

IRON ORE¹

(Data in million metric tons gross weight unless otherwise noted)

Domestic Production and Use: In 2014, mines in Michigan and Minnesota shipped 93% of the usable iron ore products in the United States, with an estimated value of \$5.1 billion. Twelve iron ore mines (9 open pits and 3 reclamation operations), 9 concentration plants, 10 pelletizing plants, 2 direct-reduced iron (DRI) plants, and 1 iron nugget plant operated during the year. Almost all ore was concentrated before shipment. Eight of the mines, operated by three companies, accounted for the majority of production. The United States was estimated to have produced and consumed 2% of the world's iron ore output.

Salient Statistics—United States:	2010	2011	2012	2013	2014^e
Production ²	49.9	54.7	54.0	53.0	57.5
Shipments	50.6	55.6	52.9	52.7	54.2
Imports for consumption	6.4	5.3	5.2	3.2	5.5
Exports	10.0	11.1	11.2	11.0	13.0
Consumption:					
Reported (ore and total agglomerate) ³	42.3	46.3	46.9	48.8	49.5
Apparent ⁴	47.9	49.1	48.1	47.1	47.8
Price, ⁵ U.S. dollars per metric ton	98.79	99.45	98.16	104.90	101.00
Stocks, mine, dock, and consuming plant, yearend, excluding byproduct ore	3.47	3.26	3.11	2.29	4.50
Employment, mine, concentrating and pelletizing plant, number	4,780	5,270	5,420	5,644	5,750
Net import reliance ⁶ as a percentage of apparent consumption (iron in ore)	E	E	E	E	E

Recycling: None (see Iron and Steel Scrap section).

Import Sources (2010–13): Canada, 71%; Brazil, 12%; Russia, 3.0%; Venezuela, 3.0%; and other, 11%.

Tariff: Item	Number	Normal Trade Relations 12–31–14
Concentrates	2601.11.0030	Free.
Coarse ores	2601.11.0060	Free.
Fine ores	2601.11.0090	Free.
Pellets	2601.12.0030	Free.
Briquettes	2601.12.0060	Free.
Sinter	2601.12.0090	Free.
Roasted Iron Pyrites	2601.20.0000	Free.

Depletion Allowance: 15% (Domestic), 14% (Foreign).

Government Stockpile: None.

Events, Trends, and Issues: U.S. iron ore production was expected to increase in 2014 and 2015 from that of 2013 owing to new production that began in late 2013 and 2014. In December 2013, one company in Louisiana began producing DRI pellets from imported iron ore concentrates. The facility was the largest of its kind in the world, with a 2.5 million-ton-per-year capacity, although equipment failure, upgrades, and repairs temporarily idled the plant periodically during the year. In September, Reynolds Pellet Plant began operations in Indiana using iron ore concentrates from Minnesota reclamation operations. The plant was designed to produce 3 million tons per year of high-quality flux pellets to feed blast furnaces in Ohio and Kentucky. Mesabi Chief Plant Four, a 2-million-ton-per-year iron ore reclamation plant, was set to begin operations in the first quarter of 2015.

In February, it was announced that the Empire Mine would remain open through January 2017 following an extension of supply and joint-operating agreements. Production rates reached 2 million tons per year for the Comstock Mountain Lion Mine in Utah, which produces concentrates for export. One company's project in Minnesota to construct a 7-million-ton-per-year open-pit iron ore mine, concentrator, pelletizing plant, and DRI plant was expected to begin in the second half of 2015 after receiving financing needed to complete the project. Construction began on a 2-million-ton-per-year DRI plant in Texas, expected to be operational by yearend 2015. Weather-related delays on the Great Lakes reduced shipments from January through April; however, record-high shipments of iron ore were recorded during the summer months.

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Following the completion of several infrastructure improvement and capacity projects by the three largest iron ore miners in Western Australia, regional shipments increased to record levels. Additional projects in Australia were aimed at increasing capacity in 2015 and could put as much as 100 million tons of additional product on the market annually. Increased production in Australia and lower than expected consumption in China moved the market into oversupply. Spot market prices per dry metric ton of fines at 62% iron content fell to nearly \$80 in October from a high of \$154 in 2013. Global mine closures were attributed to sustained reductions in spot market prices.

In eastern Canada, the Wabush Scully Mine was closed and the Pointe-Noire Pellet Plant was idled indefinitely, which could lead to increased domestic exports to Canada in 2014. Three mines in Australia were closed or idled in late 2014. An estimated 20% to 30% of iron mines in China were closed or idled in 2014. Production, by iron content, of iron ore in China was estimated to decline by 16% to 310 million tons in 2014 and projected to decline to 275 million tons in 2015. China's Ministry of Industry Information and Technology announced they would close an additional 19 million tons per year of iron ore capacity and 29 million tons per year of steelmaking capacity by yearend 2014.

World Mine Production and Reserves: Mine production for China is based on crude ore, rather than usable ore, which is reported for the other countries.

	Mine production		Reserves ⁷	
	2013	2014 ^e	Crude ore	Iron content
United States	53	58	6,900	2,100
Australia	609	660	53,000	23,000
Brazil	317	320	31,000	16,000
Canada	43	41	6,300	2,300
China	1,450	1,500	23,000	7,200
India	150	150	8,100	5,200
Iran	50	45	2,500	1,400
Kazakhstan	26	26	2,500	900
Russia	105	105	25,000	14,000
South Africa	72	78	1,000	650
Sweden	26	26	3,500	2,200
Ukraine	82	82	⁸ 6,500	⁸ 2,300
Other countries	127	131	18,000	9,500
World total (rounded)	3,110	3,220	190,000	87,000

World Resources: U.S. resources are estimated to be about 27 billion tons of iron contained within 110 billion tons of iron ore. U.S. resources are mainly low-grade taconite-type ores from the Lake Superior district that require beneficiation and agglomeration prior to commercial use. World resources are estimated to exceed 230 billion tons of iron contained within greater than 800 billion tons of crude ore.

Substitutes: The only source of primary iron is iron ore, used directly as direct-shipping ore or converted to briquettes, concentrates, DRI, iron nuggets, sinter, or pellets. At some blast furnace operations, ferrous scrap may constitute as much as 7% of the blast furnace feedstock. Scrap, DRI, and iron nuggets are extensively used for steelmaking in electric arc furnaces and in iron and steel foundries, but scrap availability can be limited. Technological advancements have been made, which allow hematite to be recovered from tailings basins and pelletized.

^eEstimated. E Net exporter.

¹See also Iron and Steel and Iron and Steel Scrap.

²Includes agglomerates, concentrates, DRI, direct-shipping ore, iron nuggets, pellets, and byproduct ore for consumption.

³Includes weight of lime, flue dust, and other additives in sinter and pellets for blast furnaces.

⁴Defined as production + imports – exports + adjustments for industry stock changes.

⁵Estimated from reported value of ore at mines.

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

⁷See [Appendix C](#) for resource/reserve definitions and information concerning data sources.

⁸For Ukraine, reserves consist of the A+B categories of the former Soviet Union's reserves classification system.