



**Washington University & HHB Solutions**  
Energy Optimization Team

**INDUSTRIAL-COMMERCIAL-INSTITUTIONAL**

**We Work With You**

To Create An Energy Saving Program With Proven Results!

**Industrial Energy Benchmarking That Works**

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# PROVEN RESULTS

## **Engelhard Corporation**

### **18% reduction, \$250,000 annual savings:**

Savings were achieved by air compressor control, repairing air- gas- steam leaks, increased boiler efficiency with make-up water temperature, removed un-needed gas blowers, reduced lighting demand with controls and de-lamping, better equipment utilization through training.

## **Gold Kist Inc.**

### **10.9% reduction, \$500,000 annual savings**

Savings were achieved by water control: ice making waste, changing sanitation clean-up nozzles, and controlling high pressure pump system. Also, Air Compressor controls, Freezer controls, and start-up and shut down weekend settings for all equipment.

## **Owens-Corning Fiberglas Corporation**

### **14.4% reduction, \$225,000 annual savings**

Savings were achieved by sequencing production presses (reduced 75 hp vacuum pump), weekend startup/shutdown control and checklists, Electrical demand scheduling, massive de-lamping/lamping program, removed and repaired steam and abandoned air lines, repaired compressed air lines and took one 100 hp compressor off line, and Sequenced boiler operation with the drying process.

## **Owen Manufacturing Company**

### **17.8% reduction, \$230,000 annual savings**

Savings were achieved by repairing air leaks and shut down of 2- 50 hp compressors, Controlling Steam lines usage, electrical demand scheduling, reduction in natural gas by sequencing dryers, lighting control and de-lamping, supervisor training, and daily condition checks and reports.

## **Schuller International Inc**

### **10% reduction, \$490,000 annual savings**

Savings were achieved by repairing air leaks, scheduling compressors, lowered air pressure, revised SOP for oven temperature control to reduce natural gas, eliminated un-needed equipment, revised SOP for melt operation, and supervisor training.

# Our Energy Optimization Team Provides the Following On-Site Services

## Assessment

- Production & Energy data analysis
- Process analysis
- Analyze infrastructure metrics
- Review process, operating, and maintenance procedures
- Review equipment capacities and parameters
- Evaluate metric solutions
- List and prioritize Energy Projects and Log with priorities based on ROI and non-capital based emphasis

## Implementation

- Development of clients Energy Coordinator and Energy Team
- Identify Key Energy Performance Indicators
- Implement advanced metering and monitoring
- Implement recommended action for area of savings
- Conduct regular management and Energy Team progress reviews and update the Project Energy log
- Establish Energy Team Priorities, Time lines, & Accountabilities
- Implement energy monitoring, control and reporting enhancements

## Retention

- Continuous check ups & performance measurements to newly established benchmarks
- Assessment & coaching of clients management, monitoring and control of energy program
- Analysis of data integrity and trend deviations
- Qualifying the impact of operating, equipment & process changes of energy effectiveness
- Maintain Energy Key Performance Indicators & Savings model
- Network and build Energy Team

# SATISFACTION GUARANTEED

## Thermal Ceramics

"Manufacturing management is undergoing a behavior change by recognizing the importance of and potential cost savings from energy reduction activities. Upper management is pleased with the improved profitability being realized through the implementation of this program."

## Wagner Castings Company

"We ...Question whether anyone could point out improvements in an operation that we live with hour by hour..." Those feelings were replaced with respect and confidence...Bottom line results met and exceeded our expectations."

## Uniroyal Chemical Company

"My experience with Mr. George Hollins was good. I have no problem in recommending them to other companies for an evaluation of their management methods and practices."

## Emerson Electric Co.

Mr. Hollins: "This is to express my thanks with those of the Emerson Corporate manufacturing conference. The conference was a success... Feedback from conference attendees has been overwhelmingly positive. Our objectives.... an environment for divisional interaction, exchange of engineering and manufacturing technology, and sharing of Emerson's strategic direction were achieved."

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## Industrial Energy Benchmarking

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