

Mineral Industry Surveys

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PLATINUM-GROUP METALS IN MAY 2010

Englehard Industries' average May prices of platinum, palladium, and rhodium decreased by 5%, 8%, and 3%, respectively, compared with the average prices in April. The average prices of iridium and ruthenium increased by 20% and 15%, respectively, during the same time period. According to industry analysts, prices of platinum, palladium, and rhodium decreased sharply in the middle of the month because of a major liquidation of commodities, including the platinum-group metals (PGMs) following an announcement by the German Government banning naked short selling of some financial products and Government bonds (Platinum Today, 2010). Prices were also affected by growing concerns over European sovereign debt as well as signs that the Chinese economic growth may be slowing. In contrast, prices of iridium and ruthenium increased steadily throughout the month. The iridium price reached \$715 per troy ounce at the end of the month, the highest price since 1981, in response to dwindling supplies caused by strong consumer demand from Asia. Since January 2010, average monthly prices of iridium and ruthenium have increased by 53% and 42%, respectively.

Stillwater Mining Co. (Columbus, MT) produced 4,010 kg of platinum and palladium in the first quarter of 2010, an increase of 3% relative to production in the same quarter of 2009. First quarter 2010 production included 3,000 kg of platinum plus palladium from the Stillwater Mine, up nearly 4% from the first quarter of 2009, and 1,020 kg of platinum and palladium from the East Boulder Mine, an increase of 3% compared with the same quarter of 2009. The increased production was the result of improved mining efficiencies. Stillwater recycled catalytic converters containing about 3,710 kg of platinum, palladium, and rhodium in the first quarter of 2010, an increase of more than 200% compared with volumes in the same quarter of 2009. Recycling volumes were up because higher metal prices led to increased incentive for recycling (Stillwater Mining Co., 2010).

OJSC MMC Norilsk Nickel (Moscow, Russia), the world's leading producer of palladium as a byproduct of its copper-nickel mining operations, planned to increase its sales of platinum and palladium to 25%, up from 22% of total sales in 2009 (OJSC MMC Norilsk Nickel, 2010). Norilsk also reported that the Russian Government stockpile of palladium may be gone, thus removing a significant source of global supply. Sales

from the stockpile reached about 30,000 kg in 2009, and inventories of palladium in the stockpile have been a state secret (Kolesnikova, 2010).

Zimbabwe Platinum Mines Ltd. (Harare, Zimbabwe) planned to continue development of the Ngezi Phase II Expansion Project, based on existing agreements with the Government. The project included a new underground mine with an annual capacity of 2 million metric tons of ore, a new concentrator to process the ore, and other infrastructure including new schools and a hospital. Zimplats also announced that it was considering building a refinery in Zimbabwe. No timeframe for completion was given (Zimbabwe Platinum Mines Ltd., 2010).

Toyota Motor Corp. (Toyota City, Japan) has reduced the cost of producing fuel-cell vehicles by about 90% since the mid-2000s, and planned to produce the first retail hydrogen fuel-cell automobile by 2015. Toyota currently uses about 30 grams (g) of platinum for the fuel cell in each vehicle, and planned to reduce the quantity to 10 g of platinum per vehicle. Fuel cells produce electricity by combining oxygen with a fuel such as hydrogen over a catalyst such as platinum and produce no harmful emissions (Ohnsman, 2010).

References Cited

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TABLE 1
PLATINUM-GROUP METALS PRICES¹

(Dollars per troy ounce)

	Platinum	Palladium	Rhodium	Iridium	Ruthenium
<u>2009:</u>					
Low/date	920.00 Jan. 15	182.00 Jan. ²	1,050.00 Jan. ²	420.00 Jan.–Dec. ²	75.00 Feb. ²
High/date	1,510.00 Dec. 2	407.00 Dec. 31	2,790.00 Nov. 25	430.00 Jan. ²	160.00 Dec. ²
Average	1,207.55	265.65	1,591.32	420.40	97.28
<u>2010:</u>					
<u>April:</u>					
Low/date	1,666.00/1	494.00/1	2,600.00/1 and 5	515.00 ²	190.00 ²
High/date	1,750.00/26	573.00/26	2,975.00/15 and 16	590.00/30	245.00/29 and 30
Average	1,718.33	535.33	2,846.43	539.05	213.33
<u>May:</u>					
Low/date	1,495.00/25	420.00/20	2,675.00 ²	590.00/3	245.00 ²
High/date	1,745.00/3	549.00/3	2,850.00/3 and 4	715.00 ²	245.00 ²
Average	1,633.45	495.05	2,772.50	647.50	245.00
<u>Year-to-date:</u>					
Low/date	1,482.00 Feb. 8	397.00 Feb. 5	2,375.00 Feb. 5 and 8	420.00 Jan. ²	170.00 Jan. ²
High/date	1,750.00 Apr. 26	573.00 Apr. 26	2,975.00 Apr. 15 and 16	715.00 May ²	245.00 Apr. and May ²
Average	1,609.42	472.23	2,666.89	511.54	201.06

¹Quotes from Engelhard Industries.

²Occurred multiple days in month(s) listed.

Source: Platts Metals Week.

TABLE 2
U.S. IMPORTS FOR CONSUMPTION OF PLATINUM METAL, BY COUNTRY¹

(Kilograms metal content, unless otherwise specified)

Period and country	Platinum grain and nuggets		Platinum sponge		Other unwrought platinum		Platinum, other		Platinum waste and scrap		Platinum coins	
	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)
2009	16	\$474	37,100	\$1,420,000	3,770	\$129,000	5,910	\$174,000	136,000	\$334,000	512	\$20,500
2010:												
February	15	625	1,440	70,900	316	12,900	456	16,200	17,700	21,500	(2)	29
March	3	129	2,810	136,000	821	35,600	842	37,900	21,700	45,600	19	1,040
April:												
Belgium	--	--	52	2,740	--	--	--	--	--	--	--	--
Bolivia	--	--	--	--	--	--	--	--	985	117	--	--
Brazil	--	--	--	--	--	--	--	--	34	916	--	--
Canada	(2)	11	--	--	--	--	19	1,110	357	19,100	(2)	14
China	--	--	--	--	--	--	--	--	19	992	--	--
Colombia	--	--	--	--	83	3,540	--	--	19	454	--	--
France	--	--	11	294	--	--	10	227	--	--	--	--
Germany	--	--	238	10,600	102	2,860	259	8,640	191	16,900	--	--
Italy	--	--	109	6,110	--	--	29	1,700	73	4,740	--	--
Japan	--	--	--	--	8	172	2	16	124	4,510	--	--
Korea, Republic of	--	--	--	--	--	--	--	--	31	1,120	--	--
Malaysia	--	--	--	--	--	--	--	--	(2)	679	--	--
Mexico	--	--	--	--	3	122	--	--	17	912	--	--
Norway	--	--	47	2,530	--	--	--	--	--	--	--	--
Qatar	--	--	--	--	--	--	--	--	35	1,940	--	--
Russia	327 ³	6,460	--	--	--	--	--	--	--	--	--	--
Slovakia	--	--	--	--	--	--	90	5,370	--	--	--	--
South Africa	1	35	465	23,600	--	--	3	145	--	--	--	--
Switzerland	--	--	(2)	31	--	--	2	46	--	--	--	--
Taiwan	--	--	104	5,470	--	--	--	--	3	1,000	--	--
United Kingdom	--	--	192	10,600	(2)	2	20	811	19	1,540	--	--
Other	1	47	--	--	1	74	1	20	16	213	(2)	7
Total	328	6,550	1,220	62,000	197	6,780	434	18,100	1,920	55,200	1	20
Year to date	350	7,520	7,710	368,000	1,720	72,700	2,420	101,000	43,000	166,000	20	1,100

-- Zero.

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

²Less than ½ unit.

³All or part of these data have been referred to the U.S. Census Bureau for verification.

Source: U.S. Census Bureau.

TABLE 3
U.S. IMPORTS FOR CONSUMPTION OF PLATINUM-GROUP METALS, BY COUNTRY¹
(Kilograms metal content, unless otherwise specified)

Period and country	Unwrought palladium		Palladium, other		Iridium ²		Osmium ²		Ruthenium ²		Rhodium ²	
	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)
2009	62,300	\$568,000	7,350	\$62,300	1,520	\$20,800	68	\$551	21,200	\$55,700	11,200	\$530,000
2010:												
February	4,640	60,700	247	3,550	72	934	--	--	1,040	5,080	1,750	79,000
March	7,240	108,000	76	1,420	282	4,360	--	--	1,360	7,800	962	68,800
April:												
Belgium	49	718	--	--	--	--	--	--	--	--	57	4,470
Canada	73	1,800	118	2,430	--	--	--	--	--	--	--	--
China	--	--	27	519	--	--	--	--	--	--	--	--
Germany	360	4,910	6	141	51	854	--	--	150	1,060	138	10,600
Italy	81	1,460	74	1,370	--	--	--	--	--	--	9	950
Japan	75	371	9	82	--	--	--	--	15	87	--	--
Norway	285	4,610	--	--	--	--	--	--	--	--	10	750
Russia	1,410	22,700	--	--	--	--	--	--	--	--	102	8,420
South Africa	922	14,000	31	495	86	1,220	--	--	729	3,940	483	38,300
Switzerland	1	3	15	349	--	--	--	--	--	--	--	--
United Kingdom	--	--	6	134	29	476	--	--	198	1,310	6	529
Other	27	89	4	25	--	--	--	--	--	--	--	--
Total	3,280	50,700	291	5,550	166	2,550	--	--	1,090	6,400	806	64,100
Year to date	19,000	265,000	972	16,400	812	11,800	8	56	4,280	23,000	4,470	281,000

-- Zero.

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

²Unwrought and other forms.

Source: U.S. Census Bureau.

TABLE 4
U.S. EXPORTS OF PLATINUM-GROUP METALS, BY COUNTRY¹

(Kilograms of metal content, unless otherwise specified)

Period and country	Platinum ²		Platinum waste and scrap		Palladium ²		Iridium, osmium, and ruthenium ^{2,3}		Rhodium ²	
	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)
2009	15,600	\$522,000	31,600	\$523,000	30,300	\$229,000	4,020	\$34,400	1,220	\$48,400
2010:										
February	1,010	41,400	2,600	60,900	2,250	19,000	674	5,620	159	8,100
March	1,310	56,400	2,320	50,300	7,510	91,800	370	2,840	384	22,600
April:										
Australia	3	92	(4)	3	64	541	(4)	20	--	--
Austria	1	45	--	--	1	11	--	--	--	--
Belgium	1	6	--	--	1	4	--	--	--	--
Canada	30	1,120	2	68	327	2,500	1	13	(4)	9
China	138	6,400	--	--	172	1,470	60	811	190	10,700
Czech Republic	--	--	--	--	75	141	--	--	--	--
Denmark	--	--	--	--	9	145	--	--	--	--
France	1	44	--	--	42	270	(4)	4	--	--
Germany	587	26,300	20	820	612	10,400	160	2,220	--	--
Hong Kong	24	1,460	--	--	109	1,440	7	183	--	--
India	35	1,850	--	--	103	486	1	8	--	--
Ireland	3	79	--	--	24	91	7	41	--	--
Israel	3	55	--	--	267	919	10	82	--	--
Italy	(4)	48	--	--	105	1,270	--	--	6	568
Japan	62	1,420	32	1,310	273	3,810	49	575	51	4,540
Korea, Republic of	4	146	--	--	479	5,740	--	--	4	369
Malaysia	(4)	3	--	--	1	15	--	--	--	--
Mexico	39	1,430	--	--	20	38	(4)	12	(4)	25
Netherlands	(4)	57	--	--	2	38	--	--	--	--
New Zealand	(4)	11	--	--	5	88	--	--	--	--
Philippines	(4)	24	--	--	1	5	--	--	--	--
Saudia Arabia	--	--	--	--	25	109	--	--	--	--
Singapore	(4)	13	--	--	77	278	--	--	--	--
South Africa	--	--	609	2,180	--	--	--	--	--	--
Spain	--	--	--	--	72	485	--	--	--	--
Sweden	2	86	--	--	(4)	9	--	--	--	--
Switzerland	1,530	84,600	--	--	1,360	24,800	(4)	10	--	--
Taiwan	9	415	--	--	372	2,840	204	1,740	--	--
Thailand	1	70	--	--	7	114	--	--	--	--
Turkey	1	9	--	--	(4)	4	--	--	--	--
United Arab Emirates	(4)	4	--	--	1	20	--	--	--	--
United Kingdom	123	3,960	2,210	78,600	196	2,200	4	38	3	337
Other	8	142	--	--	10	118	(4)	3	--	--
Total	2,600	130,000	2,870	83,000	4,810	60,400	504	5,750	254	16,600
Year to date	5,980	278,000	10,600	244,000	16,900	190,000	1,950	17,800	945	53,200

-- Zero.

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

²Unwrought and other forms.

³Gross weight.

⁴Less than ½ unit.

Source: U.S. Census Bureau.