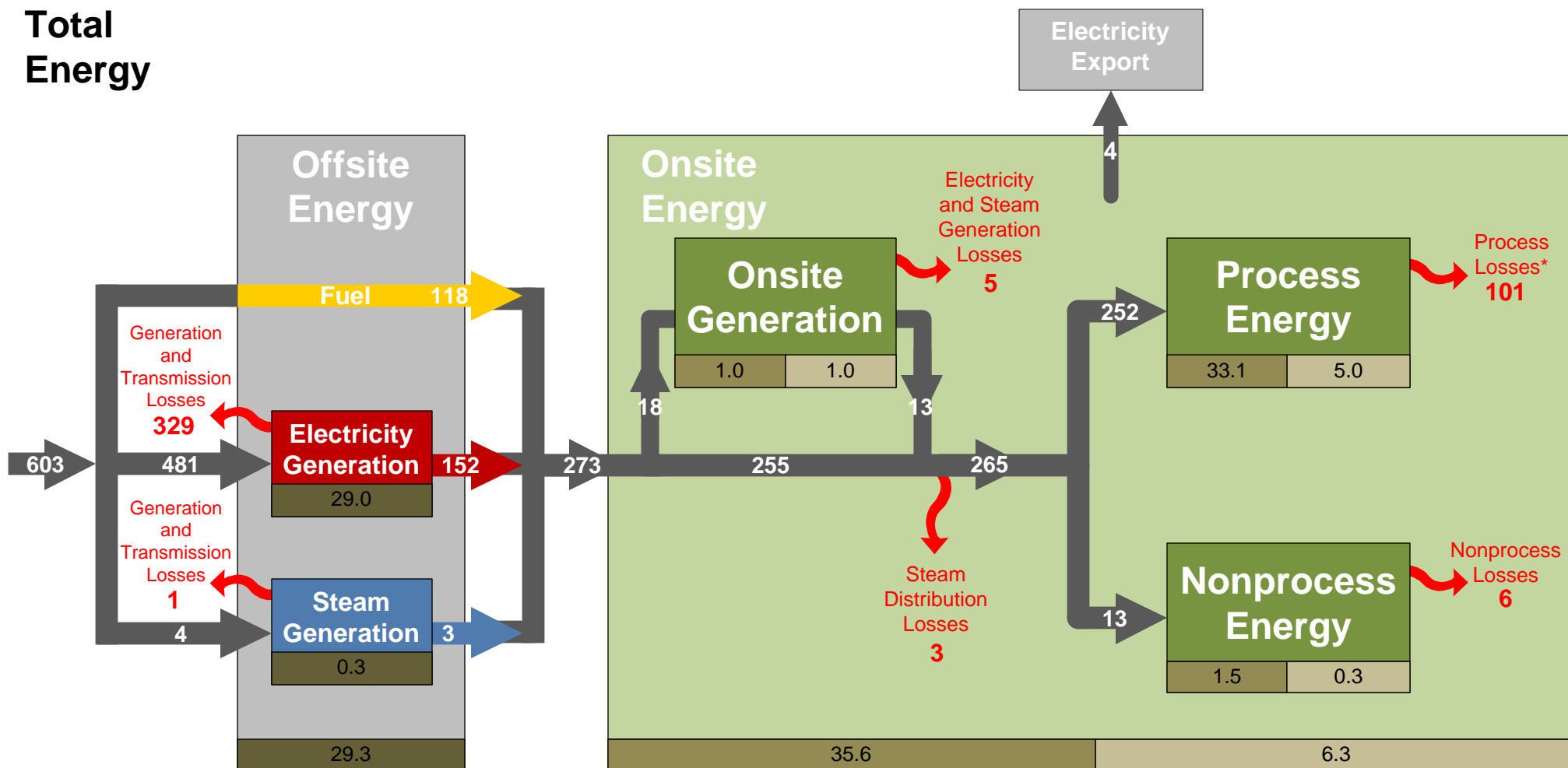


Manufacturing Energy and Carbon Footprint

Sector: Alumina and Aluminum (NAICS 3313)

Total Primary Energy Use: 603 TBtu
Total Combustion Emissions: 36 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

Feedstock energy not included

Energy values <0.5 TBtu shown as 0

Notes:

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Onsite Energy Use:	273 TBtu
Onsite Combustion Emissions:	6 MMT CO ₂ e

Onsite Generation

Process Energy

Exhaust
Losses*

Nonprocess Energy

Conventional Boilers	
0.2	0.2

CHP/ Cogeneration	
0.8	0.8

Other Electricity Generation**	
0.0	0.0


1.0	1.0
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07021100151	Process Heating	
	5.0	4.8
	Process Cooling and Refrigeration	
	0.3	0.1
	Other Process Uses	
	0.1	0.1
	Electro-Chemical	
	22.9	0.0
	Machine Drive	
	4.9	0.1
	Machine-Driven Systems	
	Pumps	2
	Fans	4
	Compressed Air	4
	Materials Handling	13
Materials Processing	3	
Other Systems	1	
33.1	5.0	

Exhaust
Losses*

4	Facility HVAC	
2	0.6	0.2
1	Facility Lighting	
3	0.6	0.0
1	Other Facility Support	
1	0.2	0.1
1	Onsite Transportation	
0	0.1	0.1
0	Other Nonprocess	
0	0.0	0.0
	1.5	0.3

Electricity Export

Energy Use (TBtu)	All Energy
	Fuel
	Electricity
	Steam
	 Losses
Combustion Emissions (MMT CO₂e)	Offsite
	Onsite
	Total
Total = Onsite + Offsite	

Notes: Feedstock energy not included
Energy values <0.5 TBtu shown as 0

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