

Mineral Industry Surveys

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COBALT IN NOVEMBER 2021

The amount of cobalt contained in U.S. imports of cobalt metals and chemicals in November 2021 was 31% more than imported in November 2020. For the first 11 months of 2021, the amount of cobalt contained in imports was essentially the same as that imported during the same period in 2020 (table 2). The amount of cobalt contained in U.S. exports of unwrought cobalt and chemicals in November 2021 was nearly three times that exported in November 2020. During the first 11 months of 2021, exports were 43% more than those during the same period in 2020 (table 4).

higher than that in October and 86% higher than that in November 2020. The following listed prices are for cobalt metal in November, in dollars per pound.

| Type | Price range | Average price |
|----------------------------|---------------|---------------|
| U.S. spot ¹ | 27.90–30.50 | 29.01 |
| LME cash mean ² | Not available | 27.17 |

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).

Prices

In the first 11 months of 2021, the cobalt market experienced higher prices and lower London Metal Exchange (LME) stocks compared with those in 2020 (fig. 1, table 1). In November, the monthly average U.S. spot cobalt price increased by 8% from that in October and was 84% higher than that in November 2020. The monthly average LME cash mean price was 10%

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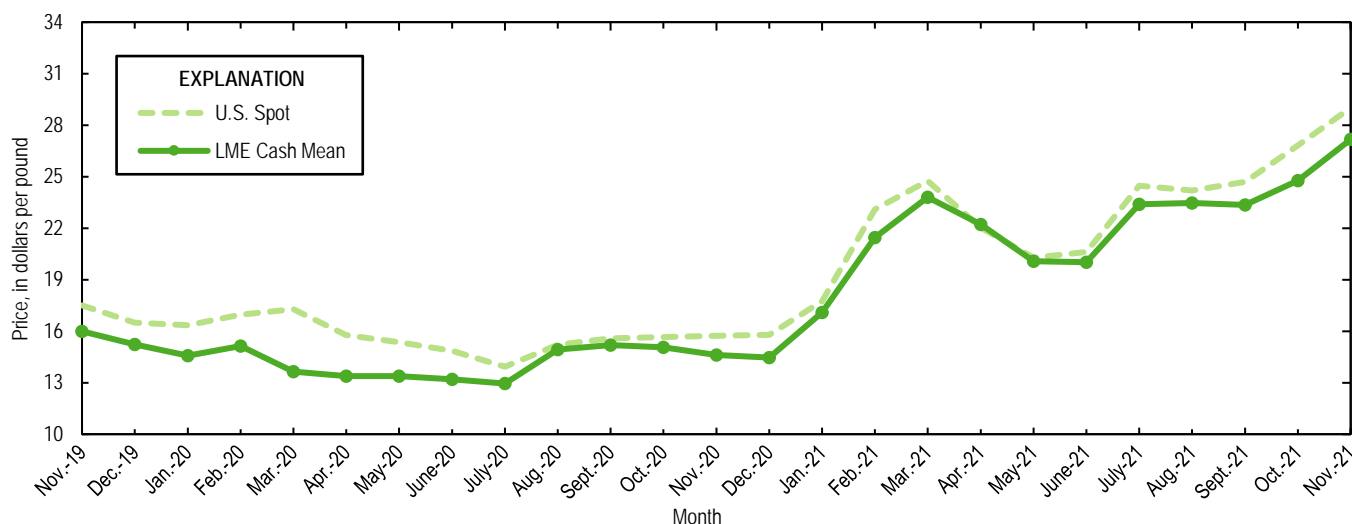


Figure 1. Average U.S. spot prices and LME cash mean prices for November 2019 through November 2021. Sources: S&P Global Platts Metals Week and London Metal Exchange.

TABLE 1
REPORTED STOCKS OF COBALT METAL, END OF PERIOD

(Metric tons, contained cobalt)

| Period | U.S. Government ² | LME ¹ | | Total |
|-----------|---------------------------------|-------------------|-----------------------|-------|
| | | U.S. warehouse | Non-U.S. warehouse | |
| 2020: | | | | |
| November | 302 | 82 | 369 | 451 |
| December | 302 | 82 | 369 | 451 |
| 2021: | | | | |
| January | 302 | 73 | 353 | 426 |
| February | 302 | 73 | 254 | 327 |
| March | 302 | 50 | 244 | 294 |
| April | 302 | 50 | 244 | 294 |
| May | 302 | 50 | 247 | 297 |
| June | 302 | 50 | 241 | 291 |
| July | 302 | 50 | 236 | 286 |
| August | 302 | 50 | 236 | 286 |
| September | 302 | 50 | 230 | 280 |
| October | 302 | 50 | 221 | 271 |
| November | 302 | 50 | 221 | 271 |

¹London Metal Exchange.

²Data from Defense Logistics Agency Strategic Materials.

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 ⁵ (metric tons) | Cobalt content, year to date ^{5,6} (metric tons) |
|--|-------------------------------|-----------------------------------|-------------------------------|-----------------------------------|----------------------------------|-----------------------------------|---|--|
| | Gross weight (metric tons) | Value ⁴ (thousands) | Gross weight (metric tons) | Value ⁴ (thousands) | Gross weight (metric tons) | Value ⁴ (thousands) | | |
| 2020: | | | | | | | | |
| November | 446 | \$14,100 | 91 | \$2,270 | 129 | \$1,370 | 552 | 9,100 |
| December | 546 | 22,100 | 100 | 2,370 | 84 | 875 | 642 | 9,740 |
| January–November | 7,600 ^r | 260,000 | 1,160 | 28,200 | 1,990 ^r | 22,600 ^r | 9,100 | XX |
| January–December | 8,140 | 282,000 | 1,260 | 30,600 | 2,070 | 23,500 | 9,740 | XX |
| 2021: | | | | | | | | |
| January | 507 | 16,900 | 137 | 3,600 | 204 | 2,370 | 674 | 674 |
| February | 223 | 7,880 | 175 | 4,170 | 179 | 2,170 | 409 | 1,080 |
| March | 1,000 | 39,900 | 176 | 5,300 | 269 | 2,740 | 1,210 | 2,290 |
| April | 784 | 32,300 | 159 | 5,540 | 298 | 3,860 | 985 | 3,280 |
| May | 508 | 21,800 | 172 | 6,370 | 335 | 4,430 | 722 | 4,000 |
| June | 740 | 31,200 | 236 | 7,410 | 392 | 4,130 | 1,020 | 5,020 |
| July | 437 | 20,700 | 202 | 6,600 | 330 | 3,320 | 675 | 5,690 |
| August | 801 | 37,800 | 187 | 6,620 | 216 | 2,300 | 1,000 | 6,690 |
| September | 577 | 28,500 | 174 | 6,590 | 199 | 3,070 | 766 | 7,460 |
| October | 722 | 35,200 | 168 | 6,040 | 309 | 4,160 | 937 | 8,400 |
| November: | | | | | | | | |
| Australia | -- | -- | -- | -- | -- | -- | -- | 203 |
| Belgium | (7) | 18 | 57 | 2,440 | 18 | 283 | 46 | 429 |
| Brazil | -- | -- | -- | -- | 9 | 86 | 3 | 168 |
| Canada | 108 | 4,990 | -- | -- | (7) | 6 | 108 | 782 |
| China | -- | -- | 1 | 42 | 1 | 24 | 1 | 99 |
| Finland | 33 | 1,750 | 124 | 4,360 | 39 | 1,000 | 141 | 1,370 |
| Germany | 25 | 2,010 | -- | -- | -- | -- | 25 | 108 |
| Italy | -- | -- | (7) | 3 | -- | -- | (7) | 9 |
| Japan | 21 | 778 | -- | -- | -- | -- | 21 | 1,050 |
| Korea, Republic of | -- | -- | 18 | 550 | -- | -- | 13 | 28 |
| Madagascar | 21 | 1,110 | -- | -- | -- | -- | 21 | 99 |
| Mexico | -- | -- | -- | -- | -- | -- | -- | 68 |
| Morocco | -- | -- | -- | -- | -- | -- | -- | 142 |
| Norway | 204 | 11,800 | -- | -- | -- | -- | 204 | 3,070 |
| Russia | 52 | 2,440 | -- | -- | -- | -- | 52 | 691 |
| South Africa | 3 | 175 | -- | -- | -- | -- | 3 | 43 |
| Taiwan | -- | -- | 39 | 1,710 | 106 | 1,060 | 55 | 224 |
| United Kingdom | 7 | 412 | 27 | 985 | 16 | 369 | 33 | 526 |
| Other | (7) | 24 | -- | -- | -- | -- | (7) | 13 |
| Total | 475 | 25,500 | 267 | 10,100 | 190 | 2,820 | 725 | 9,120 |
| January–November | 6,770 | 298,000 | 2,050 | 68,300 | 2,920 | 35,400 | 9,120 | 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.

⁵Customs value.

⁶Estimated from gross weights.

⁷May include revisions to previously published data.

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) |
| 2020: | | | | | | |
| November | 10 | \$421 | 116 | \$1,620 | 23 | \$3,380 |
| December | 46 | 2,100 | 132 | 1,100 | 18 | 3,670 |
| January–November | 226 | 10,700 | 1,300 | 14,100 | 301 | 40,700 |
| January–December | 272 | 12,800 | 1,430 | 15,200 | 319 | 44,400 |
| 2021: | | | | | | |
| January | 53 | 2,230 | 84 | 1,330 | 20 | 2,530 |
| February | 30 | 1,230 | 96 | 1,170 | 17 | 2,990 |
| March | 15 | 749 | 127 | 1,210 | 16 | 3,370 |
| April | 4 | 232 | 108 | 1,400 | 37 | 3,040 |
| May | 3 | 166 | 145 | 1,840 | 9 | 3,270 |
| June | 11 | 546 | 149 | 1,480 | 22 | 3,530 |
| July | 13 | 649 | 136 | 1,870 | 25 | 4,220 |
| August | 3 | 123 | 128 | 1,680 | 51 | 4,570 |
| September | 11 | 476 | 99 | 1,590 | 34 | 5,000 |
| October | 20 | 1,110 | 160 | 2,300 | 27 | 4,480 |
| November: | | | | | | |
| Belgium | 7 | 318 | 4 | 165 | (3) | 5 |
| Canada | (3) | 4 | 41 | 456 | 2 | 728 |
| China | 1 | 66 | 2 | 15 | 1 | 310 |
| France | -- | -- | 8 | 126 | 10 | 1,700 |
| Germany | (3) | 12 | 4 | 63 | 1 | 323 |
| Ireland | -- | -- | 51 | 238 | (3) | 51 |
| Japan | -- | -- | 2 | 16 | 1 | 85 |
| Taiwan | -- | -- | 6 | 232 | (3) | 3 |
| Tunisia | -- | -- | 6 | 57 | -- | -- |
| United Kingdom | 10 | 437 | 60 | 1,320 | 7 | 762 |
| Other | -- | -- | 3 | 19 | 1 | 183 |
| Total | 17 | 838 | 188 | 2,710 | 24 | 4,150 |
| January–November | 180 | 8,340 | 1,420 | 18,600 | 283 | 41,100 |

-- 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 ⁵ (metric tons) | Cobalt content, year to date ^{5,6} (metric tons) |
|------------------|--|-----------------------------------|-------------------------------|-----------------------------------|----------------------------------|-----------------------------------|---|--|
| | Gross weight (metric tons) | Value ⁴ (thousands) | Gross weight (metric tons) | Value ⁴ (thousands) | Gross weight (metric tons) | Value ⁴ (thousands) | | |
| 2020: | | | | | | | | |
| November | 157 | \$6,680 | (7) | \$11 | 38 | \$254 | 166 | 3,230 |
| December | 213 | 6,090 | 1 | 31 | -- | -- | 213 | 3,440 |
| January–November | 3,080 ^r | 91,600 ^r | 74 | 2,600 | 376 | 3,830 | 3,230 ^r | XX |
| January–December | 3,300 | 97,700 | 74 | 2,630 | 376 | 3,830 | 3,440 | XX |
| 2021: | | | | | | | | |
| January | 403 | 11,200 | 1 | 29 | -- | -- | 403 | 403 |
| February | 470 | 11,300 | 21 | 222 | (7) | 4 | 485 | 889 |
| March | 481 | 9,650 | 5 | 192 | (7) | 6 | 484 | 1,370 |
| April | 569 | 14,000 | 1 | 28 | (7) | 4 | 570 | 1,940 |
| May | 439 | 14,300 | 3 | 68 | -- | -- | 441 | 2,380 |
| June | 295 | 8,020 | 3 | 106 | 1 | 18 | 298 | 2,680 |
| July | 367 | 13,100 | 1 | 25 | 1 | 32 | 368 | 3,050 |
| August | 285 | 9,810 | 2 | 79 | 6 | 58 | 288 | 3,340 |
| September | 344 | 11,600 | 1 | 32 | -- | -- | 345 | 3,680 |
| October | 488 | 15,500 | 2 | 85 | (7) | 10 | 489 | 4,170 |
| November | 426 | 10,500 | 2 | 101 | -- | -- | 428 | 4,600 |
| January–November | 4,570 | 129,000 | 40 | 967 | 9 | 133 | 4,600 | XX |

^rRevised. XX Not applicable. -- Zero.

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

²May include other intermediate products of cobalt metallurgy and unwrought cobalt alloys.

³Cobalt acetates and cobalt chlorides.

⁴Free alongside ship (f.a.s.) value.

⁵Estimated from gross weights.

⁶May include revisions to previously published data.

⁷Less 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) |
| 2020: | | | | |
| November | 112 | \$10,700 | -- | -- |
| December | 135 | 12,600 | -- | -- |
| January–November | 1,240 ^r | 130,000 | 150 | \$521 |
| January–December | 1,380 | 142,000 | 150 | 521 |
| 2021: | | | | |
| January | 87 | 10,100 | -- | -- |
| February | 113 | 14,400 | -- | -- |
| March | 151 | 13,500 | -- | -- |
| April | 116 | 12,100 | 2 | 14 |
| May | 105 | 11,000 | -- | -- |
| June | 114 | 12,000 | -- | -- |
| July | 213 | 17,700 | -- | -- |
| August | 192 | 16,200 | -- | -- |
| September | 116 | 10,700 | (3) | 8 |
| October | 274 | 22,500 | -- | -- |
| November | 140 | 13,500 | -- | -- |
| January–November | 1,620 | 154,000 | 2 | 22 |

^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.