Onsite Energy Use:

- Total Energy Use: 3,195 TBtu
- Onsite Combustion Emissions: 128 MMT CO$_2$e

### Onsite Energy

- **Conventional Boilers**: 34.9% Natural Gas, 32.6% Waste Gas (byproduct fuel)
- **CHP/Cogeneration**: 59.4% Natural Gas, 59.4% Waste Gas (byproduct fuel)
- **Other Electricity Generation**: 0.2% Natural Gas, 0.2% Waste Gas (byproduct fuel)
- **Steam Generation**: 346 TBtu
- **Electricity Generation**: 109 TBtu

### Process Energy

- **Process Heating**: 72.8% Natural Gas, 26.9% Waste Gas (byproduct fuel)
- **Process Cooling and Refrigeration**: 9.3% Natural Gas, 0.9% Waste Gas (byproduct fuel)
- **Other Process Uses**: 3.4% Natural Gas, 2.5% Waste Gas (byproduct fuel)
- **Electro-Chemical**: 9.4% Natural Gas, 0.0% Waste Gas (byproduct fuel)

### Machine Drive

- **Machine-Driven Systems**:
  - Pumps: 164 TBtu
  - Fans: 75 TBtu
  - Compressed Air: 174 TBtu
  - Materials Handling: 9 TBtu
  - Materials Processing: 149 TBtu
  - Other Systems: 11 TBtu

### Nonprocess Energy

- **Facility HVAC**: 10.2 TBtu
- **Facility Lighting**: 3.8 TBtu
- **Other Facility Support**: 1.6 TBtu
- **Onsite Transportation**: 0.7 TBtu
- **Other Nonprocess**: 0.3 TBtu

### Notes

- Exhaust losses from process heating are not estimated
- Onsite, renewable, non-combustion generation contributes 0 TBtu
- Feedstock energy not included

Data source: 2006 MECS
Published: August 2010, revised December 2010
Units: TBtu = Trillion British Thermal Units
MMT CO$_2$e = Million Metric Tons Carbon Dioxide Equivalent
Notes: Energy values <0.5 TBtu shown as 0

Prepared for the Industrial Technologies Program (ITP) by Energetics Incorporated