



Dome-Tech, Inc.
A UTC Power Company

Case Study

Project Scope:

Phase I Energy Conservation
Analysis

Facility Description:

Pilot Plant
Manufacturing

Completion Date:

February 2006

Identified Annual Savings:

\$363,000

**Implementation Cost for
Identified Action Items:**

\$945,000

Projected Payback:

2.6 years

Pharmaceutical Manufacturing Client

Southeastern United States

Dome-Tech, Inc. was retained to perform a Phase I Energy Conservation Analysis and prioritize energy and operating cost savings and infrastructure improvement projects.

The focus of this analysis included: optimizing HVAC systems, chilled water system energy efficiency improvements, process system optimization, and the feasibility of on-site generation.

Dome-Tech's study uncovered a total of thirteen (13) Energy Conservation Opportunities (ECOs).

The most notable opportunity was a solvent incineration project that would have the potential to save approximately \$1.4 MM annually, based upon: the average heating value of the waste, annual waste solvent production, boiler efficiency, and current/projected solvent disposal costs.

Based upon the client's simple payback threshold, of the remaining twelve (12) ECOs, seven (7) were prioritized for recommendation. These included:

- Permanent airflow reductions in pilot plant labs,
- Resetting of supply air temperatures and space temperatures in pilot plant labs,
- Installation of an energy efficient cooling tower side stream filtration system,
- Variable Frequency Drive (VFD) installation on 50HP – 250HP pumps of a low temperature system,
- VFD installation on existing chiller 2000 HP compressor motor, and
- Boiler Stack Economizer retrofit

The above recommendations amounted to an estimated cost of approximately \$945K, which would produce an estimated annual savings of \$363K with a simple payback of 2.6 years.