Owner/Operator:** Gainesville  
Regional Utilities (GRU)

**Location:** Gainesville, Florida

**Installed:** 2009



Photo Courtesy of Burns & McDonnell

Shands HealthCare Cancer Hospital embarked on a program to design and build an on-site energy center that would ensure energy security, efficiency, and improved reliability under all operating conditions.

Shands HealthCare, the University of Florida, Gainesville Regional Utilities, and Burns & McDonnell, a full-service engineering, procurement and construction firm, collaborated to design a combined heat and power (CHP) plant to deliver reliable energy, district heating and cooling to the hospital.

The GRU South Energy Center's sustainable construction techniques and energy efficiency measures used in the project helped the modular plant become the first hospital in the southeast to be awarded gold-level certification in the "New Construction" rating category by the Leadership in Energy & Environmental Design (LEED) program sponsored by the United States Green Building Council.

The energy center has a state-of-the-art 4.3 MW *Mercury*™ 50 recuperated gas turbine as the facility's prime mover. The *Mercury* 50 was selected for its reliability, low carbon footprint design, and enhanced quality of power production, to assure uninterrupted operation of clinical devices. The CHP system's reliability is increased by the use of multiple redundant systems and by being housed within a structure designed to withstand Category 4 hurricane force winds.

The *Mercury* 50 CHP system generates electricity and thermal energy from the same fuel source, reducing the amount of fuel consumption. The use of the CHP system eliminates SO<sub>2</sub> emissions, reduces NO<sub>x</sub> by 95%, and reduces CO<sub>2</sub> by 58% (equivalent to removing 4,365 vehicles from the road each year). The GRU South Energy Center is the only CHP facility of its size in the southeastern U.S. capable of providing 100% of the hospital's electric needs and is able to

operate at a 75% total thermal efficiency.

In 2010, the Environmental Protection Agency recognized GRU with an Energy Star CHP Award for the center's energy efficiency and outstanding pollution reduction.

In more than 14,000 installations worldwide, *Solar*® gas turbines generate clean electrical power from natural gas with power generation packages designed to limit the impact on the environment, protect people who operate the equipment, and respect people who live nearby. Operating on the least carbon-intensive fossil fuel, our products can provide significant reductions in greenhouse gas emissions by displacing power generated from more carbon-intensive sources, while at the same time maintaining very low pollutant emissions levels.

For more information contact:  
Solar Turbines Incorporated  
Telephone: +1 619 544 5352  
Email: [powergen@solarturbines.com](mailto:powergen@solarturbines.com)  
Web: [www.solarturbines.com](http://www.solarturbines.com)