Manufacturing Energy and Carbon Footprint
Sector: All Manufacturing (NAICS 31-33)

Primary Energy Use: 19,663 TBtu
Total GHG Emissions: 1,165 MMT CO₂e

Primary Energy, 2018

- Offsite Energy
  - Fuel: 11,589
  - Electricity Generation: 344.1
    - Generation and Transmission Losses: 4,721
  - Steam Generation: 40.5
    - Generation and Transmission Losses: 198
- Onsite Energy
  - Electricity and Steam Generation (excludes 4.2 TBtu renewable, non-combustion electricity output):
    - Onsite Emissions: 238.4
    - Onsite Emissions Losses: 234.0
  - Steam Distribution Losses: 853
  - Process Energy: 827.0
    - Process Losses: 4,432
  - Nonprocess Energy: 99.5
    - Nonprocess Losses: 552
- Total Energy:
  - Energy for All Purposes estimated at 24,355 TBtu

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

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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 non-combustion 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 for All Purposes estimated at 24,355 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