**Manufacturing Energy and Carbon Footprint**

**Sector:** Plastics and Rubber Products (NAICS 326)

**Primary Energy Use:** 562 TBtu

**Total GHG Emissions:** 27 MMT CO$_2$e

### Primary Energy, 2018

**Electricity Generation**

- Offsite: $168 \text{ TBtu}$
- Onsite: $22.3 \text{ TBtu}$

**Steam Generation**

- Offsite: $0 \text{ TBtu}$
- Onsite: $0 \text{ TBtu}$

**Generation and Transmission Losses**

- Offsite: $306 \text{ TBtu}$
- Onsite: $168 \text{ TBtu}$

**Fuel**

- Offsite: $88 \text{ TBtu}$
- Onsite: $32 \text{ TBtu}$

**Energy for All Purposes**

- Offsite: $562 \text{ TBtu}$
- Onsite: $27.1 \text{ TBtu}$

**Process Energy**

- Onsite: $18.8 \text{ TBtu}$
- Offsite: $1.8 \text{ TBtu}$

**Nonprocess Energy**

- Onsite: $6.5 \text{ TBtu}$
- Offsite: $1.3 \text{ TBtu}$

**Notes:*

- Sector-wide aggregate data for year 2018; energy values rounded to nearest whole number.
- Offsite generation shown on net basis (purchases, sales, and transfers accounted for) and includes onsite noncombustion renewable output.
- Electricity export refers to sales and transfers offsite of electricity to utilities and other entities.
- Feedstock energy excluded from primary, offsite, and onsite energy values and included in Energy for All Purposes.
- Excess steam refers to the sales and transfer offsite or purging of surplus steam.

**Energy use data source:** 2018 EIA MECS (with adjustments). For full information on references, definitions, assumptions, and other sectors, visit this [webpage](#).

**Last Revised:** December 2021

**Energy for All Purposes estimated at 563 TBtu**

Includes primary energy plus net energy consumed for nonfuel purposes, including feedstock use.

Prepared for the U.S. Department of Energy, Advanced Manufacturing Office by [Energetics](#)
Manufacturing Energy and Carbon Footprint
Sector: Plastics and Rubber Products (NAICS 326)

Onsite Energy Use: 256 TBtu
Onsite Emissions: 5 MMT CO₂e

Onsite Energy, 2018

Fuel Types
- Natural Gas: 94%
- Distillate Fuel Oil: 2%
- HGL (excl. natural gasoline): 3%

Energy (TBtu = Trillion British Thermal Units)
- Fuel
- Electricity
- Steam
- Combined

Losses

Greenhouse Gas (GHG) Emissions
(MMT CO₂e = Million Metric Tons Carbon Dioxide Equivalent)

- Total
- Onsite
- Process

Total Emissions =
- Offsite Combustion Emissions +
- Onsite Combustion Emissions +
- Process Emissions

Onsite Emissions = Onsite Combustion Emissions +
- Process Emissions

Machine Drive
- 6 Pumps
- 8 Compressed Air
- 3 Materials Handling
- 49 Materials Processing
- 1 Other Systems

Process Emissions
- Process Heating
- Process Cooling and Refrigeration
- Other Process Uses
- Electro-Chemical

Other Nonprocess
- Facility HVAC
- Facility Lighting
- Other Facility Support
- Onsite Transportation

Transportation
- 22 Fans
- 22 Other Systems

Other Systems
- 2 Facility HVAC
- 13 Facility Lighting
- 9 Other Facility Support
- 10 Onsite Transportation

Energy use data source:
2018 EIA MECS (with adjustments); See webpage for details
Last Revised: December 2021

Notes:
- Sector-wide aggregate data for year 2018; energy values and fuel type percentages rounded to nearest whole number
- Offsite generation shown on net basis (purchases, sales, and transfers accounted for) and includes onsite non-combustion renewable output
- * Refers to sales and transfers offsite or purging of surplus steam
- Feedstock energy excluded

Prepared for the U.S. Department of Energy, Advanced Manufacturing Office by Energetics
Fuel and GHG Emissions, 2018

Fuel use data source: 2018 EIA MECS (with adjustments)
See webpage for details

Last Revised: December 2021

Notes:
Sector-wide aggregate data for year 2018; energy values rounded to nearest whole number; emissions values rounded to nearest tenth