

# **Appendix I**

## **Metric Conversion Factors**



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# Metric Conversion Factors

Data in the Energy Information Administration publications are expressed in units, such as British thermal units, barrels, cubic feet, and short tons, that historically have been used in the United States. However, because U.S. activities involve foreign nations, most of which use metric units of measure, the United States is committed to making the transition to the metric system. The metric conversion factors presented in Table I1 can be used to calculate the metric-unit equivalents of values expressed in U.S. units. For example, 500 short tons are the equivalent of 453.6 metric tons (500 short tons x 0.9071847 metric tons/short tons=453.6 metric tons).

**Table I1. Metric Conversion Factors**

Type of Unit	U.S. Unit	Conversion Factor	Metric Unit
Mass	Short Tons	X 0.9071847	= Metric Tons (t)
	Short Tons Uranium Oxide (U <sub>3</sub> O <sub>8</sub> )	X 0.769	= Metric Tons Uranium (U)
	Short Tons Uranium Fluoride (UF <sub>6</sub> )	X 0.613	= Metric Tons Uranium (U)
	Long Tons	X 1.016	= Metric Tons(t)
	Pounds(lb)	X 0.45359237 <sup>a</sup>	= Kilograms(kg)
	Pounds Uranium Oxide(lb U <sub>3</sub> O <sub>8</sub> )	X 0.384645 <sup>b</sup>	= Kilograms (Kg)
	Ounces, Avoirdupois(oz)	X 28.34952	= Grams(g)
Volume	Barrels of Oil(bbl)	X 0.1589873	= Cubic Meters (m <sup>3</sup> )
	Cubic Yards(yd <sup>3</sup> )	X 0.765555	= Cubic Meters (m <sup>3</sup> )
	Cubic Feet(ft <sup>3</sup> )	X 0.02831685	= Cubic Meters (m <sup>3</sup> )
	U.S. Gallons(gal)	X 3.785412	= Liter (L)
	Ounces, Fluid(fl oz)	X 29.57353	= Milliliters (ml)
	Cubic Inches(in <sup>3</sup> )	X 16.38706	= Milliliters (ml)
Length	Miles (mi)	X 1.609344 <sup>a</sup>	= Kilometers (km)
	Yards (yd)	X 0.9144 <sup>a</sup>	= Meters (m)
	Feet (ft)	X 0.3048 <sup>a</sup>	= Meters (m)
	Inches (in)	X 2.54 <sup>a</sup>	= Centimeters (cm)
Area	Acres	X 0.40469	= Hectares (ha)
	Square Miles (mi <sup>2</sup> )	X 2,589988	= Square Kilometers (km <sup>2</sup> )
	Square Yards (yd <sup>2</sup> )	X 0.836127 4	= Square Meters (m <sup>2</sup> )
	Square Feet (ft <sup>2</sup> )	X 0.092903 04 <sup>a</sup>	= Square Meters (m <sup>2</sup> )
	Square Inches (in <sup>2</sup> )	X 6.45616 <sup>a</sup>	= Square Centimeters (cm <sup>2</sup> )
Temperature	Degrees Fahrenheit (°F)	X 5/9 (after subtracting 32) <sup>a</sup>	= Degrees Celsius (°C)
Energy	British thermal units (Btu)	X 1,055.056	= Joules (J)
	Calories (cal)	X 4.1868	= Joules (J)
	Kilowatthours (kWh)	X 3.6	= Megajoules (MJ)

<sup>a</sup>Exact Conversion.

<sup>b</sup>Calculated by the Energy Information Administration.

<sup>c</sup>To convert degrees Celsius (°C) to degrees Fahrenheit (°F) multiply by 9/5, then add 32.

Sources: •General Services Administration, Federal Standard 376B, *Preferred Metric Units for General Use by the Federal Government* (Washington, DC, January 27, 1993), pp. 9-11, 13, and 16. •National Institute of Standards and Technology, *Special Publications* 330, 811, and 814. •American National Standards Institute/Institute of Electrical and Electronic Engineers, ANS/IEEE Std.268-1982, pp 28 and 29. •Energy Information Administration/*Monthly Energy Review August 1993*, Appendix B, pp 161.