ALUMINUM[1]

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

Domestic Production and Use: In 2013, 5 companies operated 10 primary aluminum smelters; 3 smelters were closed temporarily for the entire year. Based on published market prices, the value of primary metal production was $4.07 billion. Aluminum consumption was centered in the East Central United States. Transportation accounted for an estimated 36% of domestic consumption; the remainder was used in packaging, 23%; building, 14%; electrical, 9%; machinery, 8%; consumer durables, 7%; and other, 3%.

Salient Statistics—United States:	2009	2010	2011	2012	2013[e]
Production:					
Primary	1,727	1,726	1,986	2,070	1,950
Secondary (from old scrap)	1,260	1,250	1,470	1,440	1,650
Imports for consumption (crude and semimanufactures)	3,680	3,610	3,710	3,760	4,360
Exports, total	2,710	3,040	3,420	3,480	3,350
Consumption, apparent[2]	3,320	3,460	3,570	3,950	5,020
Price, ingot, average U.S. market (spot), cents per pound	79.4	104.4	116.1	101.0	94.7
Stocks:					
Aluminum industry, yearend	937	1,010	1,060	1,140	1,050
LME, U.S. warehouses, yearend[3]	2,200	2,230	2,360	2,120	1,800
Employment, number[4]	33,800	29,200	30,300	31,500	30,500
Net import reliance[5] as a percentage of apparent consumption	10	14	3	11	28

Recycling: In 2013, aluminum recovered from purchased scrap in the United States was about 3.27 million tons, of which about 56% came from new (manufacturing) scrap and 44% from old scrap (discarded aluminum products). Aluminum recovered from old scrap was equivalent to about 37% of apparent consumption.

Import Sources (2009–12): Canada, 61%; Russia, 7%; China, 5%; Mexico, 4%; and other, 23%.

Tariff: Item	Number	Normal Trade Relations 12–31–13
Unwrought (in coils)	7601.10.3000	2.6% ad val.
Unwrought (other than aluminum alloys)	7601.10.6000	Free.
Unwrought (billet)	7601.20.9045	Free.
Waste and scrap	7602.00.0000	Free.

Depletion Allowance: Not applicable.[1]

Government Stockpile: None.

Events, Trends, and Issues: In February 2013, the owner of the 270,000-ton-per-year Hannibal, OH, smelter filed for chapter 11 bankruptcy protection, citing high power prices, low aluminum prices, high debt levels, and legacy costs. In August, two of the six potlines were shut down after a request for a lower rate for power was denied, leaving only 90,000 tons per year of capacity operating. The remaining capacity was shut down in October. In June, the Sebree, KY, smelter was sold as part of a corporate restructuring. Expansion of the smelter to 210,000 tons per year from 196,000 tons per year was still expected to be completed by yearend 2014. The expansion project had been delayed from 2012 owing to declining aluminum prices and uncertainty about demand for aluminum. In June, construction of an 85,000-ton-per-year potline began at a smelter in Massena, NY, that would replace a 40,000-ton-per-year potline subsequently shut down in August. By mid-November of 2013, domestic smelters operated at about 67% of rated or engineered capacity.

The monthly average U.S. market price for primary ingot quoted by Platts Metals Week started the year at $1.031 per pound but declined to $0.976 per pound in March. The monthly average price then trended downward to $0.918 per pound in July, before increasing to $0.923 per pound in August. The price then decreased to $0.892 per pound in September and then increased to $0.916 per pound in October. Prices on the London Metal Exchange (LME) followed the trend of U.S. market prices.

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Reliance upon imports of aluminum by U.S. manufacturers increased in 2013 as primary production declined and net imports increased. Canada, Russia, and the United Arab Emirates accounted for about 73% of total U.S. imports. Total aluminum exports (crude, semimanufactures, and scrap) from the United States decreased by 4% in 2013 compared with those in 2012, and total imports of aluminum were 14% higher than the amount imported in 2012. Imports of crude aluminum (metal and alloys) in 2013 were 22% higher than the amount imported in 2012. China, Mexico, Canada, and the Republic of Korea, in descending order, received approximately 83% of total United States exports. Scrap sent to China accounted for 37% of total aluminum exports.

World primary aluminum production increased by about 3% in 2013 compared with production in 2012. New capacity in China accounted for most of the increased production. World inventories of metal held by producers, as reported by the International Aluminium Institute, declined gradually to about 2.2 million tons at the end of August from about 2.3 million tons at yearend 2012. Despite a decline in U.S. LME inventories, global inventories of primary aluminum metal held by the LME increased during the year to 5.4 million tons in mid-October from 5.2 million tons at yearend 2012.

World Smelter Production and Capacity:

	Production		Yearend capacity	
	2012	2013[e]	2012	2013[e]
United States	2,070	1,950	2,720	2,680
Argentina	450	460	455	455
Australia	1,860	1,750	1,980	1,770
Bahrain	890	900	970	970
Brazil	1,440	1,330	1,700	1,700
Canada	2,780	2,900	3,020	2,880
China	20,300	21,500	26,900	30,200
Germany	410	400	620	620
Iceland	820	825	810	830
India	1,700	1,700	1,860	2,700
Mozambique	564	560	570	570
Norway	1,150	1,200	1,230	1,230
Qatar	604	600	610	610
Russia	3,850	3,950	4,450	4,450
South Africa	665	820	900	900
United Arab Emirates	1,820	1,800	1,850	2,350
Other countries	4,540	4,650	6,400	6,960
World total (rounded)	45,900	47,300	57,000	61,900

World Resources: Domestic aluminum requirements cannot be met by domestic bauxite resources. Domestic nonbauxitic aluminum resources are abundant and could meet domestic aluminum demand. A process for recovering alumina from clay was being tested in Canada to determine if it would be economically competitive with the processes now used for recovering alumina from bauxite. Processes for using other aluminum-bearing resources have not been proven to be economically competitive with those now used for bauxite. The world reserves for bauxite are 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, steel, and titanium can substitute for aluminum in ground transportation and structural uses. Composites, steel, vinyl, and wood can substitute for aluminum in construction. Copper can replace aluminum in electrical and heat-exchange applications.

[e]Estimated.

[1]See also Bauxite and Alumina.

[2]Defined as domestic primary metal production + recovery from old aluminum scrap + net import reliance; excludes imported scrap.

[3]Includes aluminum alloy.

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

[5]Defined as imports – exports + adjustments for Government and industry stock changes.