

ALUMINUM¹

(Data in thousand metric tons unless otherwise noted)

Domestic Production and Use: In 2017, two companies operated five primary aluminum smelters in four States. Three smelters operated at reduced capacity throughout the year. The status of a shutdown of one smelter that was announced as permanent in 2016 was changed to temporary in 2017, and the owner planned to restart production in early 2018. Three other smelters remained on standby throughout the year. Based on published market prices, the value of primary aluminum production was \$1.61 billion, 8% more than the value in 2016. Aluminum consumption was centered in the Midwest United States. Transportation applications accounted for an estimated 41% of domestic consumption; in descending order of consumption, the remainder was used in packaging, 20%; building, 14%; electrical, 8%; machinery, 7%; consumer durables, 7%; and other, 3%.

Salient Statistics—United States:	2013	2014	2015	2016	2017^e
Production:					
Primary	1,946	1,710	1,587	841	740
Secondary (from old scrap)	1,630	1,690	1,560	1,580	1,600
Secondary (from new scrap)	1,790	1,870	2,000	2,010	2,100
Imports for consumption:					
Crude and semimanufactures	4,160	4,290	4,560	5,410	6,300
Scrap	565	559	521	609	730
Exports:					
Crude and semimanufactures	1,520	1,520	1,460	1,460	1,300
Scrap	1,870	1,720	1,550	1,350	1,500
Consumption, apparent ²	4,520	5,070	5,300	5,120	5,980
Supply, apparent ³	6,310	6,940	7,310	7,130	8,080
Price, ingot, average U.S. market (spot), cents per pound	94.2	104.5	88.2	80.4	98.5
Stocks:					
Aluminum industry, yearend	1,130	1,280	1,350	1,400	1,360
London Metal Exchange (LME), U.S. warehouses, yearend ⁴	1,950	1,190	507	362	260
Employment, number ⁵	30,100	30,900	31,000	31,900	28,000
Net import reliance ⁶ as a percentage of apparent consumption	21	33	41	53	61

Recycling: In 2017, aluminum recovered from purchased scrap in the United States was about 3.70 million tons, of which about 57% came from new (manufacturing) scrap and 43% from old scrap (discarded aluminum products). Aluminum recovered from old scrap was equivalent to about 27% of apparent consumption.

Import Sources (2013–16): Canada, 56%; Russia 8%; United Arab Emirates, 7%; China, 6%; and other, 23%.

Tariff:	Item	Number	Normal Trade Relations 12–31–17
	Aluminum, not alloyed:		
	Unwrought (in coils)	7601.10.3000	2.6% ad val.
	Unwrought (other than aluminum alloys)	7601.10.6000	Free.
	Aluminum alloys:		
	Unwrought (billet)	7601.20.9045	Free.
	Aluminum waste and scrap:		
	Used beverage container scrap	7602.00.0030	Free.
	Other	7602.00.0090	Free.

Depletion Allowance: Not applicable.¹

Government Stockpile: None.

Events, Trends, and Issues: U.S. production of primary aluminum decreased for the fifth consecutive year, declining by about 12% from that in 2016 and 64% from that in 2012. This was the lowest level since 1951 when production was 759,000 tons. In June, the owner of a 269,000-ton-per-year smelter in Evansville, IN, which was permanently shut down in 2016, announced that the shutdown would be revised to temporary and that about 160,000 tons per year of capacity would be restarted in 2018. In October, domestic smelters were operating at about 37% of capacity of 2 million tons per year.

ALUMINUM

On July 7, the U.S. International Trade Commission reported the findings of its investigation of the aluminum industry that was requested by the U.S. House of Representatives Committee on Ways and Means in April 2016. The investigation examined the factors affecting competition in major unwrought and wrought aluminum-producing and aluminum-exporting countries, including the United States, as well as industry characteristics, recent trade trends, competitive strengths and weaknesses, factors related to increased capacity, and the effect of Government policies on production and trade of aluminum.⁷

On April 27, the President signed a memorandum instructing the Secretary of Commerce to conduct an investigation on the impact of aluminum imports on U.S. national security under the authority of Section 232 of the Trade Expansion Act of 1962. The Department of Commerce held a public hearing on June 22 as part of the investigation. If the investigation finds that aluminum is being imported in quantities or under circumstances which threaten to impair the national security, the Secretary of Commerce shall recommend actions and steps in his report to the President that need to be taken to adjust aluminum imports so that they will not threaten to impair the national security.

As prices generally increased throughout the year, world primary aluminum production increased slightly in 2017 compared with production in 2016. The U.S. market price for primary ingot quoted by Platts Metals Week averaged \$0.90 per pound in January and gradually increased through May when it averaged \$0.96 per pound. In June and July, the average price decreased to \$0.94 per pound before resuming the upward trend in August and reached a monthly average of \$1.06 per pound in October. Global LME warehouse inventories of primary aluminum metal decreased to 1.24 million tons in mid-October 2017 from 2.2 million tons at yearend 2016. Inventories, including primary aluminum and aluminum alloys, at LME-bonded warehouses in the United States decreased to about 260,000 tons in mid-October 2017 from 362,000 tons at yearend 2016.

World Smelter Production and Capacity:

	Production		Yearend capacity	
	2016	2017 ^e	2016	2017 ^e
United States	841	740	2,000	2,000
Australia	1,630	1,490	1,720	1,720
Bahrain	971	960	970	1,050
Brazil	793	800	1,400	1,400
Canada	3,210	3,210	3,270	3,270
China	31,900	32,600	43,200	44,500
Iceland	855	870	870	870
India	2,720	3,200	3,600	3,600
Malaysia	620	760	760	760
Norway	1,220	1,220	1,550	1,550
Russia	3,560	3,600	3,900	3,900
United Arab Emirates	2,500	2,600	2,500	2,600
Other countries	8,100	7,900	9,780	9,700
World total (rounded)	58,900	60,000	75,500	76,900

World Resources: Global resources of bauxite are estimated to be between 55 to 75 billion tons and are sufficient to meet world demand for metal well into the future.¹

Substitutes: Composites can substitute for aluminum in aircraft fuselages and wings. Glass, paper, plastics, and steel can substitute for aluminum in packaging. Composites, magnesium, steel, and titanium can substitute for aluminum in ground transportation uses. Composites, steel, vinyl, and wood can substitute for aluminum in construction. Copper can replace aluminum in electrical and heat-exchange applications.

^eEstimated.

¹See also Bauxite and Alumina.

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

³Defined as domestic primary metal production + recovery from all aluminum scrap + net import reliance; excludes imported scrap.

⁴Includes aluminum alloy.

⁵Alumina and aluminum production workers (North American Industry Classification System—3313). Source: U.S. Department of Labor, Bureau of Labor Statistics.

⁶Defined as imports – exports + adjustments for industry stock changes.

⁷U.S. International Trade Commission, 2017, Aluminum—Competitive conditions affecting the U.S. industry: U.S. International Trade Commission, publication 4703, July 7, 606 p. (Accessed July 10, 2017, at <https://www.usitc.gov/publications/332/pub4703.pdf>.)