Canadian Aluminium Production Industry (NAICS 331313)  
Energy Use and Related Data, 1990 - 2015  
2017 FACT SHEET

PRODUCTION
Despite labour strikes and plant closures in 2004 and the economic recession in 2008, the aluminum production industry experienced dramatic growth in both physical and monetary output between 1990 and 2015. Physical production nearly doubled, while GDP has reached a level over three times larger than in 1990.

ENERGY USE AND INTENSITY
Statistics Canada data include energy used in the production of alumina as well as aluminium. Energy consumption generally follows the trend in physical production; electricity provides the bulk of energy used.

Energy Intensity per tonne declines over the period suggesting that the aluminium industry has increased its efficiency. The monetary indicator (energy/GDP) drops more dramatically, but is less dependable because it is influenced by economic factors unrelated to energy use. Intensities include energy use to produce alumina.

GREENHOUSE GAS EMISSIONS AND INTENSITY
Total GHG emissions levels have decreased consistently since 1990 due primarily to a large drop in perfluorocarbon emissions, which offset the rise in emissions from anode oxidation and fuel combustion over the period. Emissions include those from alumina refining.

Energy Intensity Indicators

GHG Emissions

Emissions Intensity Indicators

Source: Statistics Canada, ASM, CANSIM 379-0031

Source: Statistics Canada, ICE.

Source: CIEEDAC

Total GHG emissions intensities have declined steadily since 1990. Analysis indicates that changes in process emissions – primarily perfluorocarbons – were responsible for the overall decline in intensity.