

Energy Infrastructure

Pastore Center Cranston, Rhode Island

Project Cost: \$27,500,000

Facility Description: 100-acre campus

Electric Capacity: 10 Megawatts

Steam Capacity: 200,000 lb/hr at 400 psig



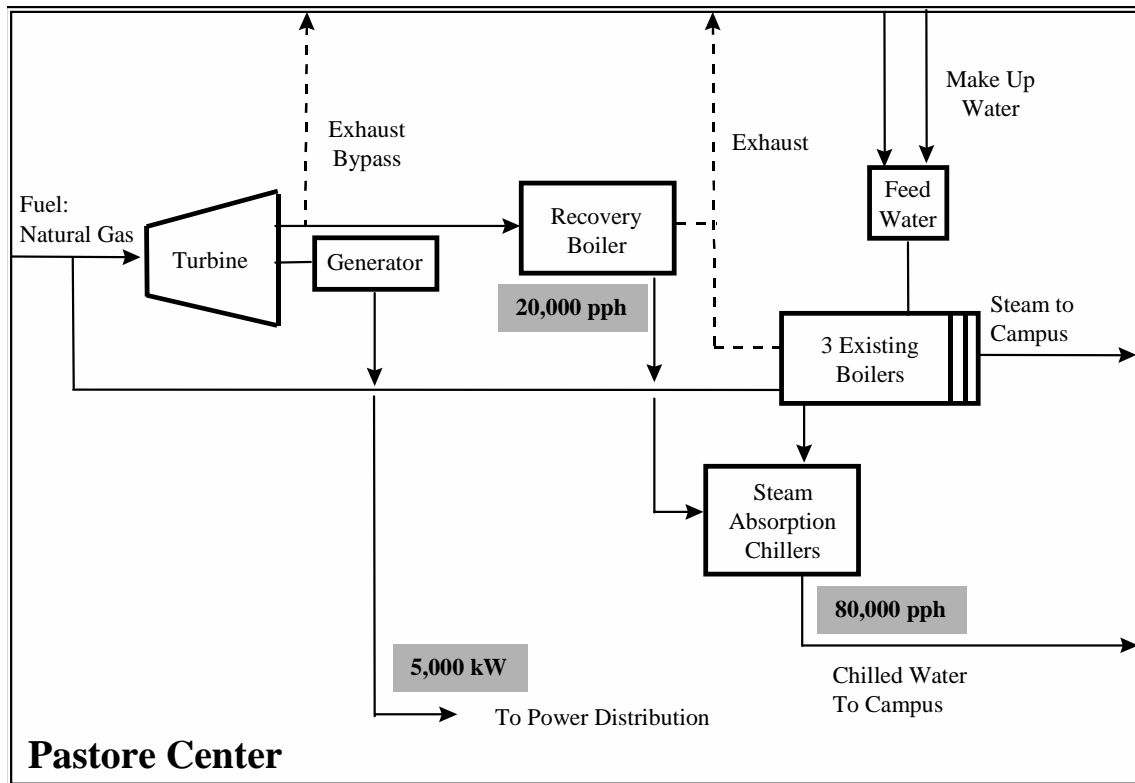
The Pastore Center Energy Plant serves a mental health hospital located on a common site with both a minimum and maximum-security correctional facility in Cranston, Rhode Island. The plant enables the mental health hospital, administration offices and two prisons to operate completely segregated from the utility electric grid, while simultaneously producing steam to meet the heating and cooking requirements of the campus. After a lengthy selection process, NORESKO was selected to renovate the existing plant, install two new gas turbines in a new building adjacent to the existing plant, and tie the new equipment to the existing plant and distribution system.

The renovated cogeneration plant design consists of two Solar Centaur type "H" gas turbines, each rated at 3.0 megawatts, with each capable of producing 55,000 pounds per hour of steam through supplementary fired

heat recovery steam generators. Two steam turbines rated at 2.0 megawatts each use the energy of the high pressure steam to provide additional electricity and deliver low pressure steam through an extensive distribution network which provides steam for heating, hot water and absorption cooling to the campus.

Additional steam is provided by one new water tube boiler rated at 110,000 pounds-per-hour, and a refurbished 100,000-pound per hour water tube boiler. The underground steam distribution and electrical distribution systems serve all buildings over a campus of 100 acres. The renovated plant now provides for all of the Pastore Center's steam and electricity requirements.

Project financing was provided through a combination of both tax-exempt financing arranged by NORESKO and State appropriated funds.



NORESCO is the nation's most experienced energy service company providing comprehensive and proven energy-efficiency solutions and infrastructure development and operations strategies to a wide range of customers. A recognized industry leader installing and operating over \$1.4 billion of proven energy solutions in diverse markets across the nation, NORESCO has built on-site energy infrastructure generating more than 300 megawatts of power, and has helped customers improve energy efficiency saving over 31 billion-kilowatt hours of electricity and 71 trillion Btus of fuel.