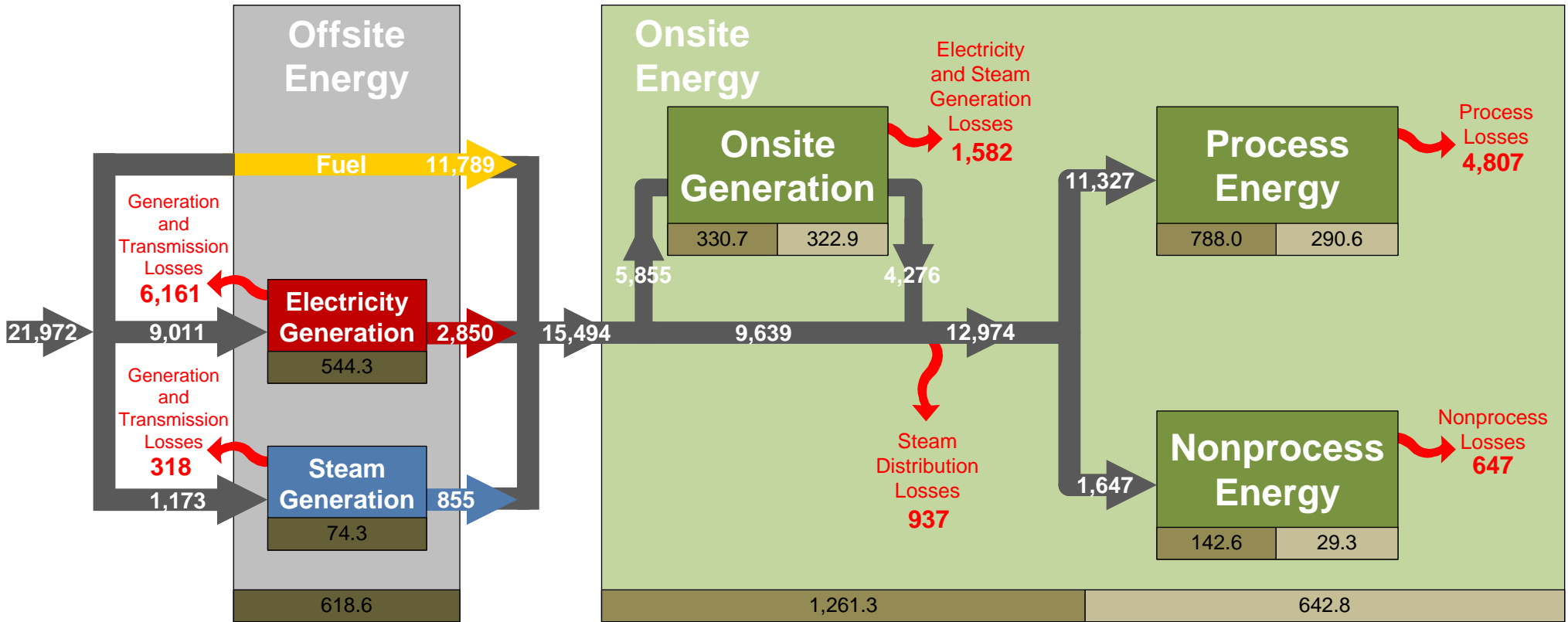


Manufacturing Energy and Carbon Footprint

Sector: All Manufacturing (NAICS 31-33)

Total Primary Energy Use: 21,972 TBtu
 Total Combustion Emissions: 1,261 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 Onsite
Electricity	
Steam	
Losses	Total Emissions = Offsite Emissions + Onsite Emissions

67 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: All Manufacturing (NAICS 31-33)

Onsite Energy Use: **15,494 TBtu**
 Onsite Combustion Emissions: **643 MMT CO₂e**

Onsite Energy

Onsite Generation

Conventional Boilers
 122.8 | 114.9

CHP/Cogeneration
 206.0 | 206.0

Other Electricity Generation*
 1.9 | 1.9

330.7 | 322.9

Steam Generation Losses **1,355**

Electricity Generation Losses **227**

937 Steam Distribution Losses

Process Energy

Process Heating
 376.2 | 261.3

Process Cooling and Refrigeration
 43.3 | 1.9

Other Process Uses
 25.4 | 11.2

Electro-Chemical
 39.3 | 0.0

Machine Drive
 303.7 | 16.2

Machine-Driven Systems

Pumps	627
Fans	346
Compressed Air	399
Materials Handling	308
Materials Processing	569
Other Systems	109
Total	788.0
Onsite	290.6

Nonprocess Energy

Facility HVAC
 81.0 | 22.3

Facility Lighting
 37.8 | 0.0

Other Facility Support
 13.3 | 1.8

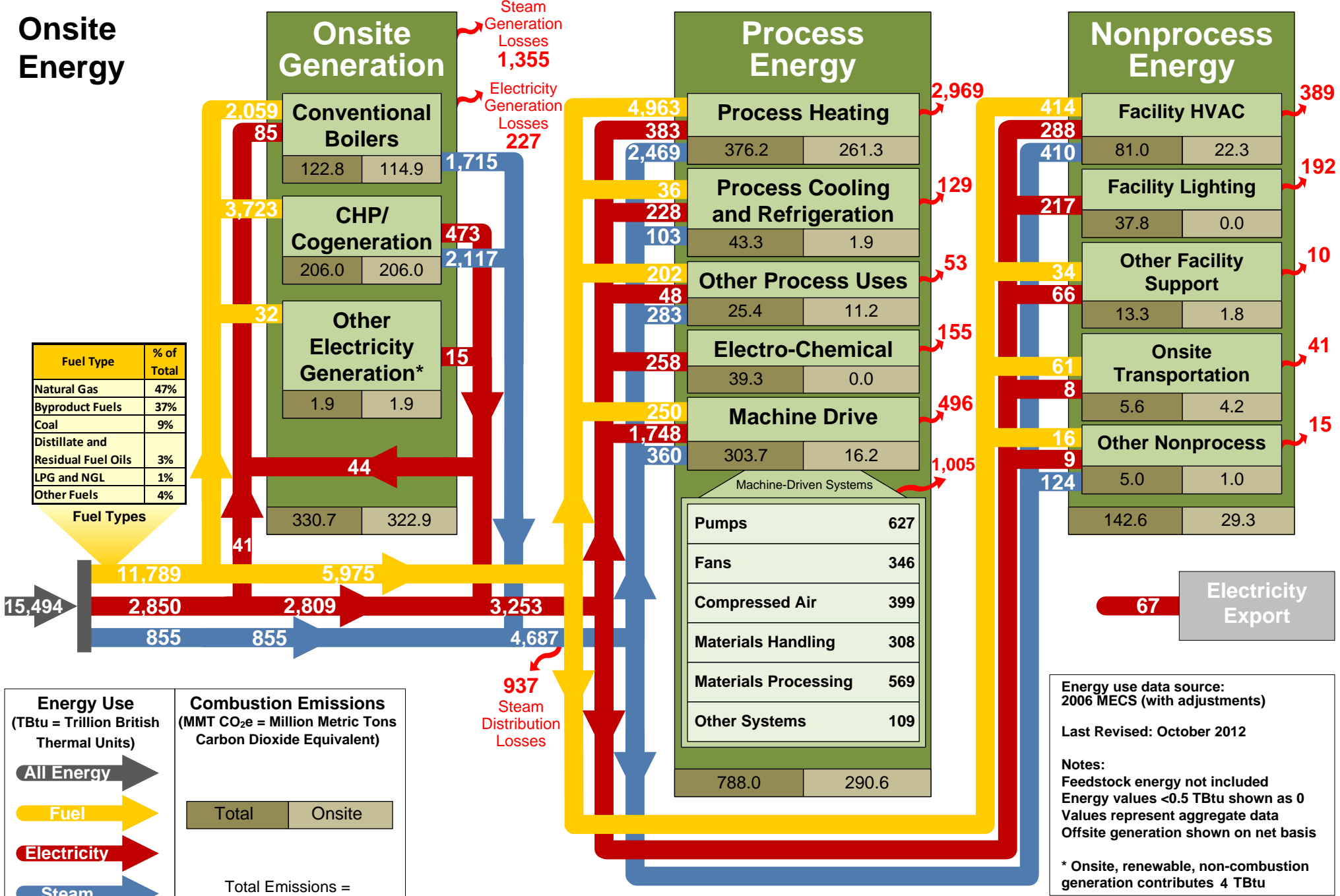
Onsite Transportation
 5.6 | 4.2

Other Nonprocess
 5.0 | 1.0

142.6 | 29.3

67 Electricity Export

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 = Trillion British Thermal Units)

- All Energy
- Fuel
- Electricity
- Steam
- Losses

Combustion Emissions
(MMT CO₂e = Million Metric Tons Carbon Dioxide Equivalent)

	Total	Onsite
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 4 TBtu