Ethane. EIA estimated the thermal conversion factor to be 2.783 million Btu per barrel, based on data for enthalpy of combustion from the National Institute of Standards and Technology, NIST Chemistry WebBook, NIST Standard Reference Database Number 69, 2018; and data for density of liquids at 60 degrees Fahrenheit and equilibrium pressure from the American Petroleum Institute.

Ethylene. EIA adopted the thermal conversion factor of 2.436 million Btu per barrel (0.058 million Btu per gallon) as published in the Federal Register EPA; 40 CFR part 98; e-CRF; Table C1; April 5, 2019. The ethylene higher heating value is determined at 41 degrees Fahrenheit at saturation pressure.

Hydrocarbon Gas Liquids. • 1949–1966: EIA used the 1967 factor. • 1967 forward: Calculated annually by EIA as the average of the thermal conversion factors for all hydrocarbon gas liquids consumed (see Table A1) weighted by the quantities consumed. The component products of hydrocarbon gas liquids are ethane, propane, normal butane, isobutane, natural gasoline (pentanes plus), and refinery olefins (ethylene, propylene, butylene, and isobutylene). For 1967–1980, quantities consumed are from EIA, Energy Data Reports, “Petroleum Statement, Annual.” For 1981 forward, quantities consumed are from EIA, Petroleum Supply Annual.

Hydrogen. Assumed by EIA to be 6.287 million Btu per barrel or equal to the thermal conversion factor for Residual Fuel Oil.

Isobutane. EIA estimated the thermal conversion factor to be 4.183 million Btu per barrel, based on data for enthalpy of combustion from the National Institute of Standards and Technology, NIST Chemistry WebBook, NIST Standard Reference Database Number 69, 2018; and data for density of liquids at 60 degrees Fahrenheit and equilibrium pressure from the American Petroleum Institute.

Isobutylene. EIA estimated the thermal conversion factor to be 4.355 million Btu per barrel, based on data for enthalpy of combustion from the National Institute of Standards and Technology, NIST Chemistry WebBook, NIST Standard Reference Database Number 69, 2018; and data for density of liquids at 60 degrees Fahrenheit and equilibrium pressure from the American Petroleum Institute.


Motor Gasoline Exports. • 1949–2005: EIA adopted the Bureau of Mines thermal conversion factor of 5.253 million Btu per barrel for “Gasoline, Motor Fuel” as published by the Texas Eastern Transmission Corporation in Appendix V of Competition and Growth in American Energy Markets 1947–1985, a 1968 release of historical and projected statistics. • 2006 forward: Calculated by EIA as the annual quantity-weighted average of the conversion factors for gasoline blendstock and the methyl tertiary butyl ether (MTBE) blended into motor gasoline exports. The factor for gasoline blendstock is 5.253 million Btu per barrel in 2006 and 5.222 million Btu per barrel beginning in 2007 (see Motor Gasoline Blending Components). For MTBE, EIA adopted the thermal conversion factor of 4.247 million Btu per barrel...