



COMBINED HEAT AND POWER UNIVERSITY HARVARD UNIVERSITY

OWNER

Harvard University

LOCATION

Cambridge, Massachusetts, USA

PRODUCT

Taurus™ 70 (7.5 MWe) Gas Turbine

CUSTOMER VALUE

Sustainability, Reduced Emissions

Originally built in 1903, the Blackstone Power Plant at Harvard University was one of the first electric power plants in the United States. During its 110 year history, it has undergone many upgrades to bring it from an old coal burning plant to a modern-day natural gas plant.

The Blackstone Power Plant uses one Taurus 70 gas turbine and a heat recovery steam generator which produces around 70,000 pounds of steam per hour with duct firing. Steam travels throughout the campus through miles of underground tunnels to approximately 170 buildings that use it for heat, hot water and, most importantly, high pressure steam for research facilities.

As a Solar® Microgrid, the Taurus 70, combined with the steam generator, can provide up to 7.5 MW of back up power in the event of a critical outage.

Solar® Turbines

A Caterpillar Company

Combined Heat and Power Plant - University



PLANT DATA

One Taurus 70 (7.5 MWe) Gas Turbine

One Heat Recovery Steam Generator

Natural Gas Fuel and Liquid Fuel

Steam: Up to 70,000 Pounds Per Hour



OUR PRODUCTS & SERVICES

Gas Turbine Package and Auxiliary Supply

Startup and Commissioning

Operating and Maintenance Training

Extended Service Agreement

COST EFFICIENT SOLUTION

REDUCED GREENHOUSE GAS EMISSIONS

SOLAR MICROGRID

Since the installation of the Taurus 70 at the Blackstone Power Plant, it has played an integral part in meeting Harvard University's goal of reducing their greenhouse gas emissions by 30% in 2016, even as campus square footage increased 12%. The Blackstone Power Plant improvements have resulted in a reduction of more than 20,000 metric tons of carbon dioxide, equivalent to taking over 4,300 cars off the road. Power is supplied to more than 250 buildings on campus through the Solar Microgrid. This is crucial to the success of all the students, faculty and researchers at Harvard University as they can continue to operate in the event of a major power outage.

Solar's Customer Services organization provides a comprehensive service agreement for the turbomachinery to ensure high reliability, availability and optimum performance. The Extended Service Agreement (ESA) uses InSight Platform™ to determine required maintenance activities based on equipment condition. The ESA also provides all package replacement parts, emergency callout support, engineering support, generator services and gas turbine overhaul. The ESA coverage results in more uptime, greater productivity and optimized life cycle.

Solar Turbines Incorporated

Tel: +1 619 544 5352

Mail: infocorp@solarturbines.com Web: www.solarturbines.com

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