

Mineral Industry Surveys

For information, contact:

Kim B. Shedd, Cobalt Commodity Specialist
National Minerals Information Center
Telephone: (703) 648-4974
Email: kshed@usgs.gov

Annie Hwang (Data)

Telephone: (703) 648-7952

Email: ahwang@usgs.gov

Internet: <https://www.usgs.gov/centers/national-minerals-information-center/mineral-industry-surveys>

COBALT IN NOVEMBER 2022

The amount of cobalt contained in U.S. imports of cobalt metals and chemicals in November 2022 was unchanged from that imported during October 2022. For the first 11 months of 2022, the amount of cobalt contained in imports was 7% more than that imported during the same period in 2021 (table 2). The amount of cobalt contained in U.S. exports of unwrought cobalt and chemicals in November 2022 was 9% less than that exported during October 2022 and during the first 11 months of 2022, the amount exported was 6% more than that exported during the same period in 2021 (table 4).

Prices

During the past 2 years, London Metal Exchange (LME) stocks trended downward and cobalt prices fluctuated but generally trended upward through the second quarter of 2022 before sharply declining to annual year-to-date lows in August and then fluctuating within a narrow range (fig. 1, table 1). In November, the monthly average U.S. spot cobalt price

decreased by 9% from that in October 2022 and was 19% lower than that in November 2021. The monthly average LME cash mean price was unchanged from that in October 2022 and was 14% lower than that in November 2021. The following listed prices are for cobalt metal in November, in dollars per pound.

Type	Price range	Average price
U.S. spot ¹	21.25–26.00	23.54
LME cash mean ²	23.24–23.26	23.25

¹Source: S&P Global Platts Metals Week, minimum 99.8% cobalt cathode.

²London Metal Exchange, mean of the cash buyer and cash seller price, minimum 99.3% cobalt briquettes, cathode, ingot, or rounds (converted from dollars per metric ton and rounded to the nearest cent).

Industry News

In late October, EVELution Energy Corp. (Rancho Santa Fe, CA) and commodities trading company Trafigura Group Pte. Ltd. (Singapore) signed a memorandum of understanding

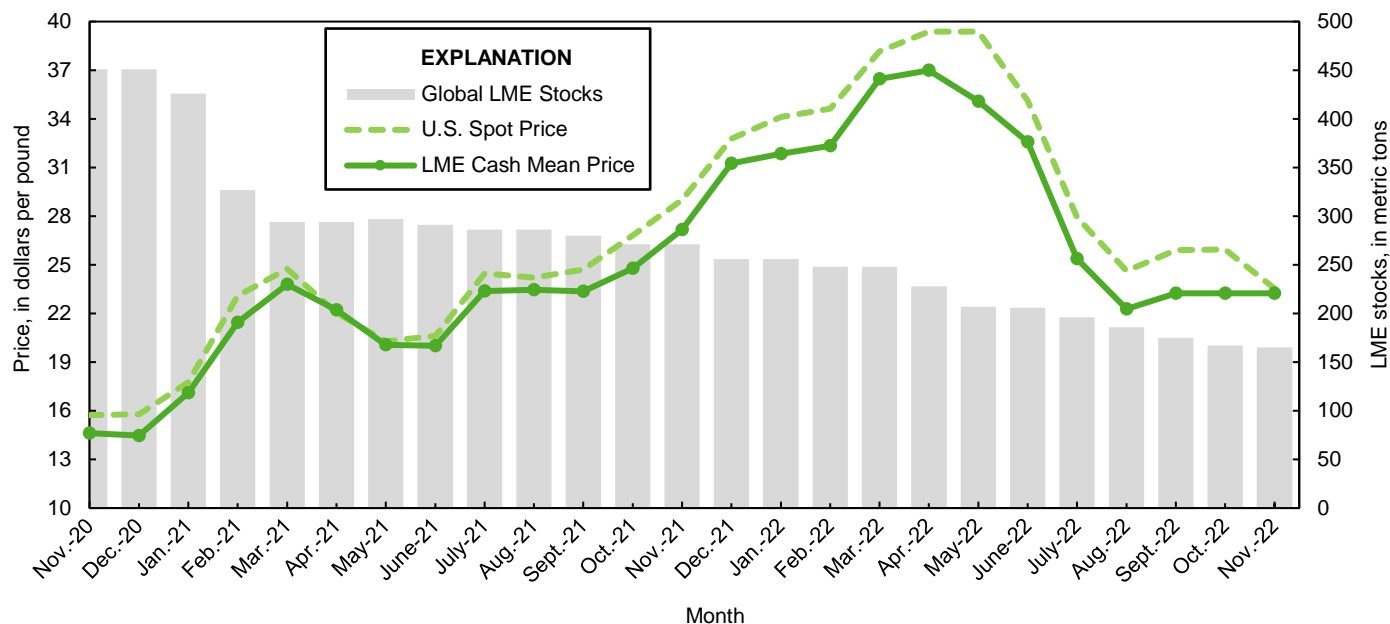


Figure 1. Global LME cobalt stocks, average U.S. spot cobalt prices, and average LME cash mean cobalt prices for November 2020 through November 2022. Sources: S&P Global Platts Metals Week and London Metal Exchange.

(MOU) on the development of a battery-grade cobalt processing plant in Yuma County, AZ. The solar-powered, carbon-neutral plant would have the capacity to produce 7,000 metric tons per year of cobalt in cobalt sulfate, which EVELution estimated would represent 40% of the anticipated consumption of cobalt sulfate for the U.S. electric vehicle (EV) industry in 2027. Construction was expected to begin in late 2023 so that the plant could begin operations in 2025. Under the MOU, Trafigura would assist EVELution with sourcing raw materials and with marketing the plant's products. EVELution was considering adding future facilities to the site for recycling EV batteries and processing nickel and other EV battery-grade metals (EVELution Energy Corp., 2022; Trafigura Group Pte. Ltd., 2022).

References Cited

- EVELution Energy Corp., 2022, About us: Rancho Santa Fe, CA, EVELution Energy Corp. (Accessed January 9, 2023, at <https://evelutionenergy.com/>.)
- Trafigura Group Pte. Ltd., 2022, Trafigura and EVELution energy sign memorandum of understanding on U.S. cobalt processing facility: Singapore, Trafigura Group Pte. Ltd. press release, October 24. (Accessed January 9, 2023, at <https://evelutionenergy.com/press-release-trafigura-and-evelution-energy-sign-memorandum-of-understanding-on-u-s-cobalt-processing-facility/>.)

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TABLE 1
REPORTED STOCKS OF COBALT METAL, END OF PERIOD

(Metric tons, contained cobalt)

Period	U.S. Government ¹	LME ²		Total
		U.S. warehouse	Non-U.S. warehouse	
2021:				
November	302	50	221	271
December	302	50	206	256
2022:				
January	302	50	206	256
February	302	54	194	248
March	302	54	194	248
April	302	54	174	228
May	302	39	168	207
June	302	39	167	206
July	302	39	157	196
August	302	39	147	186
September	302	34	141	175
October	302	34	133	167
November	302	34	131	165

¹Data from Defense Logistics Agency Strategic Materials.

²London Metal Exchange.

TABLE 2
U.S. IMPORTS FOR CONSUMPTION OF COBALT, BY COUNTRY OR LOCALITY¹

Period and country or locality of origin	Metals ²		Oxides and hydroxides		Salts and compounds ³		Total cobalt content for the period ⁴ (metric tons)	Cobalt content, year to date ^{4,5} (metric tons)
	Gross weight (metric tons)	Value ⁶ (thousands)	Gross weight (metric tons)	Value ⁶ (thousands)	Gross weight (metric tons)	Value ⁶ (thousands)		
2021:								
November	475	\$25,500	267	\$10,100	230	\$3,310	736	9,120
December	440	25,500	169	6,410	410	5,070	679	9,800
January–November	6,770	298,000	2,050	68,300	2,910 ^r	35,300 ^r	9,120	XX
January–December	7,210	323,000	2,220	74,700	3,320	40,400	9,800	XX
2022:								
January	754	44,600	84	3,540	148	2,860	859	859
February	440	24,800	161	7,460	382	3,790	667	1,530
March	648	42,400	256	11,400	1,040	6,200	1,110	2,640
April	343	24,000	193	10,100	487	4,040	624	3,260
May	900	68,900	211	10,800	1,290	6,910	1,410	4,670
June	504	38,300	160	8,640	992	5,750	890	5,560
July	685	50,500	193	10,500	1,430	7,190	1,210	6,770
August	530	36,900	134	6,130	153	2,010	671	7,440
September	578	34,600	200	7,120	310	4,410	827	8,270
October	579	29,600	117	5,030	200	2,550	725	8,990
November:								
Australia	--	--	--	--	--	--	--	53
Belgium	6	375	24	1,000	--	--	23	264
Brazil	--	--	--	--	39	543	13	207
Canada	101	5,420	--	--	--	--	101	1,110
China	4	71	5	161	7	148	9	147
Finland	(7)	21	40	1,230	160	1,250	72	2,030
Germany	25	2,180	--	--	--	--	25	164
Hong Kong	--	--	--	--	--	--	--	49
India	--	--	--	--	--	--	--	24
Italy	--	--	(7)	3	--	--	(7)	5
Japan	127	6,720	--	--	--	--	127	1,140
Korea, Republic of	--	--	--	--	--	--	--	68
Madagascar	21	1,150	--	--	--	--	21	252
Mexico	--	--	--	--	--	--	--	30
Morocco	20	1,080	--	--	--	--	20	175
Netherlands	--	--	--	--	--	--	--	17
Norway	182	10,300	--	--	--	--	182	2,470
Russia	19	922	--	--	--	--	19	455
South Africa	63	667	--	--	--	--	63	208
Spain	--	--	--	--	--	--	--	6
Taiwan	--	--	4	168	55	855	16	226
Turkey	--	--	--	--	--	--	--	24
United Kingdom	2	193	37	2,430	--	--	29	523
Zambia	--	--	--	--	--	--	--	54
Other	(7)	59	--	--	(7)	8	(7)	10
Total	571	29,100	109	4,990	260	2,810	721	9,710
January–November	6,530	424,000	1,820	85,700	6,700	48,500	9,710	XX

¹Revised. XX Not applicable. -- Zero.

²Data are rounded to no more than three significant digits; may not add to totals shown.

³Unwrought cobalt, excluding alloys; includes cobalt cathode and cobalt metal powder; may include intermediate products of cobalt metallurgy.

⁴Includes cobalt acetates, cobalt carbonates, cobalt chlorides, and cobalt sulfates.

⁵Estimated from gross weights.

⁶May include revisions to previously published data.

⁷Customs value.

⁸Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 3
U.S. IMPORTS FOR CONSUMPTION OF ADDITIONAL COBALT MATERIALS, BY COUNTRY OR LOCALITY¹

Period and country or locality of origin	Unwrought cobalt alloys		Cobalt waste and scrap		Wrought cobalt and cobalt articles	
	Gross weight (metric tons)	Value ² (thousands)	Gross weight (metric tons)	Value ² (thousands)	Gross weight (metric tons)	Value ² (thousands)
2021:						
November	17	\$838	188	\$2,710	24	\$4,150
December	30	1,460	135	1,200	32	4,710
January–November	180	8,340	1,420	18,600	283	40,800 ^r
January–December	210	9,800	1,560	19,800	315	45,500
2022:						
January	51	2,440	163	1,840	53	5,770
February	19	1,020	79	1,390	16	3,060
March	6	326	189	2,980	44	4,830
April	21	1,240	192	2,830	27	3,200
May	24	1,400	175	2,340	42	4,720
June	25	1,690	155	2,070	44	4,980
July	29	1,760	99	2,060	38	4,080
August	33	1,730	152	2,530	27	3,940
September	35	1,780	200	2,850	33	4,210
October	32	1,730	133	2,200	42	3,790
November:						
Belgium	4	180	10	200	--	--
Canada	--	--	1	7	3	1,290
China	--	--	1	13	2	644
France	--	--	23	683	7	191
Germany	(3)	17	6	3	3	480
Ireland	--	--	46	214	(3)	37
Japan	--	--	4	35	(3)	80
Taiwan	--	--	6	232	(3)	10
Tunisia	--	--	11	106	--	--
United Kingdom	27	1,470	7	142	17	1,660
Other	--	--	--	--	(3)	95
Total	31	1,670	114	1,640	33	4,490
January–November	306	16,800	1,650	24,700	398	47,100

^rRevised. -- Zero.

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

²Customs value.

³Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 4
U.S. EXPORTS OF COBALT MATERIALS¹

Period	Unwrought cobalt, powders, matte, waste and scrap ²		Oxides and hydroxides		Salts and compounds ³		Total cobalt content for the period ⁴ (metric tons)	Cobalt content, year to date ^{4,5} (metric tons)
	Gross weight (metric tons)	Value ⁶ (thousands)	Gross weight (metric tons)	Value ⁶ (thousands)	Gross weight (metric tons)	Value ⁶ (thousands)		
2021:								
November	424	\$10,400	2	\$101	--	--	426	4,600
December	333	10,000	2	96	--	--	335	4,930
January–November	4,570	129,000	40	968 ^r	9	\$133	4,600	XX
January–December	4,900	139,000	43	1,060	9	133	4,930	XX
2022:								
January	454	14,400	2	83	--	--	456	456
February	293	11,600	1	50	--	--	293	749
March	597	16,600	3	94	--	--	599	1,350
April	378	13,200	1	44	(7)	5	379	1,730
May	493	17,600	7	304	--	--	498	2,220
June	400	12,200	2	79	(7)	6	402	2,630
July	381	14,600	3	145	--	--	384	3,010
August	410	12,000	7	297	(7)	4	416	3,430
September	344	12,200	7	298	--	--	349	3,780
October	584	16,900	2	64	--	--	585	4,360
November	529	13,900	7	281	--	--	535	4,890
January–November	4,860	155,000	42	1,740	1	16	4,890	XX

¹Revised. XX Not applicable. -- Zero.

²Data are rounded to no more than three significant digits; may not add to totals shown.

³May include other intermediate products of cobalt metallurgy and unwrought cobalt alloys.

⁴Cobalt acetates and cobalt chlorides.

⁵Estimated from gross weights.

⁶May include revisions to previously published data.

⁷Free alongside ship (f.a.s.) value.

⁸Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 5
U.S. EXPORTS OF WROUGHT COBALT, COBALT ORE,
AND CONCENTRATES¹

Period	Wrought cobalt and cobalt articles		Cobalt ore and concentrates	
	Gross weight (metric tons)	Value ² (thousands)	Gross weight (metric tons)	Value ² (thousands)
2021:				
November	139	\$13,400	--	--
December	217	18,600	(3)	\$4
January–November	1,610 ^r	152,000 ^r	2	22
January–December	1,820	170,000	2	26
2022:				
January	139	15,400	--	--
February	103	13,300	--	--
March	105	15,300	--	--
April	204	19,200	(3)	4
May	143	16,600	--	--
June	164	16,400	--	--
July	201	23,000	--	--
August	114	18,500	--	--
September	185	25,500	(3)	8
October	121	17,200	--	--
November	181	24,300	--	--
January–November	1,660	205,000	(3)	12

^rRevised. -- Zero.

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

²Free alongside ship (f.a.s.) value.

³Less than ½ unit.

Source: U.S. Census Bureau.