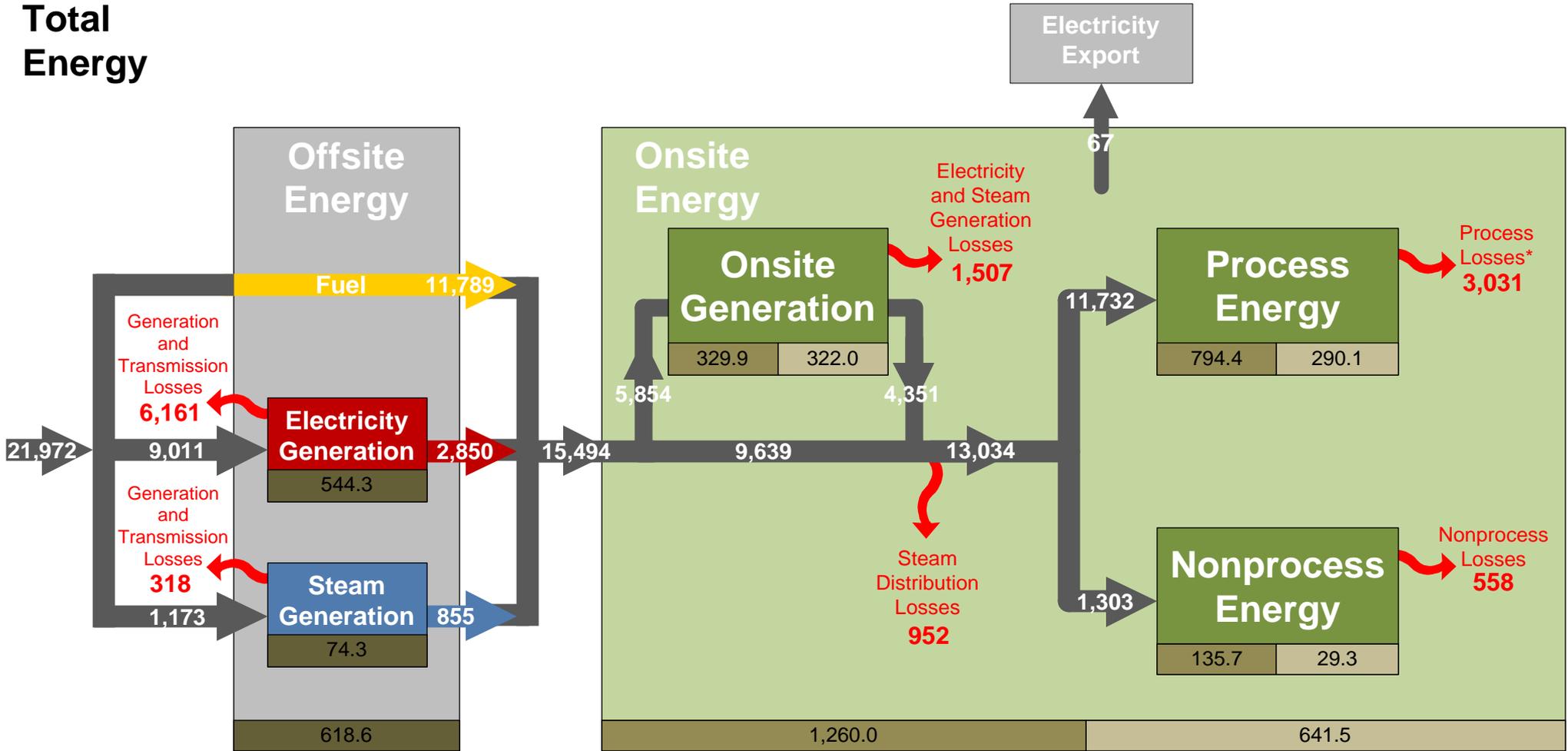


Manufacturing Energy and Carbon Footprint
Sector: All Manufacturing (NAICS 31-33)

Total Primary Energy Use: 21,972 TBtu
Total Combustion Emissions: 1,260 MMT CO₂e

Total Energy



Energy Use (TBtu)	All Energy
	Fuel
	Electricity
	Steam
	Losses
Combustion Emissions (MMT CO ₂ e)	Offsite
	Onsite
	Total
Total = Onsite + Offsite	

* Exhaust losses from process heating are not estimated

Data source: 2006 MECS

Published: August 2010, revised December 2010

Units: TBtu = Trillion British Thermal Units

MMT CO₂e = Million Metric Tons Carbon Dioxide Equivalent

Notes: Feedstock energy not included

Energy values <0.5 TBtu shown as 0

Manufacturing Energy and Carbon Footprint

Sector: All Manufacturing (NAICS 31-33)

Onsite Energy Use: **15,494 TBtu**
 Onsite Combustion Emissions: **642 MMT CO₂e**

Onsite Energy

Onsite Generation

Conventional Boilers
 122.5 | 114.7

CHP/Cogeneration
 205.4 | 205.4

Other Electricity Generation**
 1.9 | 1.9

329.9 | 322.0

Steam Generation **1,299**

Electricity Generation **208**

Process Energy

Process Heating
 390.0 | 260.8

Process Cooling and Refrigeration
 41.3 | 1.9

Other Process Uses
 19.8 | 11.2

Electro-Chemical
 39.3 | 0.0

Machine Drive
 304.0 | 16.2

Machine-Driven Systems

Pumps	632
Fans	349
Compressed Air	403
Materials Handling	311
Materials Processing	574
Other Systems	110
Total	2,392

794.4 | 290.1

Exhaust Losses*

Nonprocess Energy

Facility HVAC
 76.6 | 22.3

Facility Lighting
 37.8 | 0.0

Other Facility Support
 13.3 | 1.8

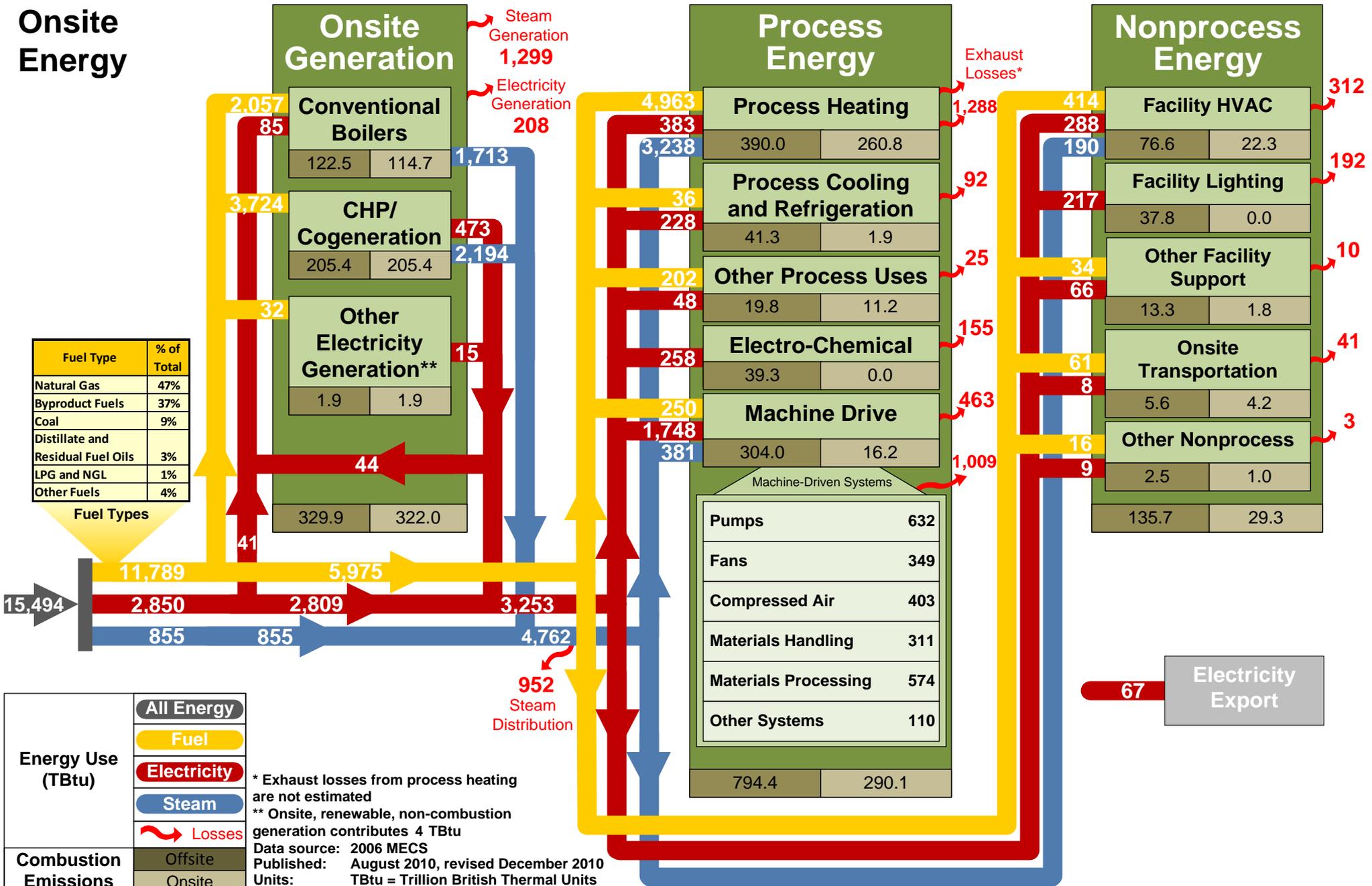
Onsite Transportation
 5.6 | 4.2

Other Nonprocess
 2.5 | 1.0

135.7 | 29.3

Electricity Export
 67

Fuel Type	% of Total
Natural Gas	47%
Byproduct Fuels	37%
Coal	9%
Distillate and Residual Fuel Oils	3%
LPG and NGL	1%
Other Fuels	4%



Energy Use (TBtu)	All Energy
	Fuel
Electricity	
Steam	
Losses	

Combustion Emissions (MMT CO ₂ e)	Offsite
	Onsite
	Total

Total = Onsite + Offsite

* Exhaust losses from process heating are not estimated
 ** Onsite, renewable, non-combustion generation contributes 4 TBtu
 Data source: 2006 MECS
 Published: August 2010, revised December 2010
 Units: TBtu = Trillion British Thermal Units
 MMT CO₂e = Million Metric Tons Carbon Dioxide Equivalent
 Notes: Feedstock energy not included
 Energy values <0.5 TBtu shown as 0