



GATTER & DIEHL, INC.

Consulting Engineers

Project Highlight Tri-Generation Energy



Earth Day 2014 - CCHP Micro-Turbines

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*MicroTurbine Tri-Generation
Combined Cooling, Heating & Power (CCHP)*

Location:

North American Headquarters, Middletown, PA

Input:

Fuel- Natural Gas

Output:

Electrical - 1 Megawatt

Cooling - 300 Tons

Heating - 5,000 MBH

Cost:

\$3,400,000

Payback:

Six Years



CCHP-Energy Plant

Services Provided

- Financial Analysis & Feasibility
- Energy Modeling
- Plan & Specification Development
- Grant Writing, Prep and Submission
- Grant Administration
- Utility Interconnection Coordination
- FERC Qualifying Submission
- Bidding and Contractor Section Process
- Construction Contract Preparation
- Construction Contract Administration
- Construction Management



CCHP-Gas Absorption Chiller

Project Description

Phoenix Contact is not only leaders in their industry, but they are also leaders in environmental stewardship.

With the completion of the new Combined Cooling, Heating and Power (CCHP) Plant, Phoenix Contact produces approximately 60% of their power, cooling and heating needs from their state of the art Capstone Microturbine system. The Microturbines are fueled by natural gas, a Pennsylvania clean energy natural resource. The entire system is automatically controlled via VFD pumps, variable Microturbine ramping, continuous measurement of heating and cooling BTU demands throughout the facility and power monitoring.

The 1 megawatt capacity is always available in case of utility power loss. Protocols were developed whereby the Microturbine power can be initiated either automatically or manually. This allows Phoenix Contact to maintain vital power to certain manufacturing, production and distribution processes and avoid otherwise costly downtime.



CCHP- Heat Exchanger

"The synergies offered by CCHP made sense to us.....produce power on-site, while meeting our HVAC demands, improve our facility power system reliability, use a clean burning Pennsylvania natural resource fuel and continue to reduce our carbon footprint, all while lowering our energy consumption costs".

Doug Ferguson, VP Phoenix Contact Americas



1 Megawatt Micro-Turbine

TOGETHER. SHAPING THE FUTURE.

"Contact us for all your design and engineering needs."

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