

# Mineral Industry Surveys

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## SILVER IN MAY 2016

U.S. mines produced 96,100 kilograms (kg) of silver in May, a slight decrease compared with April's revised production and a 6% increase compared with that in May 2015 (table 1). Based on unrounded data, the average daily silver production in May 2016 was 3,100 kg, a 3% decrease compared with 3,210 kg in April 2016 and a 3% increase from the full-year 2015 daily average of 2,980 kg.

### Prices

The average monthly Engelhard silver price continued the upward trend begun in January, increasing by 4% in May to \$16.95 per troy ounce, the highest monthly average since January 2015 (table 2, fig. 1). The daily silver price, however, trended downward throughout the month from a high of \$17.90 on May 2 to a low of \$16.08 at monthend.

### Technology

In a paper released in May, researchers from the University of Surrey in England reported that silver nanowires (SNW) could be a primary component in flexible touch screens, potentially boosting demand for silver (Jamasmie, 2016). Flexible touchscreens have been a long awaited technology among consumers since Samsung showcased a 4.5-inch flexible display in 2011 (Ziegler, 2011). Numerous companies were already looking to SNW materials as an indium tin oxide (ITO) alternative in consumer electronics displays. The companies currently marketing, and developing SNW materials reportedly agreed that SNWs are better electrical conductors and less costly than ITO (Reback, 2016).

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### References Cited

- Jamasmie, Cecilia, 2016, This new silver application may push demand prices even higher: [mining.com](http://www.mining.com), May 13. (Accessed July 18, 2016, at <http://www.mining.com/this-new-silver-application-may-push-demand-prices-even-higher/>.)
- Reback, Gedalyah, 2016, Flexible phone screens of silver and gold—Soon at CES?: [geektime.com](http://www.geektime.com), January 13. (Accessed July 27, 2016, at <http://www.geektime.com/2016/01/13/flexible-phone-screens-of-silver-and-gold-soon-at-ces/>)
- Ziegler, Chris, 2011, Samsung shows flexible and transparent displays at CES2011, [engadget.com](http://www.engadget.com), January 9. (Accessed July 27, 2016, at <https://www.engadget.com/2011/01/09/samsung-shows-flexible-and-transparent-displays-at-ces-2011-vid/>)

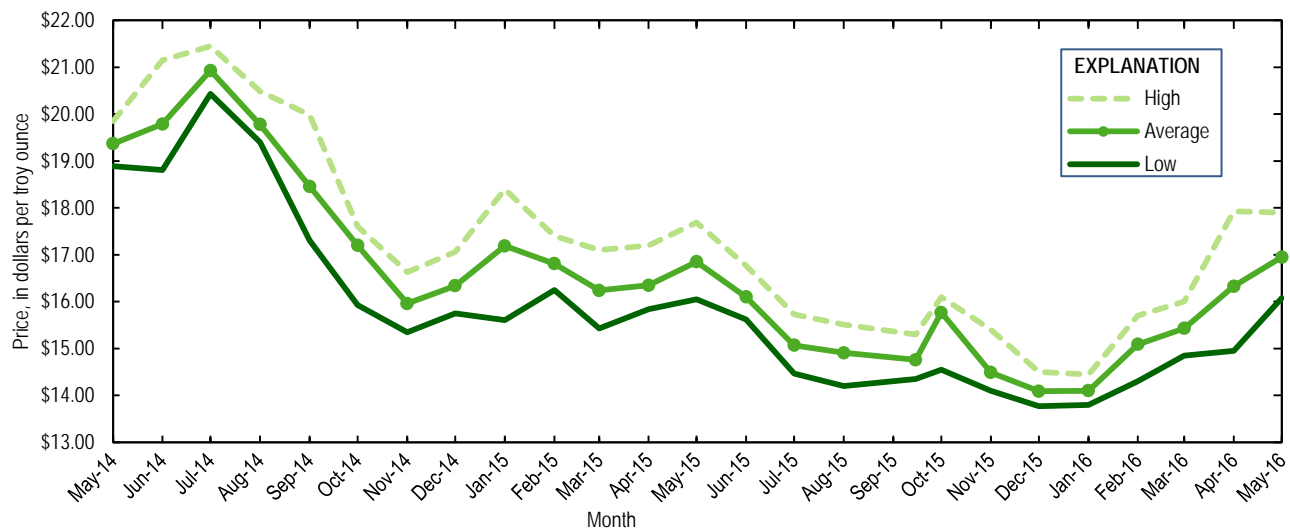


Figure 2. Engelhard monthly silver prices for May 2014 through May 2016. Source: Platts Metals Week.

TABLE 1  
MINE PRODUCTION OF RECOVERABLE SILVER  
IN THE UNITED STATES, BY STATE<sup>1</sup>

(Kilograms)

	Nevada	Other States <sup>2</sup>	Total
2015: <sup>P</sup>			
May	26,200	64,400	90,600
June	25,300	62,300	87,500
July	24,800	63,300	88,000
August	24,200	66,600	90,800
September	22,500	61,000	83,500
October	23,900	71,000	94,900
November	22,600	67,600	90,200
December	24,000	71,200 <sup>r</sup>	95,200 <sup>r</sup>
January–December	294,000	800,000 <sup>r</sup>	1,090,000
2016:			
January	22,500	71,800 <sup>r</sup>	94,300 <sup>r</sup>
February	21,600	75,600 <sup>r</sup>	97,300 <sup>r</sup>
March	22,200	76,100 <sup>r</sup>	98,300 <sup>r</sup>
April <sup>r</sup>	21,000	75,200	96,200
May	20,700	75,400	96,100
January–May	108,000	374,000	482,000

<sup>P</sup>Preliminary. <sup>r</sup>Revised.

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

<sup>2</sup>Includes Alaska, Arizona, California, Colorado, Idaho, Missouri, Montana, New Mexico, South Dakota, and Utah.

TABLE 2  
SILVER PRICES

(Dollars per troy ounce)

	Price	Date
<u>Engelhard:</u>		
<u>2015:</u>		
Low/date	13.77	Dec. 15
High/date	18.40	Jan. 21
Average	15.72	XX
<u>2016:</u>		
<u>March:</u>		
Low/date	14.85	Mar. 2
High/date	16.00	Mar. 18
Average	15.43	XX
<u>April:</u>		
Low/date	14.95	Apr. 1
High/date	17.93	Apr. 29
Average	16.33	XX
<u>May:</u>		
Low/date	16.08	May 31
High/date	17.90	May 2
Average	16.95	XX
<u>Year to date:</u>		
Low/date	13.80	Jan. 14
High/date	17.93	Apr. 29
Average	15.61	XX
<u>Handy and Harman:</u>		
2015, Average	15.72	XX
<u>2016:</u>		
March	15.46	XX
April	16.36	XX
May	16.95	XX
Year to date	15.58	XX
<u>London Final:<sup>1</sup></u>		
2015, Average	15.70	XX
<u>2016:</u>		
March	15.42	XX
April	16.26	XX
May	16.89	XX
Year to date	15.53	XX

XX Not available.

<sup>1</sup>Reported as "London Spot/US Equiv."

Source: Platts Metals Week.

TABLE 3  
U.S. IMPORTS OF SILVER<sup>1</sup>

Period and country	Bullion		Doré		Ores and concentrates <sup>2</sup> Ash and residues		Total	
	Silver content (kilograms)	Value (thousands)	Silver content (kilograms)	Value (thousands)	Silver content (kilograms)	Value (thousands)	Silver content (kilograms)	Value (thousands)
2015	4,660,000	\$2,410,000	1,280,000	\$998,000	253	\$61	5,940,000	\$3,410,000
2016:								
March	483,000	236,000	99,400	64,100	--	--	582,000	301,000
April	415,000	200,000	88,900	71,500	--	--	504,000	272,000
May:								
Argentina	--	--	3,550	4,130	--	--	3,550	4,130
Australia	1,210	338	--	--	--	--	1,210	338
Bolivia	5,070	2,530	--	--	--	--	5,070	2,530
Canada	165,000	90,300	2,360	1,300	--	--	167,000	91,600
China	5,010	2,800	--	--	--	--	5,010	2,800
Colombia	--	--	317	173	--	--	317	173
Guatemala	--	--	7,440	6,360	--	--	7,440	6,360
Italy	--	--	636	389	--	--	636	389
Korea, Republic of	31,000	15,000	--	--	--	--	31,000	15,000
Mexico	161,000	88,400	57,300	39,200	--	--	218,000	128,000
Nicaragua	--	--	381	209	--	--	381	209
Peru	14,000	7,620	46,100	51,000	--	--	60,100	58,600
Poland	20,000	10,400	--	--	--	--	20,000	10,400
Switzerland	--	--	550	433	--	--	550	433
Other	48	29	71	39	--	--	119	68
Total	402,000	217,000	119,000	103,000	--	--	5,200,000	321,000
January–May	2,080,000	1,020,000	507,000	370,000	(3)	6	2,590,000	1,400,000

-- Zero.

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

<sup>2</sup>Includes silver content of base metal ores and concentrates.

<sup>3</sup>Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 4  
U.S. IMPORTS OF REFINED SILVER<sup>1</sup>

Period and country	Other unwrought silver (gross weight)		Metal powder (gross weight)		Silver nitrate (gross weight)		Semi manufactured forms <sup>2</sup> (gross weight)		Waste and scrap (gross weight)	
	Quantity (kilograms)	Value (thousands)	Quantity (kilograms)	Value (thousands)	Quantity (kilograms)	Value (thousands)	Quantity (kilograms)	Value (thousands)	Quantity (kilograms)	Value (thousands)
2015	238,000	\$98,300	531,000	\$124,000	2,550	\$352	441,000	\$199,000	5,410,000	\$293,000
2016:										
March	34,600	12,300	31,000	2,740	332	25	27,300	12,400	495,000	19,200
April	15,300	7,840	30,900	6,290	78	21	68,200	29,600	610,000	21,200
May:										
Argentina	--	--	--	--	--	--	--	--	18,900	28
Belgium	--	--	1,500	68	100	4	--	--	38,100	237
Brazil	--	--	--	--	--	--	--	--	156,000	692
Canada	894	99	2,950	116	--	--	--	--	50,800	5,690
China	--	--	1,200	157	--	--	--	--	196,000	1,810
Costa Rica	--	--	--	--	--	--	--	--	637	164
Czech Republic	--	--	--	--	--	--	--	--	533	40
Dominican Republic	--	--	--	--	--	--	--	--	171	239
Egypt	--	--	--	--	--	--	--	--	14,400	68
Germany	291	186	3	11	--	--	5	16	113,000	15,600
Greece	--	--	--	--	--	--	--	--	335	49
Guatemala	--	--	--	--	--	--	--	--	12,300	130
Hong Kong	--	--	--	--	--	--	--	--	17,100	82
Hungary	--	--	3,570	162	--	--	--	--	--	--
India	--	--	34	19	--	--	113	28	946	84
Japan	20	8	27,300	2,970	--	--	45	4	--	--
Luxembourg	--	--	--	--	--	--	--	--	34	1,040
Mexico	6,170	2,960	--	--	--	--	1,810	75	45,300	804
Singapore	--	--	--	--	--	--	--	--	1,800	66
Taiwan	--	--	60	4	--	--	6	8	586	31
United Kingdom	(3)	2	--	--	--	--	--	--	2,030	62
Venezuela	--	--	--	--	--	--	--	--	1,020	2
Other	89	58	69	22	--	--	134	59	473	431
Total	7,460	3,310	36,700	3,530	100	4	2,120	190	671,000	27,400
January-May	99,100	42,000	170,000	20,900	1,070	96	139,000	59,800	2,790,000	98,800

-- Zero.

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

<sup>2</sup>Containing 99.5% or more by weight of silver.

<sup>3</sup>Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 5  
U.S. EXPORTS OF SILVER<sup>1</sup>

Period and country	Bullion		Doré		Ores and concentrates <sup>2</sup>		Total	
	Silver content (kilograms)	Value (thousands)	Silver content (kilograms)	Value (thousands)	Silver content (kilograms)	Value (thousands)	Silver content (kilograms)	Value (thousands)
2015	781,000	\$557,000	34,400	\$18,300	2,500	\$8,480	818,000	\$583,000
2016:								
March	36,000	20,700	3,590	1,790	2,030	3,410	41,600	25,900
April	7,860	4,720	3,300	1,650	1,000	1,310	12,200	7,680
May:								
Australia	1,940	951	--	--	--	--	1,940	951
Canada	765	466	--	--	--	--	765	466
Germany	2,750	692	50	32	--	--	2,800	724
Hong Kong	433	399	--	--	--	--	433	399
Korea, Republic of	--	--	--	--	1,110	2,570	1,110	2,570
Malaysia	285	100	--	--	13	9	298	109
Mexico	377	209	2	4	--	--	379	213
New Zealand	27	18	332	177	--	--	359	195
Singapore	318	252	533	312	--	--	851	564
Sweden	334	308	--	--	--	--	334	308
Switzerland	401	155	383	243	--	--	784	398
United Kingdom	181	95	1,410	774	--	--	1,590	869
Other	420	276	--	--	4	4	424	280
Total	8,230	3,920	2,710	1,540	1,130	2,580	12,100	8,040
January–May	138,000	75,300	13,900	7,080	4,450	8,100	156,000	90,500

-- Zero.

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

<sup>2</sup>Includes silver content of base metal ores and concentrates.

Source: U.S. Census Bureau.

TABLE 6  
U.S. EXPORTS OF REFINED SILVER<sup>1</sup>

Period and country	Other unwrought silver (gross weight)		Metal powder (gross weight)		Silver nitrate (gross weight)		Semi manufactured forms <sup>2</sup> (gross weight)		Waste and scrap (gross weight)	
	Quantity (kilograms)	Value (thousands)	Quantity (kilograms)	Value (thousands)	Quantity (kilograms)	Value (thousands)	Quantity (kilograms)	Value (thousands)	Quantity (kilograms)	Value (thousands)
2015	141,000	\$127,000	617,000	\$375,000	28,900	\$3,170	265,000	\$140,000	14,700,000	\$1,430,000
2016:										
March	5,860	2,760	101,000	54,600	6,480	334	45,000	23,400	1,490,000	146,000
April	83,100	43,500	45,200	27,200	5,360	261	83,300	56,300	1,110,000	132,000
May:										
Australia	--	--	--	--	--	--	107	60	--	--
Austria	308	200	--	--	--	--	--	--	--	--
Belgium	20	21	146	96	--	--	--	--	134,000	8,350
Brazil	--	--	163	163	--	--	--	--	--	--
Canada	8,650	4,570	995	995	4,470	237	72,400	41,000	139,000	11,500
China	102	64	5,320	3,010	19	3	985	614	2,550	1,660
France	52	32	2,780	1,740	--	--	261	147	--	--
Germany	58	58	1,400	802	--	--	267	184	208,000	14,500
Hong Kong	2,230	1,290	1,260	851	--	--	183	206	582	425
India	2,800	1,230	--	--	--	--	960	571	--	--
Ireland	--	--	10	8	--	--	2,370	1,130	--	--
Italy	--	--	1,420	1,420	--	--	50	32	161,000	47,500
Japan	--	--	4,250	2,850	--	--	163	73	269,000	12,300
Korea, Republic of	--	--	2,960	1,880	18	3	760	427	90	1,210
Luxembourg	--	--	--	--	--	--	--	--	29	801
Malaysia	--	--	140	101	--	--	375	212	--	--
Mexico	322	242	838	813	326	131	4,870	2,920	17,800	2,220
Netherlands	(3)	4	1,820	1,080	--	--	--	--	--	--
Singapore	--	--	5,700	3,460	--	--	248	140	10	5
Spain	--	--	--	--	--	--	639	319	--	--
Sweden	--	--	--	--	--	--	569	246	41,200	1,820
Switzerland	11	26	--	--	--	--	19	11	20,300	14,300
Taiwan	--	--	13,900	8,230	--	--	5	12	--	--
Thailand	322	146	--	--	--	--	307	175	--	--
United Arab Emirates	44	18	--	--	--	--	356	187	--	--
United Kingdom	3	10	1,850	1,330	--	--	723	381	6,890	3,180
Other	542	253	194	132	15	4	1,170	666	157	181
Total	15,500	8,160	45,200	28,900	4,850	378	87,800	49,700	1,000,000	120,000
January–May	116,000	61,100	377,000	209,000	19,100	1,400	313,000	192,000	5,980,000	637,000

-- Zero.

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

<sup>2</sup>Containing 99.5% or more by weight of silver.

<sup>3</sup>Less than ½ unit.

Source: U.S. Census Bureau.