

Worthington Energy Innovations helped a snack food manufacturing plant earn the world's first LEED® Platinum certification

WORTHINGTON DESIGNS IT

WORTHINGTON BUILDS IT

WORTHINGTON SUSTAINS IT

Our Energy Audit, Systems Design and Performance Verification methodologies helped Shearer's Foods, Inc. achieve a LEED® Platinum rating at their plant in Massillon, Ohio.

How We Did It: Shearer's LEED® Platinum Rating

Worthington's Energy Audit laid the foundation because it provided a detailed energy model for manufacturing operations at the Massillon plant that covered the thermal mass balance involved in cooking, baking and frying processes at the plant. Worthington was able to measure the BTUs used per pound of product produced and establish a baseline that the new systems being developed could be compared to. This model included:

Energy Audit

1. Facility Production and Utility Data
2. Field Readings on Process Loads and Outputs
 - Combustion Exhaust
 - Product Flow
 - Mass Flow In / Mass Flow Out (Evaporation)
 - Temperature In / Temperature Out
3. Engineering Calculations



Systems Design

As Worthington Energy Innovations built the energy model for Shearer's Foods, Inc., it looked for ways that efficiency could be improved in each process at the Massillon Plant. Worthington was then able to work with process equipment manufacturers to take advantage of the opportunities it discovered by working process improvements into energy efficiency Systems Design. Once the manufacturing processes were optimized, Worthington designed heat recovery systems to capture the remaining heat lost from process equipment. In the case of the Massillon Plant, rejection heat is currently able to offset most of the need to purchase fuel for heating during winter months.

Performance Verification

Worthington Energy Innovations used multiple resources to calculate the performance of the new system and verify that these calculations were correct – and because Worthington established a baseline first the new system's performance could be compared to previous production systems. Worthington's energy system helped reduce the energy needed to produce chips at Massillon by 30% per pound of product.

LEED® Platinum

Worthington's energy and engineering calculations for LEED® Energy Efficiency Credits assisted Shearer's in achieving a higher than expected LEED® rating for Shearer's Food, Inc. The company was aiming for a LEED® Gold rating at their plant in Massillon, Ohio but Worthington encouraged and supported Shearer's in the stretching of this original goal. The end result was a successful and groundbreaking, LEED® Platinum Certification – **the Massillon facility is the first of its kind in the world to receive this highest distinction in sustainable design and operation.**



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