PROJECT SUMMARY

DATA CENTER CCHP (COMBINED COOLING, HEATING AND POWER) PROJECT GRANT APPLICATION, ENVIRONMENTAL PERMITTING, TARIFF ANALYSIS AND REGULATORY OPERATIONS MANUAL PREPARATION

PROJECT SUMMARY

Bridgestone Associates prepared a comprehensive application for grant funds under the New Jersey Clean Energy program for a 796 kW micro-turbine based Combined Cooling, Heat and Power Plant (CCHP) for the new KPMG LLP data center in Montvale, New Jersey. After award of the $796,000 grant, Bridgestone Associates prepared, submitted and obtained all environmental permitting for the new micro-turbines as well as back-up boilers and for existing stand-by generators and boilers that had not been permitted previously. Bridgestone Associates also prepared a detailed analysis of the gas and electric tariffs, a project economic model, and comprehensive regulatory compliance and standard operating procedures manuals for the project.

PROJECT STATISTICS

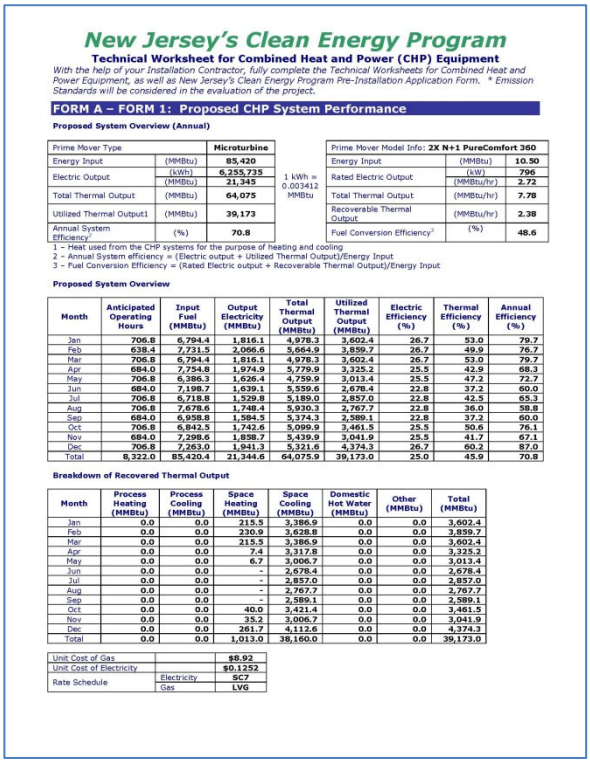
Client:	KPMG, LLP., UTC Power Corporation, and Nu Communications, Inc.
Project Type:	Natural gas fired micro-turbine based CCHP plant
Size:	796 kW + 420 Refrigeration Tons cooling
Unit Sizes:	Two UTC Power micro-turbine/absorption chiller based PureComfort Combined Heat and Power Systems consisting of 14 Capstone 60 kW micro-turbines and two 210 ton absorption chillers
Project Cost:	US$2.375 million
Plant Location:	Montvale, New Jersey, USA
Plant Elevation:	315 feet above sea level
Interconnection Voltage:	480 Volt
Primary Fuel:	Natural Gas
Fuel Input:	85,420 MMBtu/yr
Electrical Output:	6,256 MWh/yr (28.4% of facility total requirement)

Thermal Output: 38,160 MMBtu/yr chilled water; 1,013 MMBtu/yr hot water.

System Efficiencies: Electrical: 25.0%
Thermal: 45.9%
Overall: 70.8%

PROJECT DESCRIPTION

Bridgestone Associates was initially contracted by UTC Power Corporation, South Windsor, CT to prepare and submit a detailed application for grant funding of the proposed 796 kW CCHP plant for the new KPMG, LLP data center in Montvale, NJ. KPMG is a global accounting firm with its United States National Administration Center based in Montvale, NJ. The campus is owned by KPMG and at the time consisted of four (approximately 55,000 s.f. each) buildings on a 28 acre campus. This location is the primary residence of KPMG's U.S. Information Technology Infrastructure and Intellect. In addition, the facility hosts all of KPMG's global back-up information technology production operations. Plans were under development to build a state-of-the-art, highly reliable production data center operation for the firm's basic office systems. The new building was designed to facilitate 15,000 s.f. of production area.



New Jersey's Clean Energy Program

Technical Worksheet for Combined Heat and Power (CHP) Equipment

*With the help of your Installation Contractor, fully complete the Technical Worksheets for Combined Heat and Power Equipment, as well as New Jersey's Clean Energy Program Pre-Installation Application Form. * Emission Standards will be considered in the evaluation of the project.*

FORM A – FORM 1: Proposed CHP System Performance

Proposed System Overview (Annual)

Prime Mover Type		Microturbine
Energy Input	(MMBtu)	85,420
Electric Output	(kWh)	6,255,735
	(MMBtu)	21,345
Total Thermal Output	(MMBtu)	64,075
Utilized Thermal Output1	(MMBtu)	39,173
Annual System Efficiency2	(%)	70.8

1 kWh = 0.003412 MMBtu

Prime Mover Model Info: 2X N+1 PureComfort 360		
Energy Input	(MMBtu)	10.50
Rated Electric Output	(kW)	796
	(MMBtu/hr)	2.72
Total Thermal Output	(MMBtu/hr)	7.78
Recoverable Thermal Output	(MMBtu/hr)	2.38
Fuel Conversion Efficiency3	(%)	48.6

1 – Heat used from the CHP systems for the purpose of heating and cooling
2 – Annual System efficiency = (Electric output + Utilized Thermal Output)/Energy Input
3 – Fuel Conversion Efficiency = (Rated Electric output + Recoverable Thermal Output)/Energy Input

Proposed System Overview

Month	Anticipated Operating Hours	Input Fuel (MMBtu)	Output Electricity (MMBtu)	Total Thermal Output (MMBtu)	Utilized Thermal Output (MMBtu)	Electric Efficiency (%)	Thermal Efficiency (%)	Annual Efficiency (%)
Jan	706.8	6,794.4	1,816.1	4,978.3	3,602.4	26.7	53.0	79.7
Feb	638.4	7,731.5	2,066.6	5,664.9	3,859.7	26.7	49.9	76.7
Mar	706.8	6,794.4	1,816.1	4,978.3	3,602.4	26.7	53.0	79.7
Apr	684.0	7,754.8	1,974.9	5,779.9	3,325.2	25.5	42.9	68.3
May	706.8	6,386.3	1,626.4	4,759.9	3,013.4	25.5	47.2	72.7
Jun	684.0	7,198.7	1,639.1	5,559.6	2,678.4	22.8	37.2	60.0
Jul	706.8	6,718.8	1,529.8	5,189.0	2,857.0	22.8	42.5	65.3
Aug	706.8	7,678.6	1,748.4	5,930.3	2,767.7	22.8	36.0	58.8
Sep	684.0	6,958.8	1,584.5	5,374.3	2,589.1	22.8	37.2	60.0
Oct	706.8	6,842.5	1,742.6	5,099.9	3,461.5	25.5	50.6	76.1
Nov	684.0	7,298.6	1,898.7	5,439.9	3,041.9	25.5	41.7	67.1
Dec	706.8	7,263.0	1,941.3	5,321.6	4,374.3	26.7	60.2	87.0
Total	8,322.0	85,420.4	21,344.6	64,075.9	39,173.0	25.0	45.9	70.8

Breakdown of Recovered Thermal Output

Month	Process Heating (MMBtu)	Process Cooling (MMBtu)	Space Heating (MMBtu)	Space Cooling (MMBtu)	Domestic Hot Water (MMBtu)	Other (MMBtu)	Total (MMBtu)
Jan	0.0	0.0	215.5	3,386.9	0.0	0.0	3,602.4
Feb	0.0	0.0	230.9	3,628.8	0.0	0.0	3,859.7
Mar	0.0	0.0	215.5	3,386.9	0.0	0.0	3,602.4
Apr	0.0	0.0	7.4	3,317.8	0.0	0.0	3,325.2
May	0.0	0.0	6.7	3,006.7	0.0	0.0	3,013.4
Jun	0.0	0.0	-	2,678.4	0.0	0.0	2,678.4
Jul	0.0	0.0	-	2,857.0	0.0	0.0	2,857.0
Aug	0.0	0.0	-	2,767.7	0.0	0.0	2,767.7
Sep	0.0	0.0	-	2,589.1	0.0	0.0	2,589.1
Oct	0.0	0.0	40.0	3,421.4	0.0	0.0	3,461.5
Nov	0.0	0.0	35.2	3,006.7	0.0	0.0	3,041.9
Dec	0.0	0.0	261.7	4,112.6	0.0	0.0	4,374.3
Total	0.0	0.0	1,013.0	38,160.0	0.0	0.0	39,173.0

Unit Cost of Gas		$8.92
Unit Cost of Electricity		$0.1252
Rate Schedule	Electricity	SC7
	Gas	LVG

Because of the high reliability requirements of the new data center, all systems were designed with reliability as a priority. This included all electrical supply and delivery systems as well as mechanical and cooling systems. As a result, the data center incorporates highly efficient core heat rejection/cooling equipment and critical load bus conditioning with uninterruptible service equipment. Two UTC Power micro-turbine/absorption chiller based PureComfort Combined Cooling, Heat and Power ("CCHP") Systems were included in the design to front-end the data center's demand for power from 60 kW to 840 kW while providing, in addition, nominal 420 R.T. (Refrigeration Tons) of cooling. These natural gas fired micro-turbines were designed to ensure environmentally sound, economical operation with a calculated payback of six years approximately. The use of the PureComfort packaged systems added diversity to the stability and

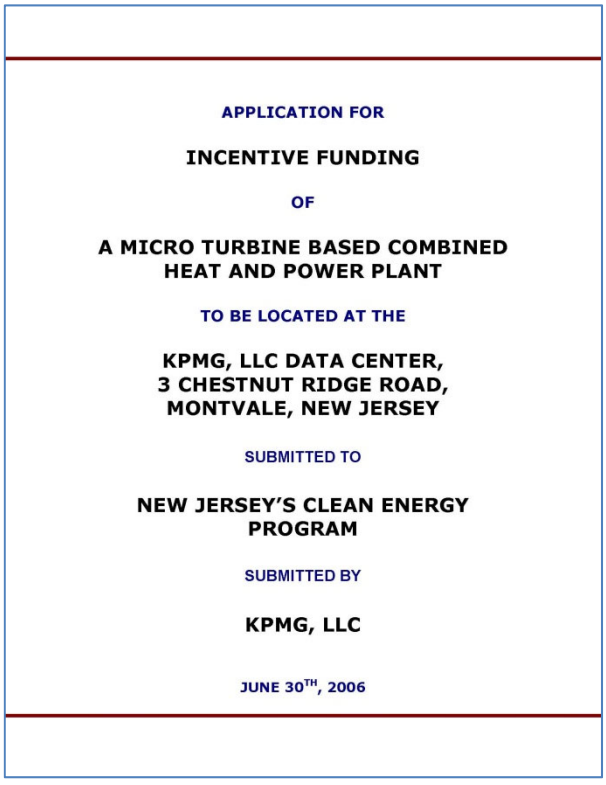
reliability of the data center while the system's high efficiency enabled significantly lower emissions than those associated with grid supplied power. The configuration chosen, an n+1 included the normal six micro-turbines per PureComfort CHP system plus an additional unit for redundancy and reliability purposes.

In addition to the energy efficiency benefits of the CCHP system, the use of this micro-turbine based system allows for two additional modes of operation that conventional data centers do not have. In a conventional data center, the normal mode of operation is connected to the local electric grid with a back-up generator for use when there is a grid interruption. With the micro-turbine based CCHP system and complete back-up chiller capacity, the KPMG data center has four modes of operation (1) "Conventional" mode, (2) "Normal Economy" mode, (3) "Back-up" mode, and (4) "Emergency" mode. In the "Conventional" mode, the grid provides all power requirements. In the "Normal Economy" mode, the plant operates in full CCHP mode in parallel with the grid. The grid provides any additional (or supplemental) power requirements. In the "Back-up" mode, the back-up generator provides power during short grid interruptions and in the "Emergency" mode, the data center can be operated with the micro-turbines operating at full output iso-synchronously from the grid. This allows the data center to continue operations even when there is an extended grid outage when a back-up generator would be limited in run hours.

Data Center Power Supply

Mode	Energy Source	Energy Supplier	Duty
Conventional	Electric	Electric Utility	Continuous
Normal Economy	Gas + Electric	CHP Plant + Electric Utility	Continuous
Back-Up	Diesel	Private	Limited
Emergency	Gas	Gas LDC	Continuous

As part of the project evaluation and in support of the grant application, Bridgestone Associates prepared a detailed economic and technical performance model and analysis of gas and electric tariffs. This model was used to evaluate project returns as well as sensitivity to changes in primary variables such as fuel costs and fuel purchasing scenarios.



APPLICATION FOR

INCENTIVE FUNDING

OF

A MICRO TURBINE BASED COMBINED HEAT AND POWER PLANT

TO BE LOCATED AT THE

KPMG, LLC DATA CENTER,
3 CHESTNUT RIDGE ROAD,
MONTVALE, NEW JERSEY

SUBMITTED TO

NEW JERSEY'S CLEAN ENERGY PROGRAM

SUBMITTED BY

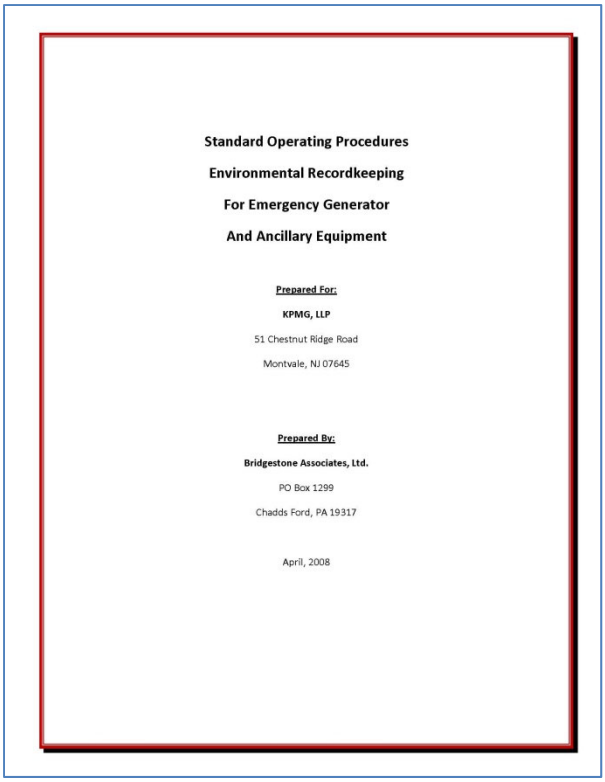
KPMG, LLC

JUNE 30TH, 2006

The application for grant funding prepared and submitted by Bridgestone Associates was successful and resulted in a capital grant from the New Jersey Clean Energy Fund of $796,000 towards the project's total capital cost of $2,375,000.

During the construction of the project, Bridgestone Associates was engaged to prepare, file and obtain all environmental permits for the CCHP plant. This

included the emissions permits for the 14 new micro-turbines, the new auxiliary boiler, and fuel oil storage tanks for back-up fuel. During the permitting process Bridgestone Associates discovered that the existing boilers and on-site back-up generator had not been permitted so, on behalf of KPMG, Bridgestone Associates negotiated with the New Jersey Department of Environmental Protection (NJDEP) a penalty and obtained the new, valid permits.


Standard Operating Procedures
Environmental Recordkeeping
For Emergency Generator
And Ancillary Equipment

Prepared For:
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51 Chestnut Ridge Road
Montvale, NJ 07645

Prepared By:
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Chadds Ford, PA 19317

April, 2008

Bridgestone Associates also prepared detailed Regulatory Compliance Manuals and Standard Operating Procedure Manuals for KPMG to follow as they operated the new CCHP plant and the existing boilers and back-up generator. These manuals provided detailed instructions on reporting of environmental compliance data to the NJDEP, reporting frequencies, and the necessary reporting forms and formats. They also provided the emissions limits on each piece of permitted equipment and how to report if there were excursions above those limits.

The CCHP was successfully completed and has been operating since late 2007.