

A World Leader in Electrical Automation Systems and Solutions



Phoenix Contact – North American Headquarters - Harrisburg, PA

Comprised of 360,000 SF of Manufacturing, Production, Distribution and Engineering

Expansion Project - 120,000 SF – 3 Story Production and Office Tower - Completed Spring 2014

Energy Plant Requirements

- Replace Old Chillers in Poor State of Repair
- Provide for Additional Heating and Cooling Needs
- Address Additional Electrical Demand and Consumption
- Use a Low Emission Clean Energy System
- Must Offer Power System Backup Capabilities

Experience thru June 2013



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Solution Selected – CCHP Tri-generation:

Capstone – Natural Gas Driven Micro-turbine System

1 Megawatt of Power

300 Tons of Cooling

5000MBH of Heating



Study Considerations:

Utility Electricity Cost

Installed System Cost

Grants, Incentives and Rebates

System Efficiency

Backup Power

Utility Natural Gas Cost

Maintenance and Warranty Costs

Energy Modeling

Low Emissions

Support PA Jobs – Natural Resource Fuel



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Project CCHP Financial Breakdown:

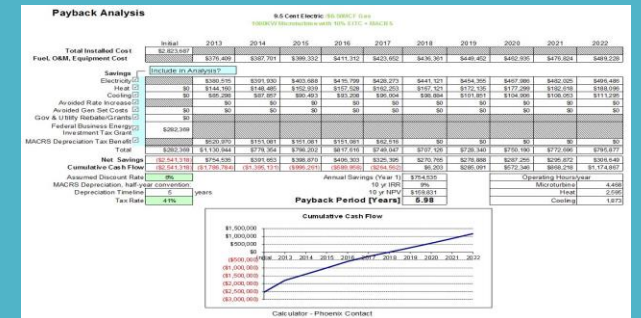
CCHP Total Cost = \$2.83 Million

Grant = \$ 975,000

MACRS – Accelerated Depreciation

10% Energy Investment Tax Credit

Payback = 5.98 Years (Includes Maintenance, Warranty, FPP and Parasitic Loads)



ACT 129 Program – June 2013 - Phoenix Contact’s Project did not meet TRC Minimum Values

Submitted via PPL’s E-Power Custom Incentives Program

Phase 1 – PPL/ACT 129 – Min TRC Requirement = 1.0 – Max Incentive = \$500,000

CHP Systems Credited at \$.10/kwhr

Phase 2 – PPL/ACT 129 – Min TRC Requirement = 1.2 – Max Incentive = \$250,000

CHP Systems Credited at \$.05/Kwhr

Other Systems Credited at \$.08/Kwhr

TRC Did Not:

- Recognize State Grant Funding Offset
- Recognize Environmental Emissions Offset
- Recognize Grid Load Offset and Associated Generation, Transmission and Distribution Offset
- Allow for Backout of Project Costs if Customer adds Modular Units for Backup Power Capacity



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