

# ENERGY PROJECT CASE STUDY

## ENERGY MANAGEMENT SERVICES

### Financials

- ◆ Natural Gas Rate Change and refund: 12% of annual gas costs
- ◆ Natural Gas tax exemption and refund: 19% of annual gas costs
- ◆ Electric meter consolidation savings: 10% of annual electric costs
- ◆ Electric utility billing refund: 5% of annual electric costs
- ◆ Demand Reduction Analysis Savings: 5% of annual electric costs

### Description of Facility

- ◆ Plastic injection molding facility along with some product assembly
- ◆ Warehouse and office areas
- ◆ Facility manufactures a variety of plastic parts for customers.

### Energy System Description

- ◆ Systems include injection molding machines, chilled water supply, cooling water supply, compressed air supply, and vacuum systems
- ◆ The wide variety of sizes and applications of the injection molding process causes a highly varying load profile for the facility

### System Opportunities/Issues

- ◆ A new rate contract needed to be negotiated with the electric utility due to contract expiration
- ◆ The electric utility planned on implementing a higher demand component in the rate with a demand ratchet and a demand credit mechanism
- ◆ The electric utility had multiple meters, needed a billing audit, a supply review, an equipment demand study, and an on site facility assessment.
- ◆ The natural gas utility was improperly charging for taxes and some meters were being charged on the wrong rate

### Program Description

- ◆ A complete energy health check was provided for the client on an ongoing basis including rate analysis and utility negotiations, billing analysis, invoice review, and monthly reporting, along with an electric demand study and a facility assessment to identify and prioritize potential energy consumption reduction projects..
- ◆ A new rate was negotiated with the electric utility with a demand reduction credit
- ◆ Primary metering was installed to replace problematic multiple secondary meters and reduce demand costs
- ◆ Demand study provided basis for managing the facility demand for further cost savings
- ◆ Refunds were received from the natural gas utility and the electric utility

### Program Benefits

- ◆ New multi-year electric utility contract with a base demand reduction credit
- ◆ Billing and tax errors identified and refunds were received
- ◆ Client has identified the key energy performance factors to manage energy cost going forward
- ◆ Metering was consolidated and real time demand metering installed in clients office
- ◆ Overall annual program client energy savings value to program costs exceeded a multiple of 4

