Confidential Pharmaceutical Client

Energy Evaluation

Location

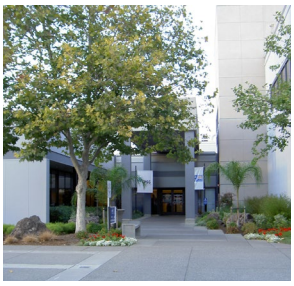
West Coast, USA

Client

Confidential Pharmaceutical

Market Sector

Science & Technology



This facility comprises approximately 227,000 sf of manufacturing and approximately 26,000 sf of office space. The company, in conjunction with the federal Energy Star program, developed a program of energy reduction, benchmarking and education initiatives called Energy Star Best Practices.

PS&S California, Inc. (PS&S) reviewed the program items to determine compliance. PS&S performed a site survey to become familiar with existing equipment and the sequence of operations. Site analysis involved evaluation of the efficiency of several energy systems highlighted below and the feasibility of renewable energy systems:

- Chilled water system
- HVAC system
- Boiler system
- Compressor system
- Thermal oxidizers
- Dust collection system
- Manufacturing operation
- Feasibility of combined heat and power system and renewable energy technologies such as: wind turbine, photovoltaic system – ground mounted tracking and fixed systems and geothermal system

PS&S determined that the site complied with 14 of the 26 items on the program checklist. Additional recommendations made by PS&S to improve site compliance were:

- Heat recovery from John Zink thermal oxidizer to offset boiler plant steam production. Estimated savings of $454,300 and 2567 tons of CO_2.
- Installation of variable-speed drives in air handling units, dust collection system, chiller and primary chilled water pumps. Estimated savings of $36,000 and 109 tons of CO_2.
- HVAC and process hot water system modification to reduce operation of equipment. Estimated savings of $13,016 and 73 tons of CO_2.
- Reduction in compressed air usage in process by use of solenoid valve photovoltaic system
- Compressed air system monitoring program
- Combined heat and power system alternatives
- Thermography to identify areas of improvement in building envelope