

FORD

Manages reductions in energy and emissions through energy evaluations...

BACKGROUND



The Ford Windsor Casting Facility was built in 1934 and employs 1,000 people. It is the largest iron foundry in Ontario. The Facility supplies iron castings from two mould lines that produce approximately 2.2 million crankshafts and 1.0 million cylinder

blocks yearly. When the opportunity arose for the Windsor Facility to improve energy consumption, **FIREBRIDGE** INC. was employed to perform an energy evaluation that would identify high rate of return savings opportunities. The Study was co-funded by **uniongas** through the Industrial Energy Wise Incentive Program

FOCUS



Reaching energy and environmental objectives is often challenging for any industrial innovator. By investing in a detailed process assessment from an energy perspective, Ford's Windsor Casting Facility, has lead to a substantial decrease in both natural gas usage

and green house gas (GHG) emissions. The focus of the report identified opportunities that minimized investment costs while maximizing savings.

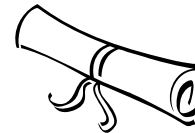


METHODOLOGY

A systematic approach to energy assessment was used that requires the development of a thorough understanding of the process. This comprehensive study of the process identified synergies within the Cupola operation that could be capitalized on. A total of seven projects were identified for consideration that covered areas in the combustion and maintenance fields. Three major process improvement strategies were identified and implemented with great success on Ford

Windsor's two Cupolas. These projects are identified as;
Process air reduction during process turndown modes
After burner trim during process turndown modes
Upgrade Heat Exchange System

RESULTS



Five of these projects were implemented for a total savings of \$1.1 million per year and an annual energy reduction of 2.8 Million m3 of natural gas. GHG emissions are in the range of 3,750 tons for Cupola #1 and 1,880 tons for Cupola #2.