

**ALUMINUM<sup>1</sup>**

(Data in thousand metric tons of metal unless otherwise noted)

**Domestic Production and Use:** In 2007, 6 companies operated 14 primary aluminum smelters; 5 smelters were temporarily idled. Based upon published market prices, the value of primary metal production was \$7.1 billion. Aluminum consumption was centered in the East Central United States. Transportation accounted for an estimated 38% of domestic consumption; the remainder was used in packaging, 22%; building, 16%; electrical, 7%; machinery, 7%; consumer durables, 7%; and other, 3%.

<b>Salient Statistics—United States:</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007<sup>e</sup></b>
Production:					
Primary	2,703	2,516	2,481	2,284	2,600
Secondary (from old scrap)	1,070	1,160	1,060	1,080	1,300
Imports for consumption	4,130	4,720	5,330	5,180	4,500
Exports	1,540	1,820	2,370	2,820	2,900
Consumption, apparent <sup>2</sup>	6,130	6,590	6,460	5,730	5,300
Price, ingot, average U.S. market (spot), cents per pound	68.1	84.0	91.0	121.4	125.2
Stocks:					
Aluminum industry, yearend	1,400	1,470	1,430	1,410	1,500
LME, U.S. warehouses, yearend <sup>3</sup>	207	116	209	239	350
Employment, number <sup>4</sup>	58,000	57,500	58,400	59,800	60,000
Net import reliance <sup>5</sup> as a percentage of apparent consumption	38	44	45	41	26

**Recycling:** In 2007, aluminum recovered from purchased scrap was about 3.5 million tons, of which about 63% came from new (manufacturing) scrap and 37% from old scrap (discarded aluminum products). Aluminum recovered from old scrap was equivalent to about 25% of apparent consumption.

**Import Sources (2003-06):** Canada, 55%; Russia, 17%; Brazil, 4%; Venezuela, 4%; and other, 20%.

<b>Tariff: Item</b>	<b>Number</b>	<b>Normal Trade Relations 12-31-07</b>
Unwrought (in coils)	7601.10.3000	2.6% ad val.
Unwrought (other than aluminum alloys)	7601.10.6000	Free.
Waste and scrap	7602.00.0000	Free.

**Depletion Allowance:** Not applicable.<sup>1</sup>

**Government Stockpile:** None.

## ALUMINUM

**Events, Trends, and Issues:** Domestic primary aluminum production increased substantially owing to smelter restarts after new power contracts were obtained by producers. Domestic smelters operated at about 69% of rated or engineered capacity.

Net import reliance as a percent of apparent consumption declined dramatically as domestic production increased while imports for consumption decreased. Canada and Russia accounted for almost three-fourths of total imports. U.S. exports increased slightly in 2007. China, Canada, and Mexico, in descending order, received approximately three-fourths of total U.S. exports. Most of the shipments to China (98%) were in the form of aluminum scrap.

The price of primary aluminum generally rose through July 2007 before declining significantly. In January, the average monthly U.S. market price for primary ingot quoted by Platts Metals Week was \$1.295 per pound; it reached a high of \$1.308 per pound in April but in September, the price was \$1.115 per pound. Prices on the London Metal Exchange (LME) followed the trend of U.S. market prices. The monthly average LME cash price for September was \$1.075 per pound.

World primary aluminum production continued to increase as capacity expansions outside the United States were brought onstream. Inventories of metal held by producers, as reported by the International Aluminium Institute, decreased through the end of July to about 2.8 million tons from 2.9 million tons at yearend 2006. Inventories of primary aluminum metal held by the LME increased during the year to 934,000 tons at the end of September from 698,000 tons at yearend 2006.

### World Smelter Production and Capacity:

	Production		Yearend capacity	
	2006	2007 <sup>e</sup>	2006	2007 <sup>e</sup>
United States	2,284	2,600	3,700	3,700
Australia	1,930	1,900	1,950	1,950
Bahrain	872	870	830	830
Brazil	1,498	1,700	1,650	1,700
Canada	3,050	3,100	3,060	3,100
China	9,350	12,000	10,500	14,000
Germany	537	520	670	600
Iceland	320	400	400	790
India	1,100	1,400	1,200	1,500
Mozambique	564	560	570	570
Norway	1,330	1,100	1,350	1,190
Russia	3,720	4,200	3,800	4,400
South Africa	895	900	900	900
Tajikistan	414	500	515	515
United Arab Emirates, Dubai	730	900	860	920
Venezuela	610	630	675	675
Other countries	4,510	4,500	5,240	5,360
World total (rounded)	33,700	38,000	37,900	42,700

**World Resources:** Domestic aluminum requirements cannot be met by domestic bauxite resources. Domestic nonbauxitic aluminum resources are abundant and could meet domestic aluminum demand. However, no processes for using these resources have been proven economically competitive with those now used for bauxite. The world reserve base for bauxite is sufficient to meet world demand for metal well into the future.

**Substitutes:** Composites can substitute for aluminum in aircraft fuselages and wings. Glass, paper, plastics, and steel can substitute for aluminum in packaging. Magnesium, titanium, and steel can substitute for aluminum in ground transportation and structural uses. Composites, steel, and wood can substitute for aluminum in construction. Copper can replace aluminum in electrical applications.

<sup>e</sup>Estimated.

<sup>1</sup>See also Bauxite and Alumina.

<sup>2</sup>Domestic primary metal production + recovery from old aluminum scrap + net import reliance.

<sup>3</sup>Includes aluminum alloy.

<sup>4</sup>Alumina and aluminum production workers (North American Industry Classification System—3313). Source: U.S. Department of Labor, Bureau of Labor Statistics.

<sup>5</sup>Defined as imports – exports + adjustments for Government and industry stock changes.