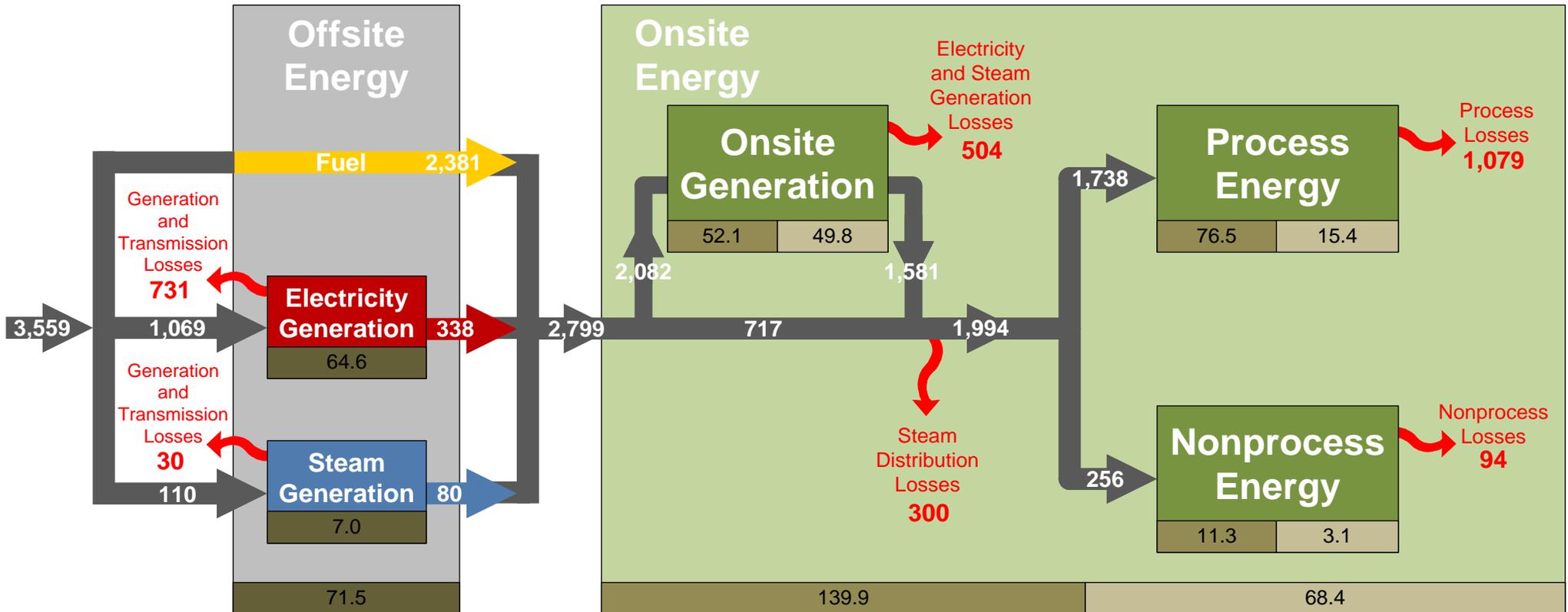


Manufacturing Energy and Carbon Footprint

Sector: Forest Products (NAICS 321, 322)

Total Primary Energy Use: 3,559 TBtu
 Total Combustion Emissions: 140 MMT CO₂e

Total Energy



Energy Use (TBtu = Trillion British Thermal Units)	Combustion Emissions (MMT CO ₂ e = Million Metric Tons Carbon Dioxide Equivalent)
All Energy	Offsite
Fuel	Total
Electricity	Onsite
Steam	
Losses	

Total Emissions = Offsite Emissions + Onsite Emissions

20 Electricity Export

Energy use data source: 2006 MECS (with adjustments)
 Last Revised: October 2012
 Notes: Feedstock energy not included
 Energy values <0.5 TBtu shown as 0
 Values represent aggregate data
 Offsite generation shown on net basis

Manufacturing Energy and Carbon Footprint

Sector: Forest Products (NAICS 321, 322)

Onsite Energy Use: 2,799 TBtu
 Onsite Combustion Emissions: 68 MMT CO₂e

Onsite Energy

Onsite Generation

Conventional Boilers	13.0	10.7
CHP/Cogeneration	38.9	38.9
Other Electricity Generation*	0.2	0.2
Total	52.1	49.8

Steam Generation Losses 447
 Electricity Generation Losses 57

Process Energy

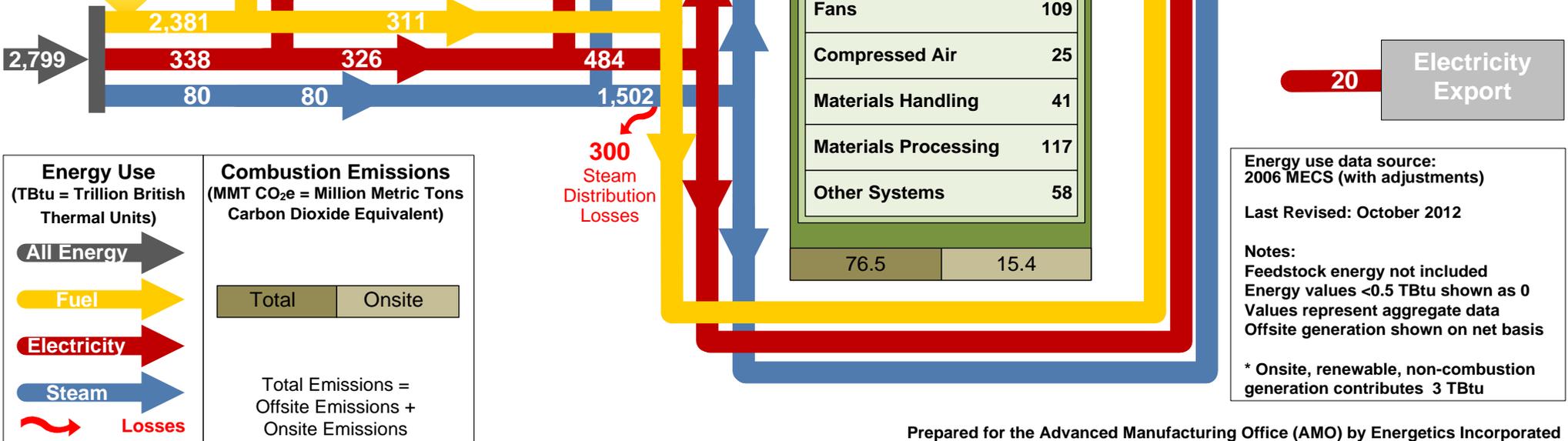
Process Heating	21.5	13.6
Process Cooling and Refrigeration	1.2	0.1
Other Process Uses	1.3	0.4
Electro-Chemical	0.6	0.0
Machine Drive	51.8	1.3
Machine-Driven Systems		
Pumps	173	
Fans	109	
Compressed Air	25	
Materials Handling	41	
Materials Processing	117	
Other Systems	58	
Total	76.5	15.4

Nonprocess Energy

Facility HVAC	5.0	1.3
Facility Lighting	3.3	0.0
Other Facility Support	0.9	0.1
Onsite Transportation	1.8	1.6
Other Nonprocess	0.4	0.1
Total	11.3	3.1

Fuel Type	% of Total
Pulping Liquor or Black Liquor (byproduct fuel)	36%
Biomass	23%
Natural Gas	24%
Coal	10%
Distillate and Residual Fuel Oils	5%
Waste Oils/Tars and Waste Materials (byproduct fuel)	1%
Petroleum Coke (byproduct fuel)	1%
LPG and NGL	< 0.5%
Other Fuels	< 0.5%

Fuel Types



Energy Use (TBtu = Trillion British Thermal Units)	Combustion Emissions (MMT CO ₂ e = Million Metric Tons Carbon Dioxide Equivalent)
All Energy	Total
Fuel	Onsite
Electricity	
Steam	
Losses	

Total Emissions = Offsite Emissions + Onsite Emissions

Energy use data source: 2006 MECS (with adjustments)
 Last Revised: October 2012

Notes:
 Feedstock energy not included
 Energy values <0.5 TBtu shown as 0
 Values represent aggregate data
 Offsite generation shown on net basis

* Onsite, renewable, non-combustion generation contributes 3 TBtu