ALUMINUM¹

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

Domestic Production and Use: In 2011, 5 companies operated 10 primary aluminum smelters; 5 smelters were closed the entire year. One smelter that was closed in 2009 was reopened during the first quarter of 2011. Five potlines that were closed in late 2008 and early 2009 at four other smelters were also restarted in early 2011. Based on published market prices, the value of primary metal production was \$5.27 billion. Aluminum consumption was centered in the East Central United States. Transportation accounted for an estimated 34% of domestic consumption; the remainder was used in packaging, 27%; building, 12%; electrical, 8%; machinery, 8%; consumer durables, 7%; and other, 4%.

Salient Statistics—United States:	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011^e</u>
Production:					
Primary	2,554	2,658	1,727	1,726	1,990
Secondary (from old scrap)	1,660	1,500	1,260	1,250	1,400
Imports for consumption	4,020	3,710	3,680	3,610	3,670
Exports	2,840	3,280	2,710	3,040	3,350
Consumption, apparent ²	5,170	3,940	3,320	3,460	3,900
Price, ingot, average U.S. market (spot),					
cents per pound	125.2	120.5	79.4	104.4	120.0
Stocks:					
Aluminum industry, yearend	1,400	1,220	937	1,010	900
LME, U.S. warehouses, yearend ³	463	1,290	2,200	2,230	2,150
Employment, number ⁴	39,600	38,000	33,800	29,200	30,000
Net import reliance ⁵ as a percentage of	,	,	,	,	,
apparent consumption	18	E	10	14	13

<u>Recycling</u>: In 2011, aluminum recovered from purchased scrap in the United States was about 3.0 million tons, of which about 54% came from new (manufacturing) scrap and 46% from old scrap (discarded aluminum products). Aluminum recovered from old scrap was equivalent to about 36% of apparent consumption.

Import Sources (2007–10): Canada, 62%; Russia, 8%; China, 5%; Mexico, 3%; and other, 22%.

<u>Tariff</u> : Item	Number	Normal Trade Relations 12-31-11
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: During the first half of 2011, production from domestic primary aluminum smelters increased after cutbacks were made during 2008 and 2009 in response to price drops in the second half of 2008. Production resumed at a smelter in Massena, NY; potlines were also restarted at smelters in Ferndale, WA; Hannibal, OH; Hawesville, KY; and Wenatchee, WA. Work on an expansion project continued at a smelter in New Madrid, MO, that would increase capacity to 266,000 tons of aluminum per year from 250,000 tons per year by yearend 2013. By the beginning of the fourth quarter of 2011, domestic smelters operated at about 64% of rated or engineered capacity.

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The United States continued to be slightly reliant upon imports in 2011, as domestic primary production increased from that in 2010 but still remained at significantly lower levels than in 2008, although exports of scrap continued to increase. Canada, Russia, and the United Arab Emirates accounted for about 71% of total U.S. imports. Total aluminum exports from the United States increased by 10% in 2011 compared with the amount exported in 2010, and total imports of aluminum in 2011 were slightly higher than the amount imported in 2010. China, Canada, and Mexico, in descending order, received approximately 79% of total United States exports. Scrap exports to China accounted for 40% of total aluminum exports.

The monthly average U.S. market price for primary ingot quoted by Platts Metals Week started the year at \$1.163 per pound and reached a peak of \$1.283 per pound in April. The monthly average price began a downward trend, reaching \$1.166 in August. Prices on the London Metal Exchange (LME) followed the trend of U.S. market prices.

World primary aluminum production increased in 2011 compared with production in 2010, mainly as a result of starting new smelters and restarting domestic smelters that had been shut down in 2008 and early in 2009. New smelters were constructed and came onstream, mainly in China and India. New smelters previously completed reached full production during 2011 in Qatar and the United Arab Emirates. World inventories of metal held by producers, as reported by the International Aluminium Institute, increased through the end of July to about 2.6 million tons from 2.5 million tons at yearend 2010. Inventories of primary aluminum metal held by the LME worldwide increased during the year to 4.6 million tons in mid-September from 4.3 million tons at yearend 2010.

World Smelter Production and Capacity:

	Prod	luction	Yearend capacity	
	<u>2010</u>	<u>2011^e</u>	<u>2010</u>	<u>2011</u>
United States	1,726	1,990	3,200	3,200
Australia	1,930	1,930	2,050	2,050
Bahrain	870	870	880	880
Brazil	1,540	1,410	1,700	1,700
Canada	2,960	2,970	3,020	3,020
China	16,200	18,000	23,000	25,000
Germany	394	450	620	620
Iceland	780	790	790	790
India	1,450	1,700	1,950	2,310
Mozambique	557	560	570	570
Norway	800	800	1,230	1,230
Qatar	190	390	585	585
Russia	3,950	4,000	4,440	4,440
South Africa	807	800	900	900
United Arab Emirates	1,400	1,800	1,800	1,800
Venezuela	335	380	590	590
Other countries	4,900	5,230	6,180	6,190
World total (rounded)	40,800	44,100	53,500	55,900

World Resources: Domestic aluminum requirements cannot be met by domestic bauxite resources. Domestic nonbauxitic aluminum resources are abundant and could meet domestic aluminum demand. However, no processes for using these resources have been proven 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.

<u>Substitutes</u>: 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, vinyl, and wood can substitute for aluminum in construction. Copper can replace aluminum in electrical applications.

^eEstimated. E Net exporter.

¹See also Bauxite and Alumina.

²Domestic primary metal production + recovery from old aluminum scrap + net import reliance; excludes imported scrap.

³Includes aluminum alloy.

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

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