

# The Convergence: Energy, Environment, and Economy

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# SourceOne Overview

- SourceOne Founded in 1997 ~ rollout with deregulation
- Nationally recognized power management company providing support to businesses who view power as critical to their operations
- Providing power related due diligence, power master planning and power/commodity management support
- Manage complex energy issues related to power generation, transmission and distribution, with >1000MWs under management
- Extensive experience and expertise related to the economics of power delivery and consumption, tariff analysis, cost recovery mechanisms and major energy infrastructure costs
- Infrastructure Development
- Sustainability Services and Carbon Management
- Acquired by Veolia Energy - May 2007

# VEOLIA

## ENVIRONNEMENT

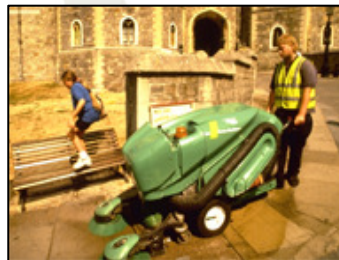
### VEOLIA ENERGY



\$8.7 bn  
49,000 employees  
38 countries

#1 Energy Services  
Provider in Europe

### VEOLIA ENVIRONMENTAL SERVICES



\$10.7 bn  
89,000 employees  
36 countries

#2 Waste Services  
Provider in the World

### VEOLIA TRANSPORTATION



\$7.1 bn  
82,000 employees  
30 countries

#1 Private Transportation  
Operator in Europe and  
North America

### VEOLIA WATER



\$14.4 bn  
78,000 employees  
59 countries

#1 Water Company in  
the World

- \$40 billion in revenues with 300,000 employees
- Public Company (VE, NYSE)
- SourceOne acquired by Veolia in May 2007

# Case Study

- Major Biotechnology Research and Manufacturing Campus in Cambridge, MA
- Cogeneration Development
  - The Problem
  - The Solution
  - The Result

# The Problem

- Expensive Electricity and District Steam Utilities
  - Electricity upwards of \$0.15/kWh
- Unreliable Electric Grid
  - Outages interrupt manufacturing, research, vivariums
  - Electricity is Mission Critical

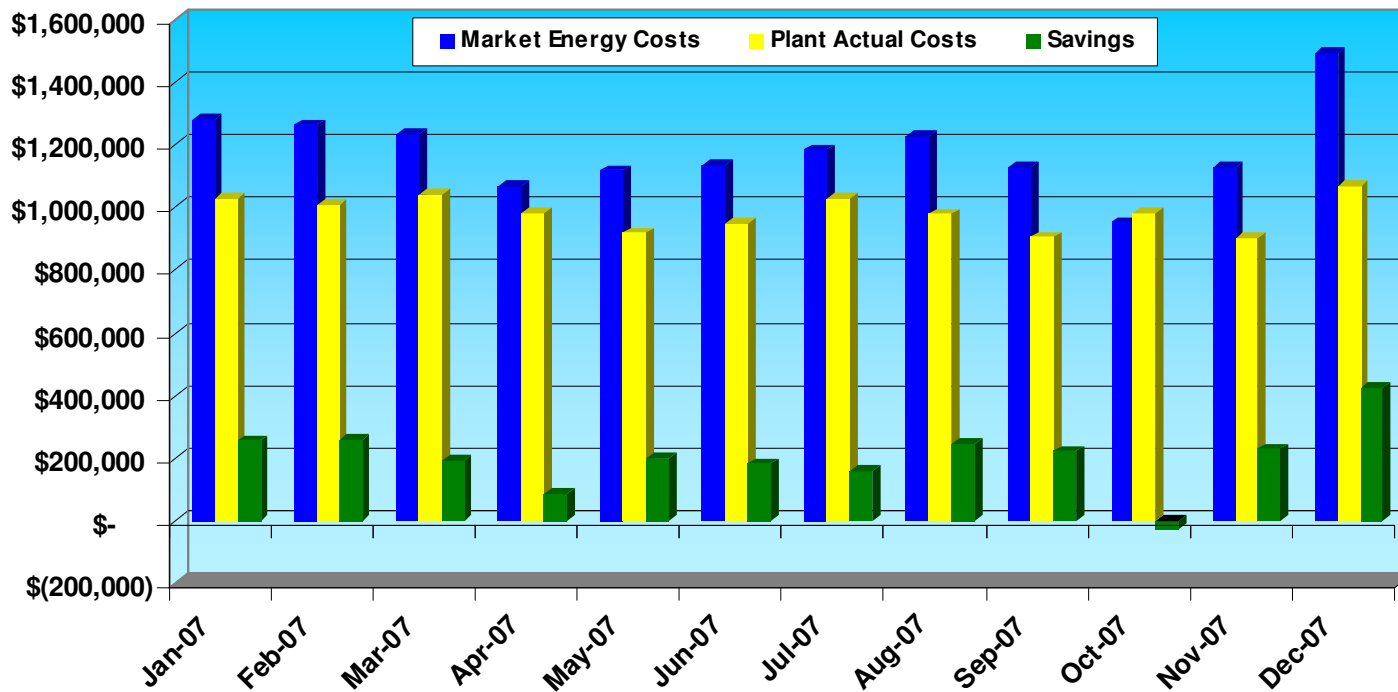
# The Solution

- 5.2 MW CTG with duct-fired HRSG as the backbone of new central plant
- Aux. boilers and street steam as a backup for thermal loads
- Grid and emergency generation for electric redundancy
- Absorption chillers absorb thermal product in the summer months
- Redundancy, Reliability, and Efficiency

# The Result

- ~\$12M capital requirement
- Energy Costs reduced by ~\$2-4M/year subject to energy pricing
- Underground vault is completely silent and vibration-free under office/research bldg.
- Up to 85% Efficiency for combined electricity/thermal generation
- Reliable Baseload Power

## Cambridge Plant Financial Performance



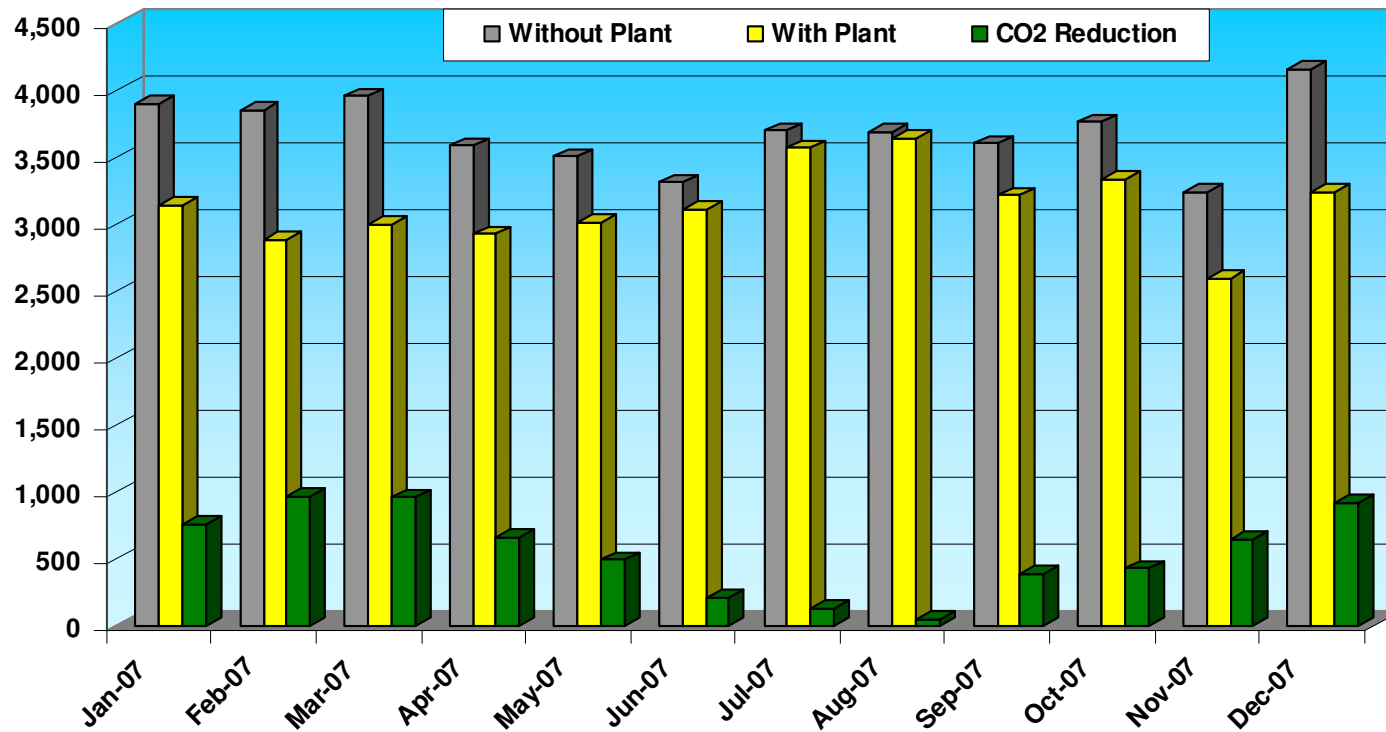
	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07
<span style="color: blue;">■</span> Market Energy Costs	\$1,281,576	\$1,264,232	\$1,234,288	\$1,071,234	\$1,118,153	\$1,132,922	\$1,185,472	\$1,226,361	\$1,126,783	\$952,571	\$1,128,574	\$1,493,149
<span style="color: yellow;">■</span> Plant Actual Costs	\$1,026,236	\$1,007,513	\$1,041,252	\$983,660	\$918,883	\$950,582	\$1,027,461	\$979,481	\$905,495	\$982,373	\$900,404	\$1,066,724
<span style="color: green;">■</span> Savings	\$255,340	\$256,719	\$193,036	\$87,574	\$199,270	\$182,341	\$158,010	\$246,880	\$221,288	\$(29,802)	\$228,170	\$426,426



# The Result Cont'd

- 11% Reduction in GHG Emissions
- City of Cambridge “Go Green” Award
- NPR Exposure
- Sustainability was not a driver
- Sustainability is THE project highlight

### Cambridge Plant CO2 Reduction Performance



	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07
Without Plant	3,887	3,837	3,946	3,579	3,494	3,305	3,691	3,684	3,591	3,753	3,227	4,149
With Plant	3,134	2,872	2,993	2,919	3,006	3,100	3,563	3,637	3,207	3,327	2,588	3,229
CO2 Reduction	753	965	954	660	488	204	128	46	384	426	640	920

# Risk

- Increased direct exposure to natural gas volatility
- Electricity and Steam are already tightly correlated to natural gas in NE
- Active energy portfolio management to mitigate volatility and secure favorable pricing
- Complexity
- Operations Expense and Staff

# What makes CHP Work

- Load shape needs to fit – or be manipulated to fit
- Energy Costs
- Investment Tax Credit – 10%
- MACRS Depreciation
- Alternative Energy Portfolio Standards and other similar state incentive programs
- GHG/Environment is no longer an afterthought
- Carbon risk is very real and environmental assessments need to be performed

Sustainability Projects that are not economically justified are not sustainable.

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