Manufacturing Energy and Carbon Footprint
Sector: Forest Products (NAICS 321, 322)

Primary Energy Use: 2,995 TBtu
Total Combustion Emissions: 92 MMT CO₂e

Primary Energy, 2014

Onsite Energy

- Fuel: 2,162
- Generation and Transmission Losses: 504
- Electricity Generation: 41.7
- Steam Generation: 3.4

Offsite Energy

- Generation and Transmission Losses: 768
- Steam Generation: 65
- Total Emissions = Offsite Emissions + Onsite Emissions: 2,995

Onsite Generation

- Excludes 3.4 TBtu renewable, non-combustion electricity output
- Electricity and Steam Generation Losses: 540
- Steam Distribution Losses: 261

Process Energy

- Energy: 49.6
- Nonprocess Energy: 10.5
- Process Losses: 928

Nonprocess Energy

- Energy: 7.6
- Nonprocess Losses: 81

Feedstock energy excluded from primary, offsite, and onsite energy values and included in Energy for All Purposes

Electricity Export*


Last Revised: September 2018

Notes:
- Sector-wide aggregate data for year 2014; 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

Energy for All Purposes estimated at 2,995 TBtu

Includes primary energy plus net energy consumed for nonfuel purposes, including feedstock use
Onsite Energy, 2014

Manufacturing Energy and Carbon Footprint
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Onsite Energy Use: 2,473 TBtu
Onsite Combustion Emissions: 47 MMT CO₂e

Fuel Types
- Pulping Liquor or Black Liquor (byproduct fuel): 40%
- Biomass: 27%
- Natural Gas: 22%
- Coal: 7%
- Distillate and Residual Fuel Oils: 1%
- Waste Oils/Tars (byproduct fuel): < 1%
- Petroleum Coke: < 1%
- HGL (byproduct fuel): < 1%
- Other Fuels: < 1%

Onsite Generation
- Conventional Boilers: 5.2%
- CHP/Cogeneration: 29.5%
- Other Electricity Generation: 0.4%

Process Energy
- Process Heating: 13.2%
- Process Cooling and Refrigeration: 0.9%
- Other Process Uses: 2.6%
- Electro-Chemical: 0.5%

Nonprocess Energy
- Faciltiy HVAC: 3.7%
- Facility Lighting: 1.9%
- Other Facility Support: 0.6%
- Onsite Transportation: 1.2%
- Other Nonprocess: 0.1%

Energy use data source: 2014 EIA MECS (with adjustments); see page 1 of 2 for reference link
Last Revised: September 2018

Notes:
- Sector-wide aggregate data for year 2014
- 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 of electricity to utilities and other entities
- Feedstock energy excluded

Prepared for the U.S. Department of Energy, Advanced Manufacturing Office by Energetics