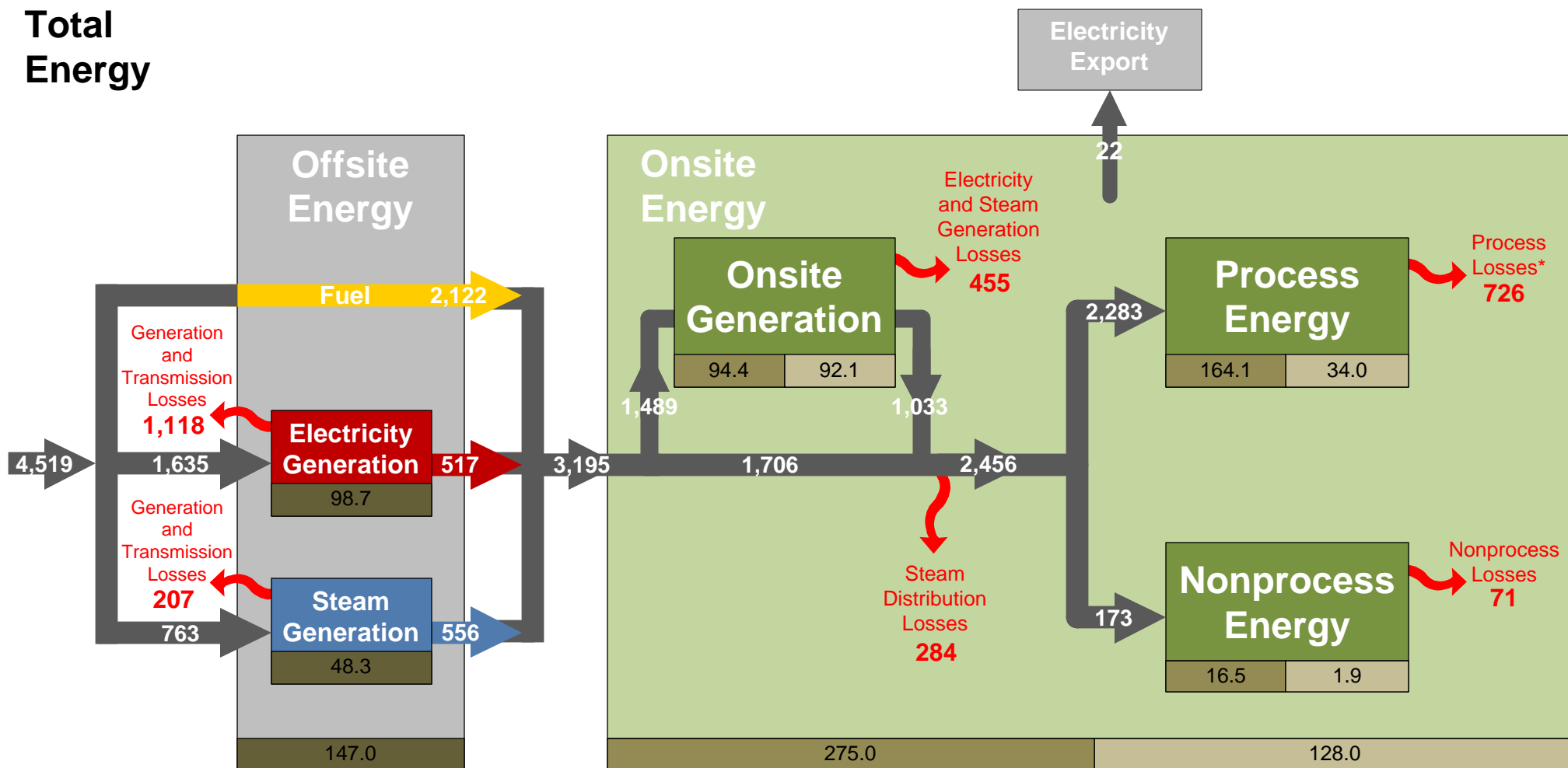


Manufacturing Energy and Carbon Footprint

Sector: Chemicals (NAICS 325)

Total Primary Energy Use: 4,519 TBtu
Total Combustion Emissions: 275 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: Chemicals (NAICS 325)

Onsite Energy Use: 3,195 TBtu
Onsite Combustion Emissions: 128 MMT CO₂e

Onsite Energy

Onsite Generation

Steam Generation
346
Electricity Generation
109

Conventional Boilers

34.9	32.6
------	------

CHP/ Cogeneration

59.4	59.4
------	------

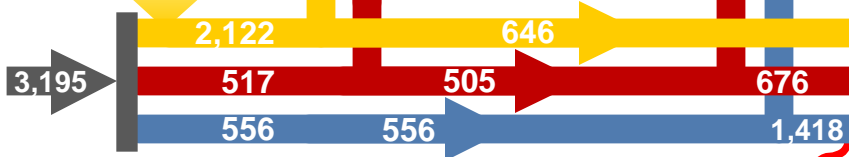
Other Electricity Generation**

0.2	0.2
-----	-----

94.4	92.1
------	------

Fuel Type	% of Total
Natural Gas	66%
Waste Gas (byproduct fuel)	22%
Coal	8%
Distillate and Residual Fuel Oils	2%
LPG and NGL	< 0.5%
Other Fuels	2%

Fuel Types



Process Energy

Exhaust Losses*

Process Heating

72.8	26.9
------	------

Process Cooling and Refrigeration

9.3	0.9
-----	-----

Other Process Uses

3.4	2.5
-----	-----

Electro-Chemical

9.4	0.0
-----	-----

Machine Drive

69.2	3.7
------	-----

Machine-Driven Systems

Pumps	164
Fans	75
Compressed Air	174
Materials Handling	9
Materials Processing	149
Other Systems	11

164.1	34.0
-------	------

Nonprocess Energy

Facility HVAC

10.2	1.3
------	-----

Facility Lighting

3.8	0.0
-----	-----

Other Facility Support

1.6	0.1
-----	-----

Onsite Transportation

0.2	0.2
-----	-----

Other Nonprocess

0.7	0.3
-----	-----

16.5	1.9
------	-----

Energy Use (TBtu)	All Energy
	Fuel
	Electricity
	Steam
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 0 TBtu

Data source: 2006 MECS

Published: August 2010, revised December 2010

Units:

MMT CO₂e = Million Metric Tons Carbon Dioxide Equivalent

Feedstock energy not included

Energy values <0.5 TBtu shown as 0