Manufacturing Energy and Carbon Footprint Total Primary Energy Use: 603 TBtu Sector: Alumina and Aluminum (NAICS 3313) **Total Combustion Emissions:** 36 MMT CO₂e Total Electricity Export Energy Offsite Onsite Electricity Energy Energy and Steam Generation Process Losses Onsite _osses* Process 5 83 Fuel 118 250 Generation Energy Generation and 1.0 1.0 33.0 5.0 Transmission Losses 329 **Electricity** 265 273 603 481 Generation 152 255 29.0 Generation and Nonprocess Transmission Steam Nonprocess Losses Losses Distribution Steam 16 Energy Losses Generation 3 3 0.3 1.6 0.3 29.3 35.6 6.3 **Energy Use Combustion Emissions** (TBtu = Trillion British (MMT CO₂e = Million Metric Tons **Carbon Dioxide Equivalent)** Thermal Units) Energy use data source: 2006 MECS (with adjustments) All Energy Published: August 2010 Offsite **Revisions:** July 2011, March 2012 Fuel Notes: Feedstock energy not included Energy values <0.5 TBtu shown as 0 Total Onsite Values represent aggregate data Electricity

Total Emissions =

Offsite Emissions +

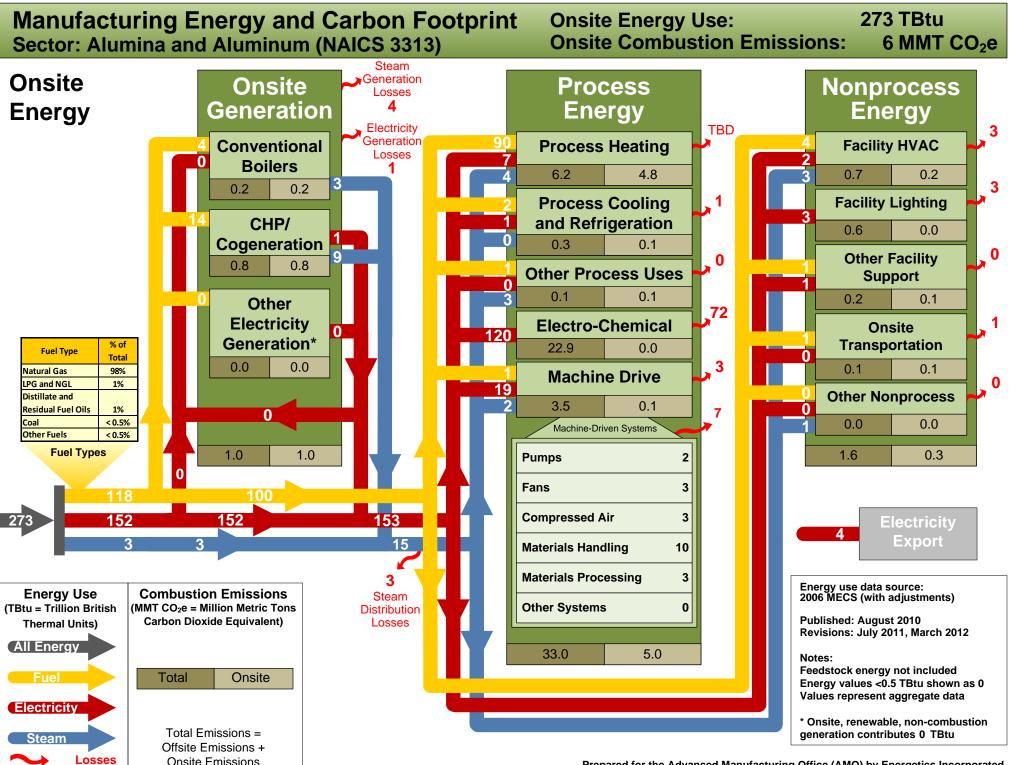
Onsite Emissions

Steam

Losses

* Process heating losses are not included, but will be estimated in a future revision.

Prepared for the Advanced Manufacturing Office (AMO) by Energetics Incorporated



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