



Electricity



Transportation



Buildings



Industrial



Agriculture



Sequestration

# Industrial Energy Efficiency Systems

Client: Carrier Plastics

2007–ongoing

Carrier Plastics, founded in 1982, provides design for manufacturability (DFM), injection molding and blow molding plastics, mostly for consumer packaging. As the company expanded to its current 128,000-square-foot facility in Auburn, New York, the owners embarked on a smart growth project to be as energy efficient as possible.

Frontier Energy helped Carrier by evaluating energy savings potential from chilled water systems, lighting systems, and injection mold and blow mold equipment. Our team also helped Carrier apply for, and receive, incentives from NYSERDA. To date, Carrier has saved 3,611,216 kWh/year and realized \$433,000 in incentives.



## FRONTIER ENERGY:

- Performed a Flextech study of the chilled water systems that concluded:
  - Upgrading the existing chilled water system with 120-tons cooling tower would save 114,000 kWh/year with a payback of 7.7 years
  - The new plant floor would need 170-tons of water-cooled chiller, which would provide 275,000 kWh/year of savings over the baseline air-cooled option at a fractional incremental cost increase
  - Existing systems HVAC systems were effectively using air-cooled economizer to provide space cooling at ambient temperatures below 40°F and no further savings would be achieved
- Provided technical assistance to calculate and verify savings of upgrading 17 injection-mold, blow-mold, and injection-stretch-blow-mold machines
- Calculated and verified building-related savings from lighting, VFD pumping application, and compressed air upgrades
- Performed production machine baseline measurement and post installation measurements to determine the production normalized savings



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