

Mineral Industry Surveys

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PLATINUM-GROUP METALS IN JUNE 2023

Imports for consumption of platinum-group metals (PGMs), including waste and scrap, were 18,900 kilograms (kg) in June 2023, an increase of 39% compared with imports in May 2023, and an increase of 21% compared with imports in June 2022 (table 1). The leading import sources for PGMs into the United States in June 2023 were, in descending order of quantity, South Africa, Russia, and Belgium (tables 3, 4).

In June 2023, exports of platinum were more than three times exports in May 2023, and exports of palladium increased by 66%, PGM scrap by 47%, and rhodium by 19% compared with those in May 2023. The leading destinations for PGM exports were, in descending order of quantity, Switzerland, Japan, and the United Kingdom (tables 1, 5).

The Engelhard average June 2023 prices were unchanged for iridium and ruthenium compared with the average prices in May 2023. The average prices for rhodium decreased by 21%, palladium by 9%, and platinum by 9% compared with prices in May. Compared with average prices in June 2022, the June 2023 average price for platinum was essentially unchanged but decreased by 58% for rhodium, by 30% for palladium, by 26% for ruthenium, and by 8% for iridium (fig. 1; tables 1, 2).

Industry News

PJSC MMC Norilsk Nickel (Nornickel) (Russia) reported difficulties obtaining equipment and technology owing to sanctions against Russia following its conflict with Ukraine in February 2022. As a result, Nornickel would reevaluate its investment strategy, which could delay the Southern Cluster project and expansion of the Talnakh deposit. Initial plans were to increase processing capacity of the two mining areas to 9 million metric tons of ore per year (Mt/yr) from 2–3 Mt/yr by 2027–2028. The increased processing capacity was projected by

the company to increase output of PGMs an additional 25,000 kilograms per year (CRU Group, 2023).

Platinum Group Metals Ltd. (Canada) reported that its subsidiary Lion Battery Technologies Inc. (Lion) has enlisted The Battery Innovation Center (BIC) in Newberry, IN, to advance the production and commercialization of its lithium-sulfur and enhanced lithium-ion battery technology using platinum and palladium as catalysts. Under their agreement, BIC would begin small- and large-scale trials using Lion's PGM catalyst technology in lithium-sulfur and lithium-ion coin and pouch cells (Platinum Group Metals Ltd., 2023).

References Cited

CRU Group, 2023, Ukraine invasion—Nornickel may delay projects: CRU Group, June 5. (Accessed August 10, 2023, via <https://www.crugroup.com/>.)
Platinum Group Metals Ltd., 2023, Platinum Group Metals Ltd. engages The Battery Innovation Center (BIC) for testing and scale-up of PGM based lithium-sulfur and lithium-ion battery chemistries developed by subsidiary Lion Battery Technologies Inc.: Vancouver, British Columbia, Canada and Johannesburg, South Africa, Platinum Group Metals Ltd. press release, June 21. (Accessed August 10, 2023, at <https://www.platinumgroupmetals.net/news/news-details/2023/Platinum-Group-Metals-Ltd.-Engages-The-Battery-Innovation-Center-BIC-for-Testing-and-Scale-Up-of-PGM-Based-Lithium-Sulfur-and-Lithium-Ion-Battery-Chemistries-Developed-by-Subsidiary-Lion-Battery-Technologies-Inc/default.aspx>.)

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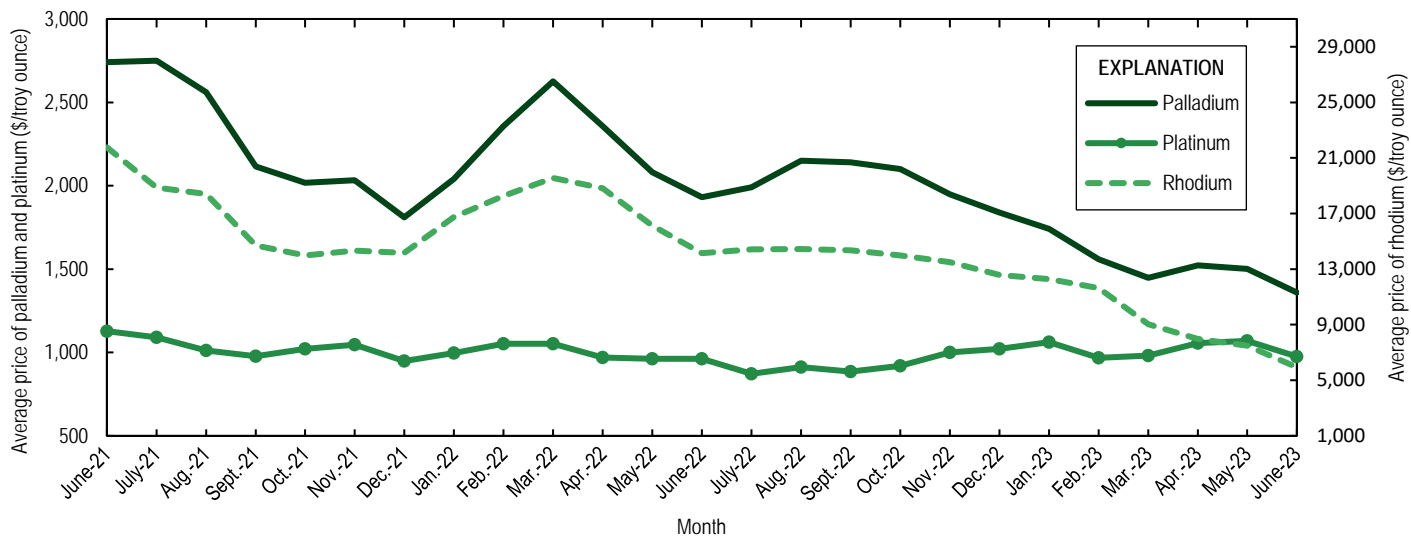


Figure 1. Engelhard unfabricated average monthly prices for palladium, platinum, and rhodium in dollars per troy ounce from June 2021 through June 2023.
Source: S&P Global Platts Metals Week.

TABLE 1
U.S. SALIENT PLATINUM-GROUP METALS STATISTICS¹

(Kilograms metal content, unless otherwise specified)

	2022	2023			
	January– December	April	May	June	January– June
Mine production: ²					
Palladium	10,100	797	797	797	4,780
Platinum	3,000	247	247	247	1,480
Total	13,100	1,040	1,040	1,040	6,260
Imports for consumption: ³					
Palladium	65,200	2,970	4,150	6,550	31,100
Platinum	64,200	4,670	4,660	7,670	32,500
Iridium	1,610	127	328	112	1,040
Osmium	1	--	--	--	--
Rhodium	13,200	776	906	725	5,330
Ruthenium	13,300	1,340	1,050	722	5,730
Waste and scrap ⁴	41,500	3,810	2,530	3,130	16,400
Total	199,000	13,700	13,600	18,900	92,000
Exports: ³					
Palladium	42,200	2,440	1,930	3,200	13,800
Platinum	23,100	1,190	655	2,120	6,790
Iridium, osmium, ruthenium	906	88	71	17	257
Rhodium	677	7	8	9	94
Waste and scrap ⁴	35,200	721	1,320	1,940	6,750
Total	102,000	4,450	3,980	7,290	27,700
Price, average (dollars per troy ounce): ⁵					
Palladium	2,133.81	1,522.89	1,501.18	1,359.57	1,518.31
Platinum	966.54	1,056.79	1,069.77	975.29	1,018.41
Iridium	4,581.93	4,600.00	4,600.00	4,600.00	4,602.42
Rhodium	15,585.00	7,968.42	7,484.09	5,940.48	8,997.58
Ruthenium	577.02	465.00	465.00	465.00	468.23

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Annual data are based on publicly available annual reports. Monthly and year-to-date data are estimated based on publicly reported quarterly data.

³Source: U.S. Census Bureau.

⁴Includes waste and scrap for all platinum-group elements. Previously included within platinum.

⁵Source: S&P Global Platts Metals Week.

TABLE 2
PLATINUM-GROUP METALS PRICES¹

(Dollars per troy ounce)

	Palladium	Platinum	Iridium	Rhodium	Ruthenium
2022:					
Low:					
Price	1,690.00	834.00	3,750.00	12,250.00	475.00
Date	Dec. 20	Jul. 14	Nov. ² –Dec. ²	Dec. ²	Dec. 21
High:					
Price	3,050.00	1,155.00	5,000.00	20,250.00	625.00
Date	Mar. 8	Mar. 8	Mar.–Jul. ²	Feb. ²	Mar.–Jul. ²
Price, average	2,133.81	966.54	4,581.93	15,585.00	577.02
2023:					
April:					
Low:					
Price	1,445.00	995.00	4,600.00	7,300.00	465.00
Date	Apr. 11	Apr. 3	Apr. ²	Apr. 3	Apr. ²
High:					
Price	1,640.00	1,135.00	4,600.00	8,750.00	465.00
Date	Apr. 21	Apr. 21	Apr. ²	Apr. 27	Apr. ²
Price, average	1,522.89	1,056.79	4,600.00	7,968.42	465.00
May:					
Low:					
Price	1,400.00	1,010.00	4,600.00	7,000.00	465.00
Date	May 31	May 31	May ²	May ²	May ²
High:					
Price	1,633.00	1,130.00	4,600.00	8,650.00	465.00
Date	May 10 and 11	May 10	May ²	May 1	May ²
Price, average	1,501.18	1,069.77	4,600.00	7,484.09	465.00
June:					
Low:					
Price	1,241.00	904.00	4,600.00	4,400.00	465.00
Date	Jun. 29	Jun. 29	Jun. ²	Jun. 30	Jun. ²
High:					
Price	1,430.00	1,040.00	4,600.00	7,000.00	465.00
Date	Jun. 2	Jun. 7	Jun. ²	Jun. 1	Jun. ²
Price, average	1,359.57	975.29	4,600.00	5,940.48	465.00
January–June:					
Low:					
Price	1,241.00	904.00	4,600.00	4,400.00	465.00
Date	Jun. 29	Jun. 29	Jan.–Jun. ²	Jun. 30	Jan.–Jun. ²
High:					
Price	1,820.00	1,135.00	4,700.00	12,400.00	485.00
Date	Jan. 10	Apr. 21	Jan. 3–5	Jan. ²	Jan. ² and Feb. 2
Price, average	1,518.31	1,018.41	4,602.42	8,997.58	468.23

¹Quotes from Engelhard.

²Occurred multiple days in month(s) listed.

Source: S&P Global Platts Metals Week.

TABLE 3
U.S. IMPORTS FOR CONSUMPTION OF PLATINUM METAL, BY COUNTRY OR LOCALITY¹

(Kilograms metal content, unless otherwise specified)

Country or locality	Platinum grain and nuggets		Platinum sponge		Other unwrought platinum		Platinum, other		Platinum coins	
	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)
2022, January–December	1,320	\$42,000	47,800	\$1,500,000	2,350	\$146,000	12,100	\$529,000	642	\$21,000
2023:										
April	113	3,730	3,900	127,000	92	3,590	516	19,700	51	1,780
May	29	1,020	4,070	139,000	126	4,470	391	15,800	40	1,430
June:										
Australia	--	--	--	--	(2)	5	--	--	8	105
Austria	--	--	--	--	--	--	32	1,440	--	--
Belgium	--	--	545	17,900	404	13,500	--	--	--	--
Canada	24	797	--	--	1	65	21	736	64	2,100
China	--	--	--	--	--	--	(2)	2	1	10
Costa Rica	--	--	--	--	--	--	140	7,780	--	--
Czechia	--	--	--	--	--	--	1	132	--	--
Ecuador	--	--	--	--	--	--	1	25	--	--
France	--	--	--	--	--	--	25	871	--	--
Germany	1	23	125	3,960	137	5,640	270	11,100	(2)	3
India	--	--	--	--	--	--	98	2,640	--	--
Ireland	--	--	--	--	(2)	11	(2)	2	--	--
Italy	--	--	252	8,140	13	427	1	33	--	--
Japan	--	--	--	--	13	594	14	607	--	--
Korea, Republic of	--	--	218	6,930	--	--	--	--	(2)	16
Mexico	--	--	--	--	--	--	5	145	--	--
Norway	--	--	--	--	--	--	4	195	--	--
Singapore	--	--	--	--	1	1,560	1	42	--	--
Slovakia	--	--	--	--	63	5,270	--	--	--	--
South Africa	--	--	4,850	155,000	10	382	--	--	--	--
Switzerland	--	--	54	1,670	--	--	66	2,040	--	--
United Kingdom	--	--	165	5,610	--	--	43	1,640	5	111
Total	25	820	6,210	199,000	643	27,500	722	29,500	77	2,350
January–June	403	13,300	24,600	799,000	1,260	54,200	5,780	224,000	400	13,400

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 4
U.S. IMPORTS FOR CONSUMPTION OF PLATINUM-GROUP METALS, BY COUNTRY OR LOCALITY¹

(Kilograms metal content, unless otherwise specified)

Country or locality	Palladium ²		Iridium ²		Osmium ²		Rhodium ²		Ruthenium ²		Waste and scrap ³	
	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)
2022, January–December	65,200	\$4,370,000	1,610	\$194,000	1	\$3	13,200	\$6,780,000	13,300	\$226,000	41,500	\$1,350,000
2023:												
April	2,970	146,000	127	14,200	--	--	776	242,000	1,340	15,600	3,810	123,000
May	4,150	202,000	328	29,900	--	--	906	283,000	1,050	15,200	2,530	79,300
June: ⁴												
Australia	(5)	3	--	--	--	--	--	--	--	--	32	2,050
Austria	81	4,060	--	--	--	--	--	--	--	--	--	--
Belgium	801	37,500	--	--	--	--	141	32,700	2	22	--	--
Brazil	--	--	--	--	--	--	--	--	--	--	16	1,100
Canada	392	18,700	--	--	--	--	--	--	--	--	878	7,760
Colombia	--	--	--	--	--	--	--	--	--	--	30	438
France	--	--	--	--	--	--	--	--	--	--	287	10,100
Germany	17	571	1	13	--	--	145	39,000	219	2,930	554	22,400
Guatemala	--	--	--	--	--	--	--	--	--	--	19	623
Italy	97	4,180	1	108	--	--	26	6,550	--	--	169	5,520
Japan	183	7,930	9	1,050	--	--	(5)	74	37	493	--	--
Korea, Republic of	311	13,800	--	--	--	--	31	9,130	--	--	--	--
Malaysia	--	--	--	--	--	--	--	--	--	--	59	1,610
Mexico	21	740	--	--	--	--	--	--	--	--	131	5,070
Poland	--	--	--	--	--	--	--	--	--	--	50	7,530
Russia	2,100	97,400	--	--	--	--	--	--	--	--	--	--
South Africa	2,330	123,000	53	4,760	--	--	381	103,000	365	5,070	--	--
Sweden	--	--	--	--	--	--	--	--	--	--	457	7,990
Switzerland	210	9,590	--	--	--	--	--	--	--	--	--	--
United Kingdom	3	163	48	7,310	--	--	(5)	143	100	1,530	391	12,700
Other	--	--	--	--	--	--	--	--	--	--	58	2,190
Total	6,550	317,000	112	13,300	--	--	725	191,000	722	10,000	3,130	87,100
January–June	31,100	1,590,000	1,040	121,000	--	--	5,330	1,880,000	5,730	78,800	16,400	528,000

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Unwrought and other forms.

³Includes waste and scrap for all platinum-group elements.

⁴The 20 countries and (or) localities with the greatest total platinum-group metal imports are listed. All others are included in the "Other" category.

⁵Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 5
U.S. EXPORTS OF PLATINUM-GROUP METALS, BY COUNTRY OR LOCALITY¹

(Kilograms metal content, unless otherwise specified)

Country or locality	Palladium ²		Platinum ²		Iridium, osmium and ruthenium ^{2,3}		Rhodium ²		Waste and scrap ⁴	
	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)
2022, January–December	42,200	\$2,770,000	23,100	\$885,000	906	\$36,500	677	\$355,000	35,200	\$2,990,000
2023:										
April	2,440	98,100	1,190	59,500	88	8,030	7	2,560	721	50,400
May	1,930	97,800	655	41,000	71	9,330	8	3,110	1,320	78,400
June: ⁵										
Argentina	--	--	32	999	--	--	--	--	--	--
Australia	2	100	18	1,060	2	170	--	--	--	--
Belgium	31	1,640	2	576	(6)	12	2	908	91	3,180
Canada	334	17,600	10	365	--	--	(6)	52	103	3,500
China	10	647	16	620	(6)	15	--	--	--	--
Costa Rica	8	586	42	2,860	--	--	--	--	--	--
Czechia	(6)	23	4	123	--	--	--	--	7	199
France	7	448	2	107	--	--	--	--	1	50
Germany	387	21,400	80	7,560	(6)	3	--	--	418	55,700
Hong Kong	75	4,860	8	283	2	288	5	1,940	--	--
India	6	376	6	1,900	--	--	--	--	--	--
Ireland	2	161	54	2,000	(6)	4	--	--	--	--
Italy	349	15,900	389	14,800	2	162	--	--	243	7,410
Japan	319	14,400	187	13,600	--	--	(6)	59	979	29,900
Korea, Republic of	27	1,480	5	132	--	--	2	941	--	--
Mexico	5	304	20	807	4	449	--	--	--	--
Switzerland	1,620	40,700	--	--	--	--	--	--	15	1,780
Taiwan	5	315	5	306	--	--	--	--	--	--
United Arab Emirates	--	--	(6)	35	--	--	--	--	34	1,050
United Kingdom	3	202	1,220	47,800	6	719	--	--	45	1,760
Other	14	884	18	1,150	1	156	--	--	4	225
Total	3,200	122,000	2,120	97,100	17	1,980	9	3,900	1,940	105,000
January–June	13,800	660,000	6,790	354,000	257	29,500	94	37,300	6,750	555,000

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Unwrought and other forms.

³Gross weight.

⁴Includes waste and scrap for all platinum-group elements. Previously categorized as “Platinum waste and scrap.”

⁵The 20 countries and (or) localities with the greatest total platinum-group metal exports are listed. All others are included in the “Other” category.

⁶Less than ½ unit.

Source: U.S. Census Bureau.