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2021 Uranium Marketing Annual Report

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Introduction

In this report, EIA provides detailed data on uranium marketing activities in the United States from 2016 through 2021 and summary data back to 2000.

Data in this report are based on information reported on Form EIA-858, *Uranium Marketing Annual Survey*. Form EIA-858 survey collects data on contracts, deliveries (during the report year and projected for the next 10 years), enrichment services purchased, inventories, use in fuel assemblies, feed deliveries to enrichers (during the report year and projected for the next 10 years), and unfilled market requirements for the next 10 years.

Previous editions of this report are available on our website.

Definitions for terms in this report are available in our Energy Glossary.

Uranium purchases and prices

Owners and operators of U.S. civilian nuclear power reactors (civilian owner/operators, or COOs) purchased a total of 46.7 million pounds U_3O_8e (equivalent¹) of deliveries from U.S. suppliers and foreign suppliers during 2021, at a weighted-average price of \$33.91 per pound U_3O_8e . The 2021 total of 46.7 million pounds U_3O_8e was 4% lower than the 2020 total of 48.9 million pounds U_3O_8e . The 2021 weighted-average price of \$33.91 per pound U_3O_8e . The 2021 weighted-average price of \$33.91 per pound U_3O_8e was 2% higher than the 2020 weighted-average price of \$33.27 per pound U_3O_8e (Table 1).

The vast majority of uranium delivered in 2021 was of foreign-origin with Kazakhstan the top source at 35% of total deliveries. Canadian-origin material accounted for the second-most material at 14.8% of total and Australia third with 14.4% of total deliveries (Table 3).

COOs purchased three material types of uranium for 2021 deliveries from 32 sellers (Table 4, Table 24). During 2021, 19% of the uranium delivered was purchased under spot contracts at a weighted-average price of \$30.56 per pound. The remaining 81% was purchased under long-term contracts at a weighted-average price of \$34.71 per pound (Table 7). Spot contracts are contracts with a one-time uranium delivery (usually) for the entire contract, and the delivery typically occurs within one year of contract execution (signed date). Long-term contracts are contracts with one or more uranium deliveries to occur at least a year following the contract execution (signed date) and as such may reflect some agreements of short and medium terms as well as longer term.

New and future uranium contracts

In 2021, COOs signed 27 new purchase contracts with deliveries in 2021 of 3.6 million pounds U_3O_8e at a weighted-average price of \$32.53 per pound (Table 8).

¹Uranium quantities are expressed in the unit of measure U_3O_8e (equivalent). U_3O_8e is triuranium octoxide (or uranium concentrate) and the equivalent uranium-component of uranium hexafluoride (UF₆) and enriched uranium.

COOs report minimum and maximum quantities of future deliveries under contract to allow for the option of either decreasing or increasing quantities. At the end of 2021, the maximum uranium deliveries for 2022 through 2031 under existing purchase contracts for COOs totaled 180 million pounds U_3O_8e (Table 10). Also at the end of 2021, unfilled uranium market requirements for 2022 through 2031 totaled 182 million pounds U_3O_8e (Table 11). These contracted deliveries and unfilled market requirements combined represent the maximum anticipated market requirements of 362 million pounds U_3O_8e over the next 10 years for COOs.

Uranium feed, enrichment services, uranium loaded

In 2021, COOs delivered 34 million pounds U_3O_8e of natural uranium feed to U.S. and foreign enrichers. U.S. enrichment suppliers received 43% of the feed, and the remaining 57% was delivered to foreign enrichment suppliers (Table 13). Fourteen million separative work units (SWU)² were purchased under enrichment services contracts from 11 sellers in 2021 (Table 16, Table 25). The average price paid by the COOs for the 14 million SWU was \$99.54 per SWU in 2021, with both quantity and price virtually identical to 2020. In 2021, the U.S.-origin SWU share was 19%, and the foreign-origin SWU accounted for the remaining 81%. Foreign-origin SWU included 28% from Russia, 17% from the United Kingdom, 13% from Germany and 11% from the Netherlands (Table 16).

Uranium in fuel assemblies loaded into U.S. civilian nuclear power reactors during 2021 contained 44.4 million pounds U_3O_8e , compared with 48.6 million pounds U_3O_8e loaded during 2020. During 2021, 7% of the uranium loaded was U.S.-origin uranium and 93% was foreign-origin uranium (Table 18).

Uranium foreign purchases/sales and inventories

U.S. suppliers (brokers, converters, enrichers, fabricators, producers, and traders) and COOs purchase uranium each year from foreign suppliers. Together, foreign purchases totaled 41.3 million pounds U_3O_8e in 2021, and the weighted-average price was \$33.26 per pound U_3O_8e (Table 19). U.S. suppliers and COOs also sold uranium to foreign suppliers. Together, foreign sales totaled 7.5 million pounds U_3O_8e in 2021, and the weighted-average price was \$35.82 per pound U_3O_8e (Table 21).

Year-end commercial uranium inventories represent ownership of uranium in different stages of the nuclear fuel cycle (in-process for conversion, enrichment, or fabrication) at domestic or foreign nuclear fuel facilities. Total U.S. commercial inventories (including inventories owned by COOs, U.S. brokers, converters, enrichers, fabricators, producers, and traders) were 141.7 million pounds U₃O₈e at the end of 2021, up 8% from 131 million pounds at the end of 2020. Commercial uranium inventories owned at the end of 2021 by COOs totaled 108.5 million pounds U₃O₈e, a 2% increase in inventories from the year-end 2020 level. Uranium inventories owned by U.S. suppliers (converters, enrichers, fabricators,

² Separative work unit (SWU): The standard measure of enrichment services. The effort expended in separating a mass F of feed of assay x_f into a mass P of product assay x_p and waste of mass W and assay x_w is expressed in terms of the number of separative work units needed, given by the expression SWU = WV(x_w) + PV(x_p) - FV(x_f), where V(x) is the *value function*, defined as V(x) = (1 - 2x) 1n((1 - x)/x).

producers, brokers and traders) totaled 33.2 million pounds U_3O_8e at the end of 2021, up 37% from 2020 year-end levels (Table 22).

Delivery year	Total purchased	Purchased from U.S. producers	Purchased from U.S. brokers and traders	Purchased from other owners and operators of U.S. civilian nuclear power reactors, other U.S. suppliers, (and U.S. government for 2007) ¹	Purchased from foreign suppliers	U.Sorigin uranium	Foreign-origin uranium	Spot contracts	Short, medium, and long-term contracts ³
2000	51.8	3.6	9.1	8.8	30.4	13.3	38.6	10.4	39.1
2001	55.4	2.3	11.7	11.4	30.0	13.2	42.2	14.4	40.0
2002	52.7	1.5	13.4	5.7	32.2	6.2	46.5	8.6	41.4
2003	56.6	0.6	10.5	8.3	37.2	10.2	46.4	8.2	46.7
2004	64.1	0	13.2	12.2	38.7	12.3	51.8	9.2	53.3
2005	65.7	W	10.4	W	39.4	11.0	54.7	6.9	58.8
2006	66.5	0	13.9	12.6	40.0	10.8	55.7	6.3	59.4
2007	51.0	0	9.8	7.6	33.5	4.0	47.0	6.6	43.7
2008	53.4	0.6	9.4	6.3	37.2	7.7	45.6	8.7	42.8
2009	49.8	W	11.1	W	36.8	7.1	42.8	8.1	41.0
2010	46.6	0.4	11.7	1.9	32.6	3.7	42.9	8.2	37.9
2011	54.8	0.6	14.8	1.1	38.4	5.2	49.6	12.0	42.3
2012	57.5	W	11.5	W	37.6	9.8	47.7	8.1	48.9
2013	57.4	W	12.8	W	37.4	9.5	47.9	11.3	46.1
2014	53.3	W	17.1	W	34.4	3.3	50.0	14.5	38.8
2015	56.5	W	13.9	W	38.2	3.4	53.1	11.3	43.2
2016	50.6	W	7.9	W	39.5	5.4	45.2	10.6	37.0
2017	43.0	W	4.5	W	34.4	2.9	40.1	6.2	36.6
2018	40.3	W	3.9	W	33.0	3.9	36.4	6.5	33.4
2019	48.3	W	4.4	W	39.2	¥	W	10.5	37.8
2020	48.9	W	6.4	W	38.4	¥	W	11.8	37.0
2021	46.7	W	W	W	41.6	2.5	44.3	9.0	37.8

Table S1a. Uranium purchased by owners and operators of U.S. civilian nuclear power reactors, 2000–2021

- - = Not applicable. W = Data withheld to avoid disclosure of individual company data. NA = Not available.

¹Includes purchases between owners and operators of U.S. civilian nuclear power reactors along with purchases from other U.S. suppliers which are U.S. converters, enrichers, and fabricators.

² Spot Contract: A one-time delivery (usually) of the entire contract to occur within one year of contract execution (signed date).

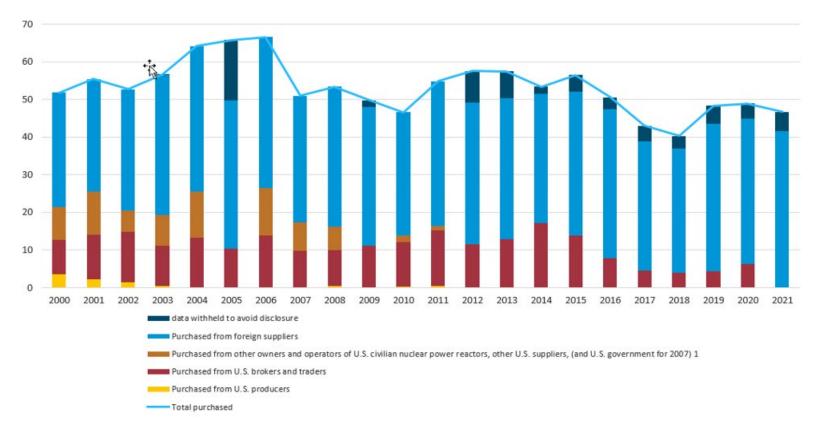
³ Short-, Medium-, and Long-Term Contracts: One or more deliveries to occur after a year following contract execution (signed date).

Notes: Other U.S. Suppliers: are U.S. converters, enrichers, and fabricators. Totals may not equal sum of components because of independent rounding.

Sources: U.S. Energy Information Administration: Linanium Industry Annual, Tables 10, 11 and 16, 2000-2002. Form EIA-858, Linanium Markating Annual Survey, 2003-2021

Figure S1. Uranium purchased by owners and operators of U.S. civilian nuclear power reactors, 2000–2021

million pounds U₃O₈e equivalent



¹ Includes purchases between owners and operators of U.S. civilian nuclear power reactors along with purchases from other U.S. suppliers which are U.S. converters, enrichers, and fabricators.

Sources: U.S. Energy Information Administration: Uranium Industry Annual reports, 2000–2002 and Form EIA-858, Uranium Marketing Annual Survey 2003–2021.

Delivery year	Total purchased (w eighted- average price)	Purchased from U.S. producers	Purchased from U.S. brokers and traders	Purchased from other owners and operators of U.S. civilian nuclear power reactors, other U.S. suppliers, (and U.S. government for 2007) ¹	Purchased from foreign suppliers	uranium (weighted-	Foreign-origin uranium (weighted- average price)	Spot contracts ² (weighted- average price)	Short-, medium-, and long-term contracts ³ (weighted- average price)
2000	11.04	14.81	11.28	10.45	10.65	11.52	10.88	8.54	11.70
2001	10.15	13.26	10.44	9.98	9.86	10.50	10.05	7.92	10.96
2002	10.36	13.03	10.21	W	10.37	10.89	10.29	9.29	10.58
2003	10.81	14.17	11.05	10.16	10.82	10.81	10.81	10.10	10.94
2004	12.61		12.08	11.30	13.15	11.87	12.76	14.77	12.24
2005	14.36	W	13.76	W	14.70	15.11	14.21	20.04	13.70
2006	18.61		20.49	W	18.62	17.85	18.75	39.48	16.38
2007	32.78		34.10	W	32.36	28.89	33.05	88.25	24.45
2008	45.88	75.16	39.62	W	48.49	59.55	43.47	66.95	41.59
2009	45.86	W	41.88	W	46.68	48.92	45.35	46.45	45.74
2010	49.29	47.13	44.98	42.24	51.30	45.25	49.64	43.99	50.43
2011	55.64	58.12	53.29	52.50	56.60	52.12	55.98	54.69	55.90
2012	54.99	W	54.44	W	54.40	59.44	54.07	51.04	55.65
2013	51.99	W	50.44	W	51.93	56.37	51.13	43.83	54.00
2014	46.16	W	42.90	W	47.62	48.11	46.03	36.64	49.73
2015	44.13	52.35	44.67	W	44.66	43.86	44.14	36.80	46.04
2016	42.43	48.86	50.56	W	44.85	43.92	42.26	29.62	46.11
2017	38.80	48.77	41.80	20.02	41.16	35.55	39.04	22.36	40.99
2018	38.81	46.59	52.51	W	39.82	45.26	38.11	27.51	40.99
2019	35.59	W	48.16	W	36.28	W	W	27.89	37.73
2020	33.27	W	30.09	W	35.27	W	W	28.70	34.74
2021	33.91	W	W	W	33.25	43.04	33.40	30.56	34.71

Table S1b. Weighted-average price of uranium purchased by owners and operators of U.S. civilian nuclear power reactors, 2000–2021

- - = Not applicable. W = Data withheld to avoid disclosure of individual company data. NA = Not available.

¹Includes purchases between owners and operators of U.S. civilian nuclear power reactors along with purchases from other U.S. suppliers, which are U.S. converters, enrichers, and fabricators.

² Spot Contract: A one-time delivery (usually) of the entire contract to occur within one year of contract execution (signed date).

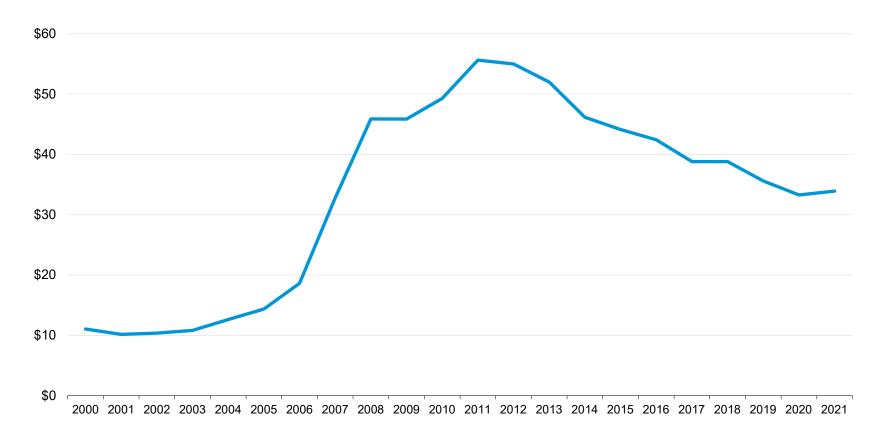
³ Short-, Medium-, and Long-Term Contracts: One or more deliveries to occur after a year following contract execution (signed date).

Notes: Cliner LLS Suppliers are U.S. converters, enrichers, and fabricators. Totals may not equal sum of components because of independent rounding. Weighted-average prices are not adjusted for inflation.

Sources: U.S. Energy Information Administration: 1/ ranium Industry Annual, Tables 10, 11 and 16, 2000-2002. Form EIA-858, Liranium Marketing Annual Survey, 2002-2021

Figure S2. Weighted-average price of uranium purchased by owners and operators of U.S. civilian nuclear power reactors, 2000–2021

dollars per pound U₃O₈e equivalent



Sources: U.S. Energy Information Administration: *Uranium Industry Annual* reports, 2000-2002. Form EIA-858, *Uranium Marketing Annual Survey*, 2003-2021

Table S2. Uranium feed deliveries, enrichment services, and uranium loaded by owners and operators of U.S. civilian nuclear power reactors, 2000–2021

	Million pounds l	U3O8 equivalent	Million se			
Year	Feed deliveries by owners and operators of U.S. civilian nuclear power reactors	Uranium in fuel assemblies loaded into U.S. civilian nuclear power reactors	U.Sorigin enrichment services purchased	Foreign-origin enrichment services purchased	Total purchased enrichment services	Average price (US\$ per SWU)
2000	47.8	51.5	5.2	6.6	11.8	-
2001	47.3	52.7	1.3	9.1	10.4	-
2002	54.7	57.2	1.7	9.8	11.5	-
2003	49.3	62.3	1.7	10.3	12.0	-
2004	53.4	50.1	1.4	10.4	11.8	-
2005	52.9	58.3	1.1	10.3	11.4	-
2006	56.6	51.7	1.6	11.8	13.4	106.57
2007	49.0	45.5	1.5	12.7	14.2	114.58
2008	43.4	51.3	1.9	10.7	12.6	121.33
2009	51.9	49.4	4.1	13.1	17.2	130.78
2010	45.5	44.3	2.3	11.5	13.8	136.14
2011	51.3	50.9	2.4	12.4	14.8	136.12
2012	52.1	49.5	3.3	12.3	15.6	141.36
2013	47.4	42.6	3.9	8.5	12.3	142.22
2014	41.9	50.5	3.8	9.2	12.9	140.75
2015	41.4	47.4	4.1	8.8	12.9	136.88
2016	43.1	42.5	4.8	9.5	14.3	131.00
2017	33.8	45.5	5.6	7.3	12.9	125.43
2018	33.4	50.4	5.0	10.0	15.0	115.42
2019	38.3	43.2	5.3	8.0	13.3	109.54
2020	34.4	48.6	4.1	10.0	14.1	99.51
2021	34.2	44.4	2.7	11.5	14.2	99.54

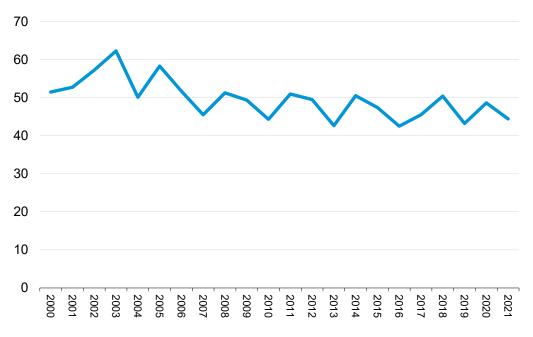
- = No data reported.

Notes: Totals may not equal sum of components because of independent rounding. Average prices are not adjusted for inflation.

Sources: U.S. Energy Information Administration: *Liranium Industry Annual* , Tables 22, 23, 25, and 27, 2000-2002. Form EIA-858, *Liranium Markating* Annual Survey , 2003-2021

Figure S3. Uranium loaded into U.S. civilian nuclear power reactors, 2000–2021

million pounds U₃O₈e equivalent

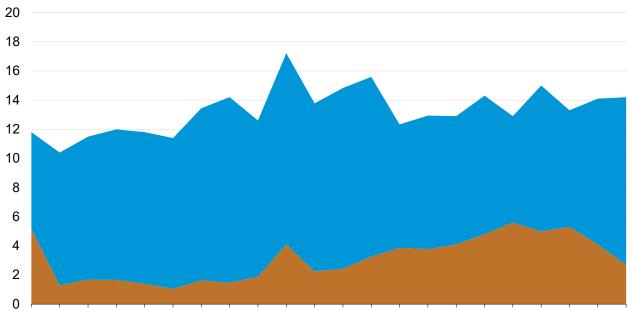


Uranium in fuel assemblies loaded into U.S. civilian nuclear power reactors

Sources: U.S. Energy Information Administration: *Uranium Industry Annual* reports, 2000-2002. Form EIA-858, *Uranium Marketing Annual Survey*, 2003-2021

Figure S4. Uranium enrichment services purchased by owners and operators of U.S. civilian nuclear power reactors, 2000–2021

million separative work units (SWU)



2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021

U.S.-origin enrichment services purchased

Sources: U.S. Energy Information Administration: *Uranium Industry Annual* reports, 2000-2002. Form EIA-858, *Uranium Marketing Annual Survey*, 2003-2021

Table S3a. Foreign purchases, foreign sales, and uranium inventories owned by U.S. suppliers and owners and operators of U.S. civilian nuclear power reactors, 2000–2021

Delivery year	Foreign purchases by U.S. suppliers	Foreign purchases by owners and operators of U.S. civilian nuclear power reactors	Total foreign purchases	U.S. broker and trader purchases from foreign suppliers	Foreign sales	U.S. supplier owned uranium inventories	Owners and operators of U.S. civilian nuclear power reactors owned uranium inventories	Total commercial uranium inventories
2000	17.4	27.5	44.9	15.8	13.6	56.5	54.8	111.3
2001	18.7	28.0	46.7	18.3	11.7	48.1	55.6	103.8
2002	22.7	30.0	52.7	18.6	15.4	48.7	53.5	102.1
2003	18.2	34.9	53.0	15.8	13.2	39.9	45.6	85.5
2004	30.2	35.9	66.1	26.4	13.2	37.5	57.7	95.2
2005	27.0	38.5	65.5	24.0	20.5	29.1	64.7	93.8
2006	26.1	38.7	64.8	24.0	18.7	29.1	77.5	106.6
2007	21.6	32.5	54.1	18.9	14.8	31.2	81.2	112.4
2008	24.1	32.9	57.1	21.3	17.2	27.0	83.0	110.0
2009	26.7	32.2	58.9	26.8	23.5	26.8	84.8	111.5
2010	25.0	30.4	55.3	24.7	23.1	24.7	86.5	111.3
2011	19.3	35.1	54.4	19.6	16.7	22.3	89.8	112.1
2012	20.2	36.0	56.2	20.2	18.0	23.3	97.6	120.9
2013	23.2	34.1	57.3	w	18.9	21.3	113.1	134.4
2014	24.2	34.4	58.6	w	20.0	18.7	114.0	132.7
2015	27.2	36.9	64.1	26.1	25.7	14.3	121.1	135.5
2016	22.1	28.5	50.7	22.1	17.2	16.7	128.0	144.6
2017	16.9	25.2	42.1	14.1	14.0	17.8	123.9	141.7
2018	18.3	23.2	41.5	18.9	13.9	19.3	111.2	130.5
2019	21.2	21.8	42.9	20.8	11.7	17.5	113.1	130.7
2020	15.0	24.6	39.6	14.4	9.9	24.2	106.7	131.0
2021	17.0	24.3	41.3	16.6	7.5	33.2	108.5	141.7

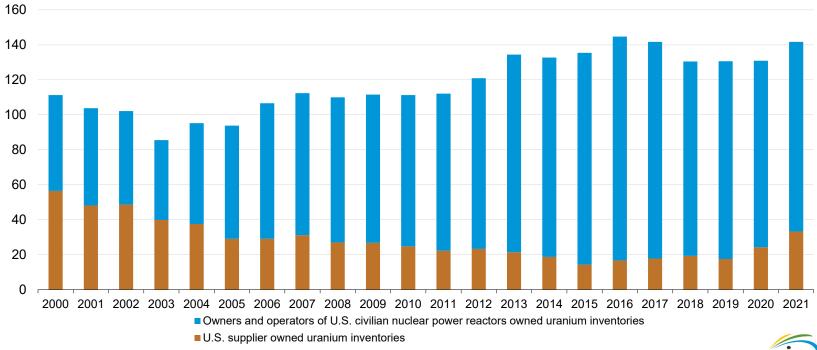
W = Data withheld to avoid disclosure of individual company data.

Notes: Totals may not equal sum of components because of independent rounding. Foreign purchase: A uranium purchase of foreign-origin uranium from a firm located outside the United States. Foreign sale: A uranium sale to a firm located outside the United States.

Sources: U.S. Energy Information Administration: Uranium Industry Annual, Tables 28, 29, 30 and 31, 2000–2002. Form EIA-858, Uranium Marketing Annual Survey, 2003–2021



million pounds U₃O₈e equivalent



Sources: Energy Information Administration: *Uranium Industry Annual* reports, 2000–2002. Form EIA-858 *Uranium Marketing Annual Survey*, 2003–2021



Table S3b. Weighted-average price of foreign purchases and foreign sales by U.S. suppliers and owners and operators of U.S. civilian nuclear power reactors, 2000–2021

Delivery year	Foreign purchases by U.S. suppliers	by owners and operators of U.S. civilian nuclear power reactors	Total foreign purchases (weighted- average price)	trader purchases from foreign suppliers (weighted- average price)	Foreign sales (weighted-average price)
2000	8.45	10.68	9.84	8.61	8.48
2001	8.98	9.87	9.51	8.87	8.79
2002	9.65	10.37	10.05	9.59	10.04
2003	10.19	10.79	10.59	10.19	10.39
2004	11.21	13.13	12.25	11.15	12.63
2005	15.11	14.63	14.83	15.68	20.70
2006	20.28	18.66	19.31	21.61	32.87
2007	36.59	32.58	34.18	39.88	55.47
2008	33.30	47.46	41.30	35.39	45.62
2009	34.80	46.55	41.23	34.88	41.48
2010	41.30	51.69	47.01	41.23	42.78
2011	48.80	56.87	54.00	49.27	49.05
2012	46.80	54.08	51.44	47.08	47.57
2013	43.25	51.64	48.24	w	42.75
2014	39.13	47.62	44.11	W	35.69
2015	40.68	44.70	42.96	40.77	39.29
2016	36.03	44.08	40.45	36.09	33.66
2017	31.11	41.12	37.09	29.93	25.19
2018	30.90	39.32	35.73	30.84	26.02
2019	33.17	36.28	34.77	33.43	27.16
2020	31.27	35.33	33.79	31.51	29.57
2021	33.19	33.30	33.26	33.53	35.82

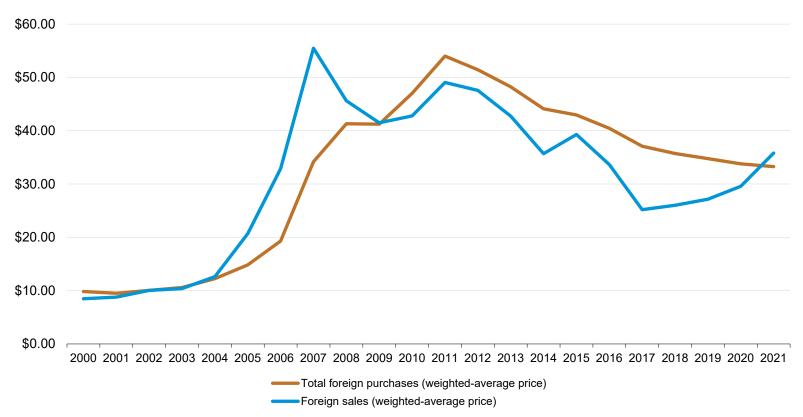
W = Data withheld to avoid disclosure of individual company data.

Notes: Totals may not equal sum of components because of independent rounding. Foreign purchase: A uranium purchase of foreign-origin uranium from a firm located outside the United States. Foreign sale: A uranium sale to a firm located outside the United States. Weighted-average prices are not adjusted for inflation.

Sources: U.S. Energy Information Administration: *Linanium Industry Annual*, Tables 28, 29, 30, and 31, 2000–2002. Form EIA-858, *Linanium Markating Annual Survey*, 2003–2021

Figure S6. Weighted-average price of foreign purchases and foreign sales of uranium, 2000–2021

dollars per pound U₃O₈e equivalent



Sources: U.S. Energy Information Administration: *Uranium Industry Annual* reports, 2000–2002. Form EIA-858, *Uranium Marketing Annual Survey*, 2003–2021

Table 1. Uranium purchased by owners and operators of U.S. civilian nuclear power reactors by supplier and delivery year,2016–2021

thousand pounds U_3O_8 equivalent; dollars per pound U_3O_8 equivalent

Deliveries	2016	2017	2018	2019	2020	2021
Purchased from U.S. producers						****
Purchases of U.Sorigin and foreign- origin uranium	2,169	1,762	1,520	w	w	W
Weighted-average price	48.86	48.77	46.59	W	W	W
Purchased from U.S. brokers and traders						
Purchases of U.Sorigin and foreign- origin uranium	7,862	4,548	3,897	4,395	6,412	W
Weighted-average price	50.56	51.80	52.51	48.16	30.09	W
Purchased from other owners and operator	s of U.S. civilian nucle	ar power reactors				
Purchases	W	W	W	W	W	W
Weighted-average price	W	W	W	W	W	W
Purchased from other U.S. suppliers						
Purchases of U.Sorigin and foreign- origin uranium	W	W	W	W	W	W
Weighted-average price	W	W	W	W	W	W
Purchased from foreign suppliers						
Purchases of U.Sorigin and foreign- origin uranium	39,469	34,384	33,044	39,208	38,418	41,583
Weighted-average price	44.85	41.16	39.82	36.28	35.27	33.35
Total purchased by owners and operators o	f U.S. civilian nuclear	oower reactors				
Purchases of U.Sorigin and foreign- origin uranium	50,595	43,033	40,293	48,328	48,934	46,736
Weighted-average price	42.43	38.80	38.81	35.59	33.27	33.91

W = Data withheld to avoid disclosure of individual company data.

-- = Not applicable.

Notes: Other U.S. Suppliers are U.S. converters, enrichers, and fabricators. Totals may not equal sum of components because of independent rounding. Weightedaverage prices are not adjusted for inflation.

Source: U.S. Energy Information Administration, Form EIA-858, Uranium Marketing Annual Survey (2016–2021)

Figure 1. Uranium purchased by owners and operators of U.S. civilian nuclear power reactors by supplier and delivery year, 2016–2021

thousand pounds U₃O₈e equivalent

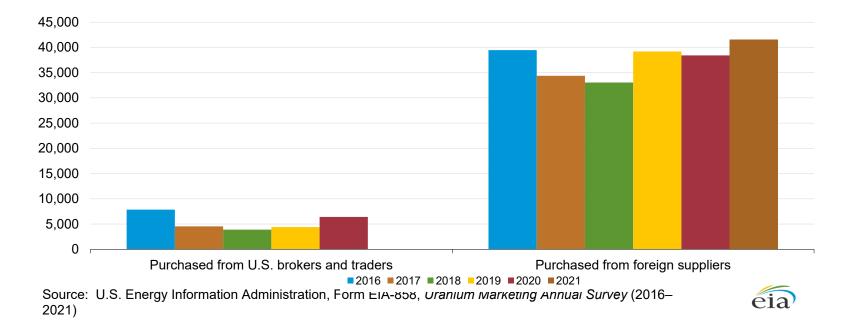


Figure 2. Weighted-average price of uranium purchased by owners and operators of U.S. civilian nuclear power reactors by supplier and delivery year, 2016–2021

dollars per pound U₃O₈e equivalent

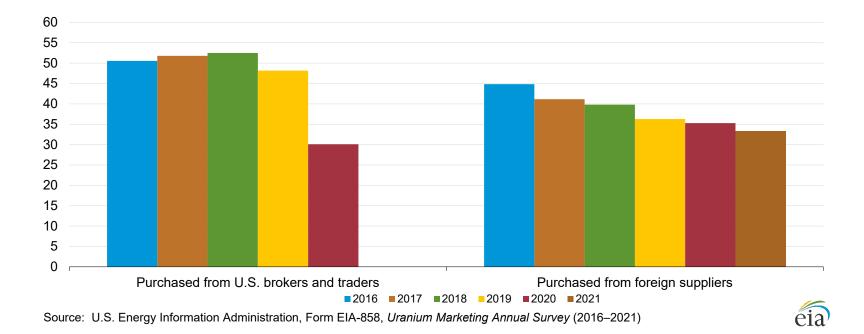


Table 2. Uranium purchased by owners and operators of U.S. civilian nuclear power reactors by origin and delivery year,2016–2021

Deliveries	2016	2017	2018	2019	2020	2021
U.Sorigin uranium						
Purchases	5,424	2,916	3,878	W	W	2,474
Weighted-average price	43.92	35.55	45.26	W	W	43.04
Foreign-origin uranium						
Purchases	45,171	40,117	36,415	W	W	44,263
Weighted-average price	42.26	39.04	38.11	W	W	33.40
Total						
Purchases	50,595	43,033	40,293	48,328	48,934	46,736
Weighted-average price	42.43	38.80	38.81	35.59	33.27	33.91

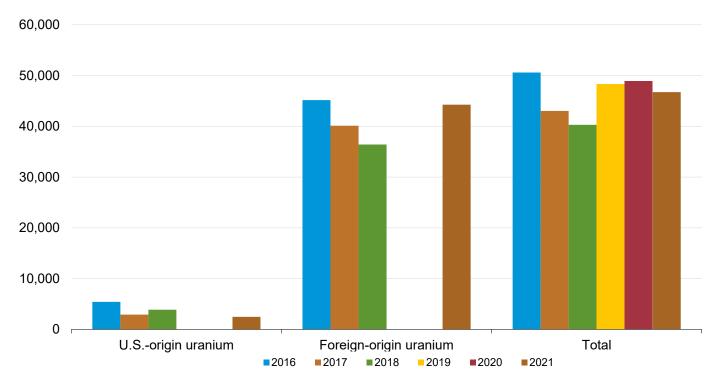
thousand pounds U₃O₈e equivalent; dollars per pound U₃O₈e equivalent

Notes: Totals may not equal sum of components because of independent rounding. Weighted-average prices are not adjusted for inflation.

Source: U.S. Energy Information Administration, Form EIA-858, Uranium Marketing Annual Survey (2016–2021)

Figure 3. Uranium purchased by owners and operators of U.S. civilian nuclear power reactors by origin and delivery year, 2016–2021

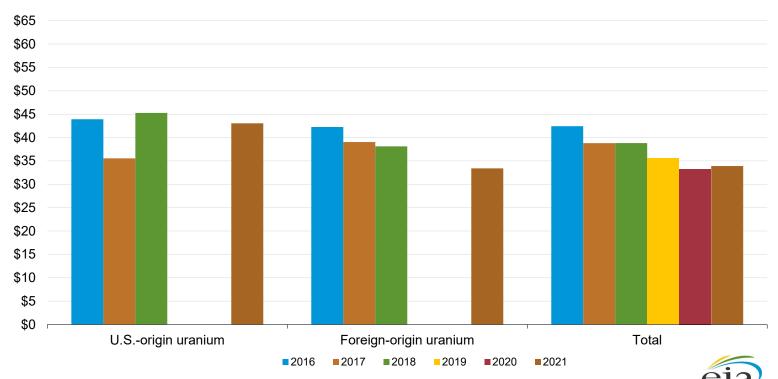
thousand pounds U₃O₈e equivalent



Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2016–2021)

Figure 4. Weighted-average price of uranium purchased by owners and operators of U.S. civilian nuclear power reactors by origin and delivery year, 2016–2021

dollars per pound U₃O₈e equivalent



Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2016–2021)

Table 3. Uranium purchased by owners and operators of U.S. civilian nuclear power reactors by origin country and delivery year, 2017–2021

thousand pounds U ₃ O ₈ e equivalent; dollars per pound U ₃ O ₈ e ec	quivalent
--	-----------

Australia Brazil Bulgaria Canada 1 China Czech Republic Germany Hungary Kazakhstan Malawi Namibia	2,129 8,129 0 0 14,048 0 0	Weighted- average price 42.44 40.63 	Purchases 7,167 0 0 9,556	Weighted- average price 40.24	Purchases 8,504 0	Weighted- average price 35.39	Purchases 5,597	Weighted- average price 39.86	Purchases 6,712	Weighted- average price 36.88
Brazil Bulgaria Canada 1 China Czech Republic Germany Hungary Kazakhstan Malawi Namibia Niger	0 0 4,048 0	 40.63	0				5,597	39.86	6,712	36.88
Brazil Bulgaria Canada 1 China Czech Republic Germany Hungary Kazakhstan Malawi Namibia Niger	0 0 4,048 0	 40.63	0							
Canada 1 China Czech Republic Germany Hungary Kazakhstan Malawi Namibia Niger	4,048 0	40.63					0	-	0	0
China Czech Republic Germany Hungary Kazakhstan Malawi Namibia Niger	0		0 556		0		0	-	0	0
Czech Republic Germany Hungary Kazakhstan Malawi Namibia Niger			9,000	37.74	10,172	33.06	10,976	35.05	6,908	35.09
Germany Hungary Kazakhstan Malawi Namibia Niger	0		W	W	0		W	W	0	0
Hungary Kazakhstan Malawi Namibia Niger	•		0		0		0	-	W	W
Kazakhstan Malawi Namibia Niger	0		0		W	W	0	-	0	0
Malawi Namibia Niger	W	W	0		0		0	-	0	0
Namibia Niger	4,638	38.30	8,168	40.98	8,760	35.69	10,828	33.37	16,557	34.16
Niger	W	W	0	0.00	0		W	W	W	W
	1,040	38.46	2,178	40.42	2,450	40.40	2,517	35.28	3,214	36.01
Portugal	1,971	49.53	W	W	998	41.21	W	W	W	W
	0		0		0		0	-	0	0
Russia	7,068	31.54	5,360	31.71	7,365	27.31	8,064	25.73	6,314	22.76
South Africa	W	W	W	W	0		0	-	W	W
Ukraine	W	W	0		0		0	-	0	0
United Kingdom	0		0		0		W	W	0	0
Uzbekistan	2,148	37.17	2,540	37.83	4,365	38.99	3,940	35.93	W	W
unknown	W	W	W	W	W	W	W	W	W	W
Foreign total 4	0,117	39.04	36,415	38.11	w	w	w	W	44,263	33.40
United States	2,916	35.55	3,878	45.26	W	W	W	W	2,474	43.04
Total purchases 4	3,033	38.80	40,293	38.81	48,328	35.59	48,934	33.27	46,736	33.91

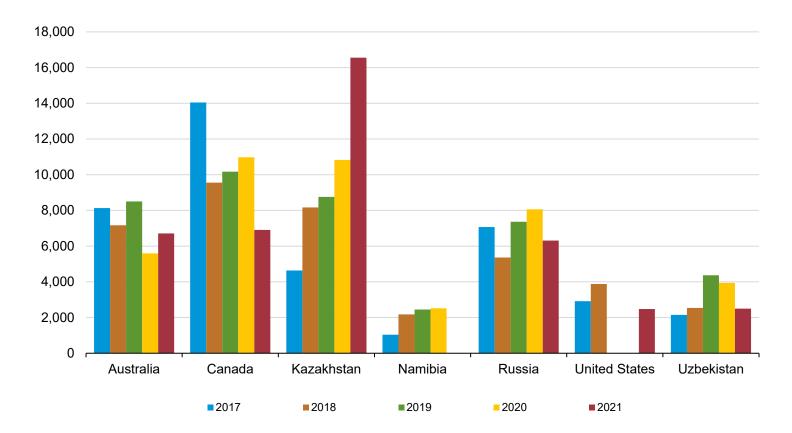
W = Data withheld to avoid disclosure of individual company data. -- = Not applicable.

Notes: Totals may not equal sum of components because of independent rounding. Weighted-average prices are not adjusted for inflation.

Source: U.S. Energy Information Administration, Form EIA-858, Uranium Marketing Annual Survey (2017-21)

Figure 5. Uranium purchased by owners and operators of U.S. civilian nuclear power reactors by selected origin country and delivery year, 2017–2021

thousand pounds U₃O₈e equivalent



Source: U.S. Energy Information Administration: Form EIA-858, Uranium Marketing Annual Survey (2017–2021)

Table 4. Uranium purchased by owners and operators of U.S. civilian nuclear power reactors by origin and material type, 2021 deliveries

thousand pounds U_3O_8e equivalent; dollars per pound U_3O_8e equivalent

	Uranium		Natural UF ₆ and					
Deliveries	concentrate	Natural UF ₆	Enriched UF ₆	Enriched UF ₆	Total			
U.Sorigin uranium								
Purchases	W	W	W	W	2,474			
Weighted-average price	W	W	W	W	43.04			
Foreign-origin uranium								
Purchases	W	W	W	W	44,263			
Weighted-average price	W	W	W	W	33.40			
Total								
Purchases	25,049	10,071	11,616	21,687	46,736			
Weighted-average price	34.01	38.47	29.76	33.94	33.91			

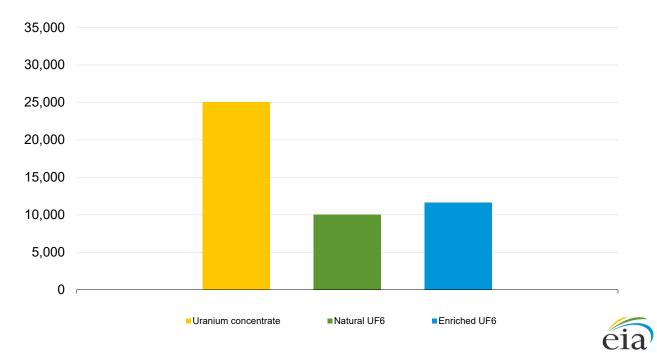
W = Data withheld to avoid disclosure of individual company data.

Notes: Totals may not equal sum of components because of independent rounding. Weighted-average prices are not adjusted for inflation. Natural UF₆ is uranium hexafluoride. The natural UF₆ and enriched UF₆ quantity represents only the U₃O₈ equivalent uranium-component quantity specified in the contract for each delivery of natural UF₆ and enriched UF₆. The natural UF₆ and enriched UF₆ weighted-average prices represent only the U₃O₈ equivalent uranium-component price specified in the contract for each delivery of natural UF₆, it does not include the conversion service and enrichment service components.

Source: U.S. Energy Information Administration, Form EIA-858, Uranium Marketing Annual Survey (2021)

Figure 6. Uranium purchased by owners and operators of U.S. civilian nuclear power reactors by material type, 2021 deliveries

thousand pounds U₃O₈e equivalent



Source: U.S. Energy Information Administration, Form EIA-858, Uranium Marketing Annual Survey (2021)

Table 5. Average price and quantity for uranium purchased by owners and operators of U.S. civilian nuclear power reactors by pricing mechanisms and delivery year, 2020–2021

dollars per pound U_3O_8 equivalent; thousand pounds U_3O_8 equivalent

	Domestic p	urchases ¹	Foreign p	urchases ²	Total purchases		
Pricing mechanisms	2020	2021	2020	2021	2020	2021	
Contract-specified (fixed and base	escalated) pricing						
Weighted-average price	W	W	W	W	35.82	35.90	
Quantity with reported price	W	W	W	W	30,166	28,102	
Spot-market pricing							
Weighted-average price	W	W	W	W	29.43	30.11	
Quantity with reported price	W	W	W	W	5,498	6,664	
Other pricing							
Weighted-average price	W	W	W	W	29.06	31.38	
Quantity with reported price	W	W	W	W	13,207	11,969	
All pricing mechanisms							
Weighted-average price	35.92	35.18	35.33	33.30	33.27	33.91	
Quantity with reported price	10,494	8,246	38,402	24,327	48,871	46,736	
Total quantity	10,516	8,246	38,418	24,327	48,934	46,736	

¹ A uranium purchase of both U.S.-origin uranium from a firm located in the United States.

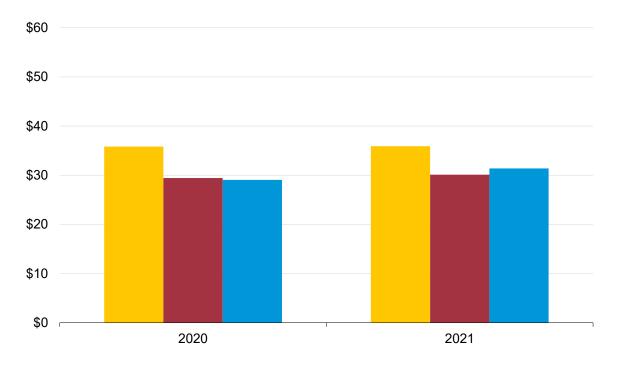
² A uranium purchase of foreign-origin uranium from a firm located outside of the United States.

Notes: Totals may not equal sum of components because of independent rounding. Weighted-average prices are not adjusted for inflation.

Source: U.S. Energy Information Administration, Form EIA-858, Uranium Marketing Annual Survey (2020–2021)

Figure 7. Average price for uranium purchased by owners and operators of U.S. civilian nuclear power reactors by pricing mechanisms and delivery year, 2020–2021

dollars per pound U₃O₈ equivalent



Contract-specified (fixed and base-escalated) pricing Spot-market pricing Other pricing

Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2020–2021)

Table 6a. Uranium purchased by owners and operators of U.S. civilian nuclear power reactors ranked by price and distributed by quantity, 2019–2021 deliveries

thousand pounds U_3O_8 equivalent; dollars per pound U_3O_8 equivalent

Quantity distribution ¹	D	eliveries in 2019	D	eliveries in 2020	Deliveries in 2021		
	Quantity with reported price	Weighted- average price	Quantity with reported price	Weighted- average price	Quantity with reported price	Weighted- average price	
First	6,038	19.84	6,109	15.09	5,842	20.33	
Second	6,038	24.69	6,109	23.9	5,842	27.13	
Third	6,038	26.47	6,109	25.58	5,842	29.11	
Fourth	6,038	28.69	6,109	28.75	5,842	30.02	
Fifth	6,038	32.8	6,109	31.45	5,842	31.23	
Sixth	6,038	41.2	6,109	35.29	5,842	33.58	
Seventh	6,038	47.93	6,109	45.92	5,842	45.36	
Eighth	6,038	63.14	6,109	60.22	5,842	54.56	
Total	48,303	35.59	48,871	33.27	46,736	33.91	

¹ Distribution divides total quantity of uranium delivered (with a price) into eight distributions by price (sorted from lowest to highest) and provides the quantity-weighted average price for each distribution.

Notes: Totals may not equal sum of components because of independent rounding. Weighted-average prices are not adjusted for inflation.

Source: U.S. Energy Information Administration, Form EIA-858, Uranium Marketing Annual Survey (2019–2021)

Table 6b. Uranium purchased by owners and operators of U.S. civilian nuclear power reactors ranked by price and distributed by purchaser, 2019–2021 deliveries

thousand pounds U_3O_8 equivalent; dollars per pound U_3O_8 equivalent

Distribution of purchasers		De	eliveries in 2019	Deliveries in 2020					Deliveries in 2021	
	Number of purchasers	Quantity with reported price	Weighted- average price	Number of purchasers	Quantity with reported price	Weighted- average price	Number of purchasers	Quantity with reported price	Weighted- average price	
First	7	15,010	25.84	7	19,668	26.03	7	20,014	27.36	
Second	7	8,825	31.61	7	11,914	31.58	6	7,739	34.19	
Third	7	14,352	40.73	7	10,039	38.01	6	12,954	38.94	
Fourth	6	10,116	46.24	6	7,250	49.17	6	6,029	44.53	
Total	27	48,303	35.59	27	48,871	33.27	25	46,736	33.91	

Notes: Totals may not equal sum of components because of independent rounding. Weighted-average prices are not adjusted for inflation.

Source: U.S. Energy Information Administration, Form EIA-858, Uranium Marketing Annual Survey (2019–2021)

Table 7. Uranium purchased by owners and operators of U.S. civilian nuclear power reactors by contract type and material type, 2021 deliveries

thousand pounds U_3O_8 equivalent; dollars per pound U_3O_8 equivalent

		Spot contracts ¹		Long-term contracts ²		Total		
Material type	Quantity with reported price	Weighted- average price	Quantity with reported price	Weighted- average price	Quantity with reported price	Weighted- average price		
U ₃ O ₈	8,646	30.67	16,403	35.77	25,049	34.01		
Natural UF ₆	W	w	W	W	10,071	38.47		
Enriched UF ₆	w	W	W	W	11,616	29.76		
Total	8,986	30.56	37,750	34.71	46,736	33.91		

¹ A one-time delivery (usually) of the entire contract to occur within one year of contract execution (signed date).

² One or more deliveries to occur after a year following contract execution (signed date).

Notes: Totals may not equal sum of components because of independent rounding. Weighted-average prices are not adjusted for inflation.

UF6 is uranium hexafluoride. The natural UF6 and enriched UF6 quantity represents only the U3O8 equivalent uranium-component quantity specified in the contract for each delivery of natural UF6 and enriched UF6 and enriched UF6 weighted-average price represent only the U3O8 equivalent uranium-component price specified in the contract for each delivery of natural UF6 and enriched UF6, it does not include the conversion service and enrichment service components.

Table 8. Contracts signed in 2021 by owners and operators of U.S. civilian nuclear power reactors by contract type

thousand pounds U_3O_8 equivalent; dollars per pound U_3O_8 equivalent

Purchase contract type (Signed in 2021)	Quantity of deliveries received in 2021	Weighted-average price	Number of purchase contracts for deliveries in 2021
Spot	W	W	W
Long-term	W	W	W
Total	3,558	32.53	27

Notes: Totals may not equal sum of components because of independent rounding. Weighted-average prices are not adjusted for inflation.

Table 9. Contracted purchases of uranium by owners and operators of U.S. civilian nuclear power reactors, signed in 2021, by delivery year, 2022–2031

thousand pounds U₃O₈ equivalent

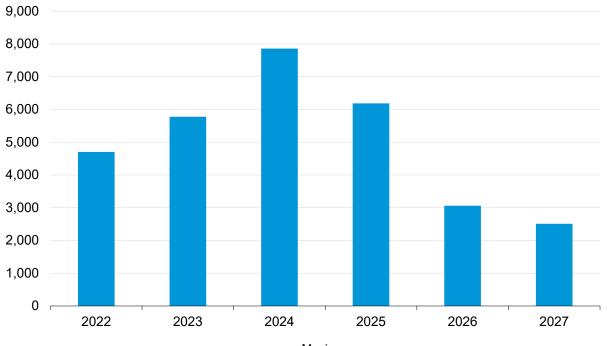
Year of delivery	Minimum	Maximum
2022	4,458	4,703
2023	4,191	5,776
2024	5,695	7,858
2025	4,283	6,185
2026	2,590	3,060
2027	1,810	2,510
2028	1,150	2,370
2029	1,300	2,553
2030	W	W
2031	W	W
Total	26,527	36,898

W = Data withheld to avoid disclosure of individual company data.

Note: Totals may not equal sum of components because of independent rounding.

Figure 8. Contracted purchases of uranium by owners and operators of U.S. civilian nuclear power reactors, signed in 2021, by delivery year, 2022–2027

thousand pounds U₃O₈ equivalent



Maximum



Table 10. Contracted purchases of uranium from suppliers by owners and operators of U.S. civilian nuclear power reactors, in effect at the end of 2021, by delivery year, 2022–2031

thousand pounds U₃O₈ equivalent

	•	ontracted purchases from U.S. suppliers		Contracted purchases from foreign suppliers		Contracted purchases from all suppliers	
Year of delivery	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	
2022	2,006	2,136	27,835	31,984	29,841	34,120	
2023	1,915	2,197	25,917	32,427	27,832	34,624	
2024	1,422	1,917	23,863	29,663	25,285	31,580	
2025	W	2,332	W	23,639	20,101	25,971	
2026	W	562	W	15,630	12,625	16,191	
2027	W	W	W	W	10,457	12,949	
2028	0	0	6,916	9,349	6,916	9,349	
2029	W	W	W	W	6,330	8,599	
2030	0	0	5,120	6,555	5,120	6,555	
2031	W	W	W	W	W	W	
Total	8,100	10,086	136,558	170,034	144,658	180,121	

W = Data withheld to avoid disclosure of individual company data.

Note: Totals may not equal sum of components because of independent rounding.

Figure 9. Maximum contracted purchases of uranium from suppliers by owners and operators of U.S. civilian nuclear power reactors, in effect at the end of 2021, by delivery year, 2022–2026

thousand pounds U₃O₈ equivalent

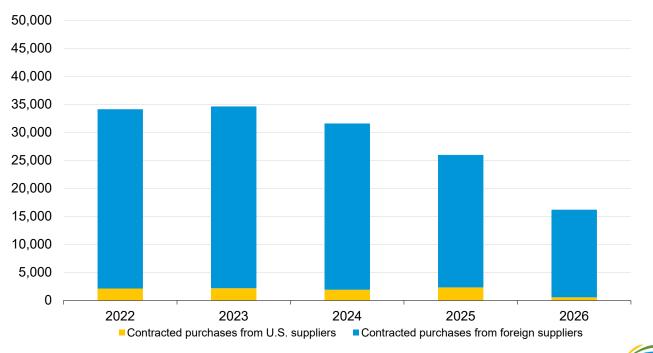


Table 11. Unfilled uranium market requirements of owners and operators of U.S. civilian nuclear power reactors, 2021–2031

thousand pounds U₃O₈ equivalent

	As of Dece	ember 31, 2020	As of Dece	ember 31, 2021
Year	Annual	Cumulative	Annual	Cumulative
2021	1,013	1,013	-	
2022	5,748	6,761	2,782	2,782
2023	11,228	17,989	3,564	6,346
2024	15,995	33,984	9,172	15,518
2025	16,856	50,840	12,710	28,228
2026	19,912	70,752	20,786	49,014
2027	19,323	90,075	19,823	68,837
2028	31,399	121,473	24,386	93,223
2029	32,871	154,345	26,872	120,095
2030	33,163	187,507	28,468	148,564
2031	-		33,532	182,095

- = No data reported. -- = Not applicable.

Note: Totals may not equal sum of components because of independent rounding. Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2020–2021) Figure 10. Annual unfilled uranium market requirements of owners and operators of U.S. civilian nuclear power reactors, at the end of 2020 and at the end of 2021

thousand pounds U₃O₈ equivalent

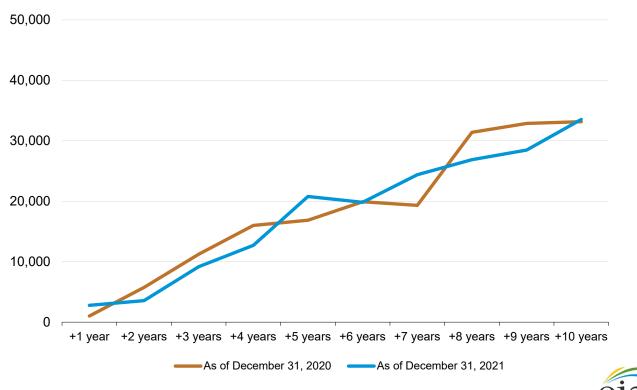


Table 12. Maximum anticipated uranium market requirements of owners and operators of U.S. civilian nuclear power reactors, 2022–2031, at end of 2021

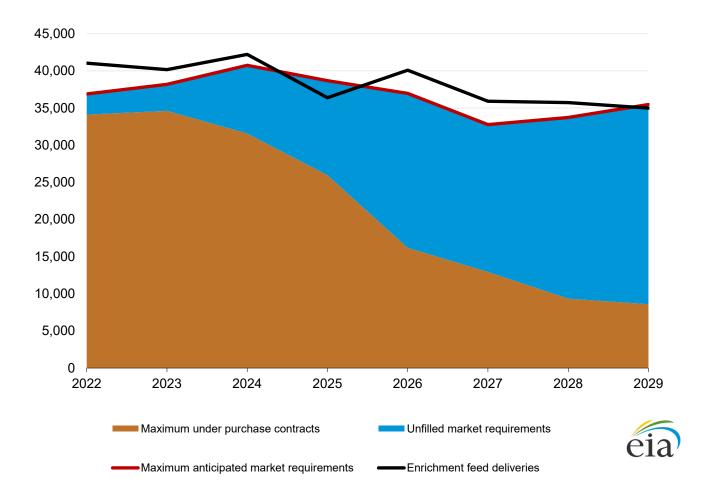
thousand pounds U₃O₈ equivalent

Year	Maximum under purchase contracts	Unfilled market requirements	Maximum anticipated market requirements	Enrichment feed deliveries
2022	34,120	2,782	36,902	41,045
2023	34,624	3,564	38,189	40,172
2024	31,580	9,172	40,752	42,221
2025	25,971	12,710	38,681	36,390
2026	16,191	20,786	36,977	40,100
2027	12,949	19,823	32,772	35,913
2028	9,349	24,386	33,735	35,733
2029	8,599	26,872	35,471	34,996
2030	W	W	35,023	36,003
2031	W	W	33,715	31,548
Total	180,121	182,095	362,216	374,119

Note: Totals may not equal sum of components because of independent rounding.



thousand pounds U₃O₈ equivalent



Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2021)

Table 13. Deliveries of uranium feed by owners and operators of U.S. civilian nuclear power reactors by enrichment country and delivery year, 2019–2021

thousand pounds U₃O₈ equivalent

		Feed deliver	ies in 2019		Feed deliver	ies in 2020		Feed deliver	ies in 2021
Enrichment country	U.S origin	Foreign- origin	Total	U.S origin	Foreign- origin	Total	U.S origin	Foreign- origin	Total
China	W	W	w	W	W	w	0	W	W
France	W	W	w	W	W	W	W	W	W
Germany	W	W	w	W	W	w	W	W	4,255
Netherlands	W	W	2,613	0	2,979	2,979	W	W	3,405
Russia	W	W	1,597	W	W	3,291	0	617	617
United Kingdom	W	W	3,818	0	3,601	3,601	W	W	2,959
Europe ¹	w	W	7,727	0	3,381	3,381	W	W	W
Foreign total	w	w	18,732	232	17,758	17,990	w	18,988	19,466
United States	W	W	19,536	1,939	14,444	16,382	W	W	14,689
Total	4,427	33,841	38,267	2,170	32,202	34,372	2,616	31,539	34,155

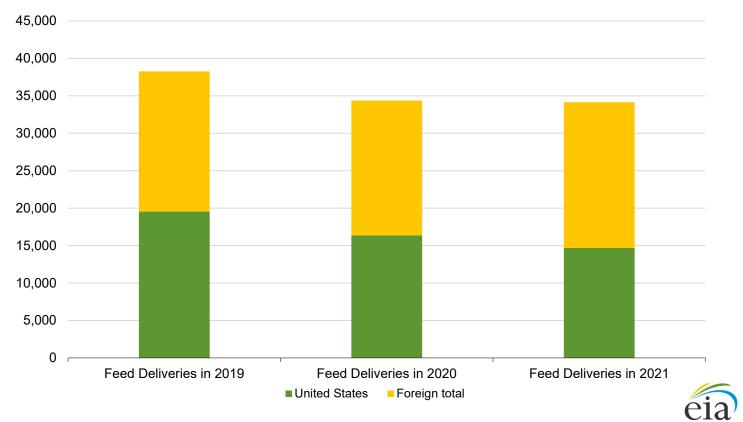
W = Data withheld to avoid disclosure of individual company data.

¹ Specific country in Europe was not reported.

Note: Totals may not equal sum of components because of independent rounding.

Figure 12. Deliveries of uranium feed for U.S. and foreign enrichment by owners and operators of U.S. civilian nuclear power reactors by delivery year, 2019–2021

thousand pounds U₃O₈ equivalent



Source: U.S. Energy Information Administration, Form EIA-858, Uranium Marketing Annual Survey (2019-2021)

Table 14. Deliveries of uranium feed for enrichment by owners and operators of U.S. civilian nuclear power reactors by origin country and delivery year, 2019–2021

thousand pounds U₃O₈ equivalent

		Deliv	eries in 2019		Deliver	ies in 2020		Deliver	ies in 2021
Origin country of feed	U.S. enrichment	Foreign enrichment	Total	U.S. enrichment	Foreign enrichment	Total	U.S. enrichment	Foreign enrichment	Total
Australia	2,746	5,029	7,775	1,194	3,077	4,271	2,709	3,625	6,334
Brazil	0	0	0	W	W	W	0	0	0
Canada	6,424	6,640	13,064	6,927	4,495	11,422	5,013	4,254	9,266
China	0	0	0	W	W	w	0	0	0
Czech Republic	0	0	0	0	0	0	W	W	W
Kazakhstan	4,222	4,533	8,756	4,421	5,249	9,670	3,039	7,919	10,958
Malawi	W	W	W	0	0	0	W	W	W
Namibia	550	495	1,045	W	W	w	W	W	819
Niger	W	W	813	W	W	1,029	W	W	1,686
Portugal	0	0	0	0	0	0	0	0	0
Russia	W	W	W	W	W	1,303	W	W	W
South Africa	W	W	W	0	0	0	W	W	W
Ukraine	0	0	0	0	0	0	0	0	0
United Kingdom	0	0	0	0	0	0	0	0	0
Uzbekistan	1,028	544	1,572	W	W	w	W	W	W
unknown/other	W	W	w	W	W	w	0	0	0
Foreign total	w	w	w	14,444	17,758	32,202	w	w	W
United States	W	W	W	1,939	232	2,170	W	W	W
Total	19,536	18,732	38,267	16,382	17,990	34,372	14,689	19,466	34,155

W = Data withheld to avoid disclosure of individual company data.

Note: Totals may not equal sum of components because of independent rounding.



Figure 13. Deliveries of uranium feed for enrichment by owners and operators of U.S. civilian nuclear power reactors by

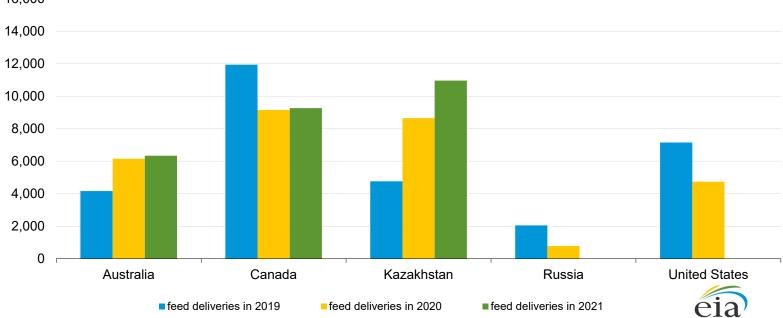


Table 15. Shipments of uranium feed by owners and operators of U.S. civilian nuclear power reactors to domestic and foreign enrichment suppliers, 2022–2031

thousand pounds U₃O₈ equivalent

	Amount	t of feed to be shipped	Change	from 2020 to 2021
	As of	As of		
Year of shipment	December 31, 2020	December 31, 2021	Annual	Cumulative
2022	37,126	41,045	3,919	3,919
2023	38,207	40,172	1,965	5,884
2024	38,082	42,221	4,139	10,023
2025	34,989	36,390	1,401	11,424
2026	36,693	40,100	3,407	14,831
2027	34,527	35,913	1,386	16,217
2028	33,755	35,733	1,978	18,195
2029	34,908	34,996	88	18,283
2030	34,164	36,003	1,839	20,122
2031		31,548		

- = No data reported. -- = Not applicable.

Note: Totals may not equal sum of components because of independent rounding.

Figure 14. Shipments of uranium feed by owners and operators of U.S. civilian nuclear power reactors to domestic and foreign enrichment suppliers, 2022–2030

thousand pounds U₃O₈ equivalent

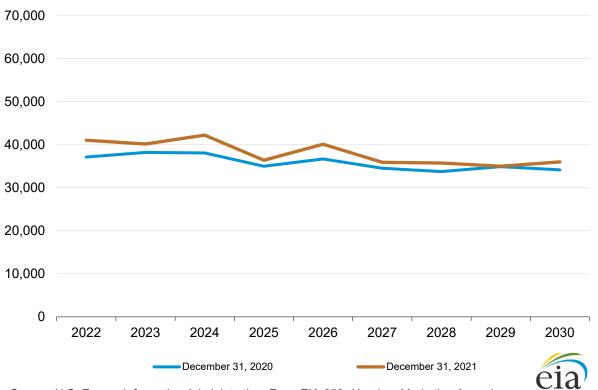


Table 16. Purchases of enrichment services by owners and operators of U.S. civilian nuclear power reactors by origin country and year, 2017–2021

thousand separative work units (SWU)

Country of enrichment service (SWU-

origin)	2017	2018	2019	2020	2021
China	W	W	W	W	W
France	W	0	W	W	W
Germany	437	1,444	1,238	1,175	1,825
Netherlands	1,183	2,864	1,367	1,885	1,583
Russia	2,912	3,473	3,087	3,220	3,953
United Kingdom	1,525	1,544	1,262	1,218	2,366
Europe ¹	W	W	W	W	W
Other ²	W	W	W	W	W
Foreign total	7,305	10,034	7,992	10,012	11,481
United States	5,572	4,979	5,289	4,132	2,736
Total	12,877	15,013	13,281	14,144	14,217
Average price (US\$ per SWU)	125.43	115.42	109.54	99.51	99.54

W = Data withheld to avoid disclosure of individual company data.

¹ Specific country in Europe was not reported.

² Specific country was not reported.

Notes: Totals may not equal sum of components because of independent rounding. Average prices are not adjusted for inflation.

Figure 15. Purchases of enrichment services by owners and operators of U.S. civilian nuclear power reactors by selected origin country and year, 2017–2021

thousand separative work units (SWU)

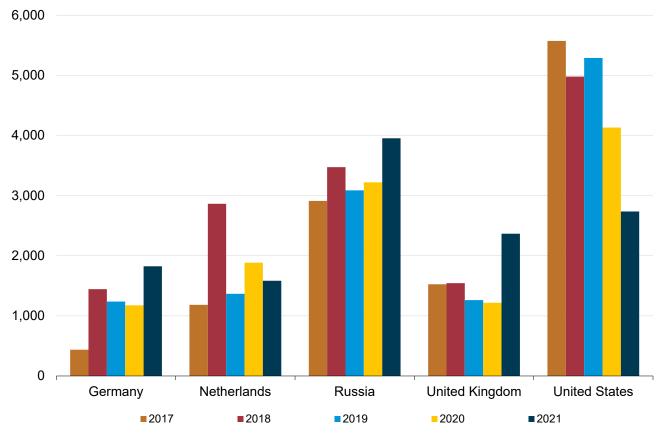


Table 17. Purchases of enrichment services by owners and operators of U.S. civilian nuclear power reactors by contract type in delivery year, 2021

thousand separative work units (SWU)

Enrichment service		Foreign	
contract type	U.S. enrichment	enrichment	Total
Spot	W	W	W
Long-term	W	W	W
Total	2,736	11,481	14,217

W = Data withheld to avoid disclosure of individual company data.

Note: Totals may not equal sum of components because of independent rounding. Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2021)

Table 18. Uranium in fuel assemblies loaded into U.S. civilian nuclear power reactors by year, 2017–2021

thousand pounds U₃O₈ equivalent

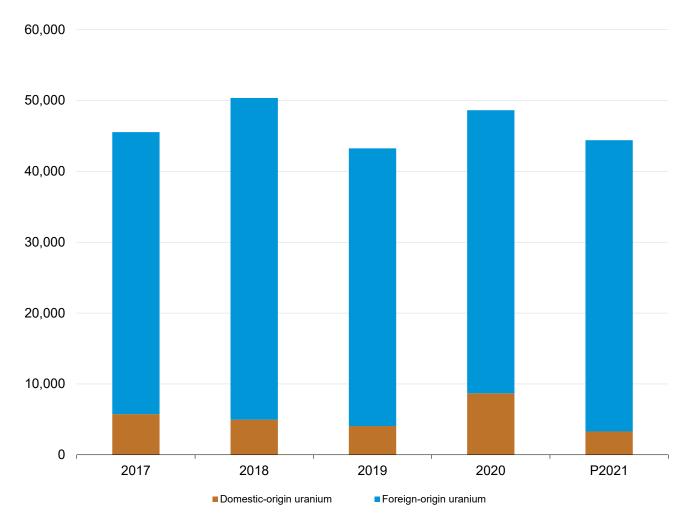
Origin of uranium	2017	2018	2019	2020	P2021
Domestic-origin uranium	5,734	4,957	4,051	8,678	3,289
Foreign-origin uranium	39,807	45,399	39,194	39,953	41,111
Total	45,541	50,355	43,245	48,631	44,400

P = Preliminary data. Final 2020 fuel assembly data reported in the 2021 survey.

Notes: Includes only unirradiated uranium in new fuel assemblies loaded into reactors during the year. Does not include uranium removed from reactors that subsequently will be reloaded. Totals may not equal sum of components because of independent rounding.

Figure 16. Uranium in fuel assemblies loaded into U.S. civilian nuclear power reactors by year, 2017–2021

thousand pounds U₃O₈ equivalent



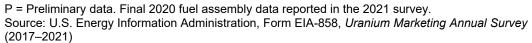


Table 19. Foreign purchases of uranium by U.S. suppliers and owners and operators of U.S. civilian nuclear power reactors by delivery year, 2017–2021

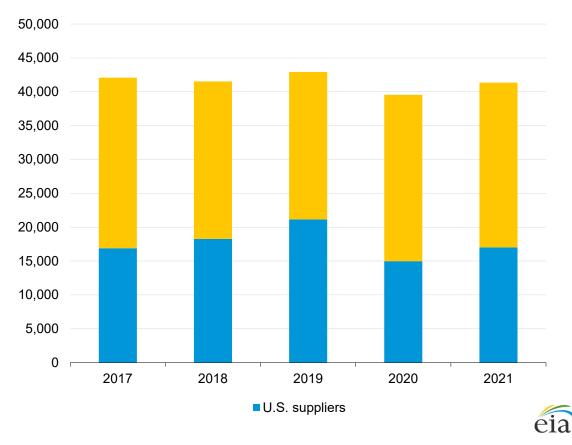
thousand pounds U₃O₈ equivalent; dollars per pound U₃O₈ equivalent

Deliveries	2017	2018	2019	2020	2021
U.S. suppliers					
Foreign purchases	16,891	18,278	21,160	14,983	17,021
Weighted-average price	31.11	30.93	33.17	31.27	33.19
Owners and operators of U.S. civilian r	nuclear power reactors				
Foreign purchases	25,187	23,246	21,763	24,572	24,327
Weighted-average price	41.12	39.32	36.28	35.33	33.30
Total					
Foreign purchases	42,078	41,524	42,923	39,555	41,348
Weighted-average price	37.09	35.73	34.77	33.79	33.26

Notes: Totals may not equal sum of components because of independent rounding. Foreign Purchase: A uranium purchase of foreignorigin uranium from a firm located outside of the United States. Weighted-average prices are not adjusted for inflation.

Figure 17. Foreign purchases of uranium by U.S. suppliers and owners and operators of U.S. civilian nuclear power reactors by delivery year, 2017–2021

thousand pounds U₃O₈ equivalent



Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2017–2021)

Table 20. U.S. broker and trader purchases of uranium by origin, supplier, and delivery year, 2017–2021

thousand pounds U_3O_8 equivalent; dollars per pound U_3O_8 equivalent

Deliveries	2017	2018	2019	2020	2021
Received U.Sorigin uranium					
Purchases	3,501	1,765	W	W	938
Weighted-average price	19.88	28.20	W	W	42.71
Received foreign-origin uranium					
Purchases	35,156	34,400	W	W	42,537
Weighted-average price	24.83	30.61	W	W	34.94
Total received by U.S. brokers and traders					
Purchases	38,657	36,165	38,394	34,411	43,474
Weighted-average price	24.38	30.49	33.09	30.14	35.10
Received from foreign suppliers					
Purchases	14,060	18,870	20,757	14,436	16,637
Weighted-average price	29.93	30.84	33.43	31.51	33.53

W = Data withheld to avoid disclosure of individual company data.

Notes: Totals may not equal sum of components because of independent rounding. Weighted-average prices are not adjusted for inflation.

Figure 18. U.S. broker and trader purchases of uranium by delivery year, 2017–2021

thousand pounds U₃O₈ equivalent

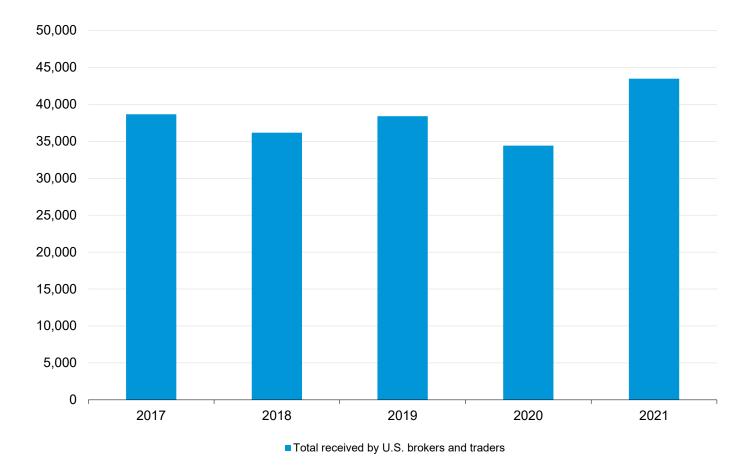


Table 21. Foreign sales of uranium from U.S. suppliers and owners and operators of U.S. civilian nuclear power reactors by origin and delivery year, 2017–2021

thousand pounds U_3O_8 equivalent; dollars per pound U_3O_8 equivalent

Deliveries to foreign suppliers and utilities	2017	2018	2019	2020	2021
U.Sorigin uranium					
Foreign sales	1,617	2,004	255	141	499
Weighted-average price	27.61	27.66	25.49	29.09	46.74
Foreign-origin uranium					
Foreign sales	12,408	11,942	11,424	9,781	6,973
Weighted-average price	24.88	25.75	27.20	29.58	35.04
Total sent:					
Foreign sales	14,025	13,947	11,679	9,922	7,471
Weighted-average price	25.19	26.02	27.16	29.57	35.82

From owners and operators of U.S. civilian nuclear power reactors, U.S. producers, and other U.S. suppliers

Foreign sales	3,505	2,589	3,466	990	W
Weighted-average price	29.55	28.97	25.76	37.53	w
From U.S. brokers and traders					
Foreign sales	10,520	11,358	8,213	8,932	W
Weighted-average price	23.74	25.35	27.75	28.69	W

Notes: *Other U.S. Suppliers* are U.S. converters, enrichers, and fabricators. Totals may not equal sum of components because of independent rounding. Foreign sale: A uranium sale to a firm located outside the United States. Weighted-average prices are not adjusted for inflation.

Figure 19. Foreign sales of uranium from U.S. suppliers and owners and operators of U.S. civilian nuclear power reactors by origin and delivery year, 2017–2021

thousand pounds U₃O₈ equivalent

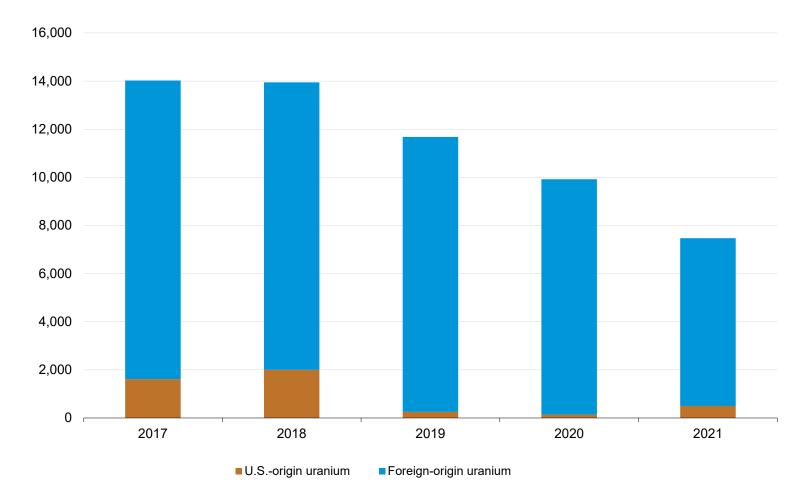




Table 22. Inventories of natural and enriched uranium by material type as of end of year, 2017–2021

thousand pounds U₃O₈ equivalent

	Inventories at the end of the year					
Type of uranium inventory owned by	2017	2018	2019	2020	P2021	
Owners and operators of U.S. civilian nuclear power reactors inventories	123,850	111,174	113,146	106,863	108,503	
Uranium concentrate (U ₃ O ₈)	20,612	19,270	24,350	21,868	19,726	
Natural UF ₆	50,615	43,312	40,375	37,806	36,400	
Enriched UF ₆	43,451	40,107	36,608	40,712	43,195	
Fabricated fuel (not inserted into a reactor)	9,173	8,485	11,813	6,477	9,182	
U.S. supplier inventories	17,818	19,345	17,517	24,158	33,155	
Uranium concentrate (U ₃ O ₈)	7,174	7,754	7,435	17,713	28,465	
Natural UF ₆	4,364	W	W	W	W	
Enriched UF ₆	6,280	W	W	W	W	
Fabricated fuel (not inserted into a reactor)	0	0	0	0	0	
Total Commercial Inventories	141,668	130,519	130,662	131,020	141,658	

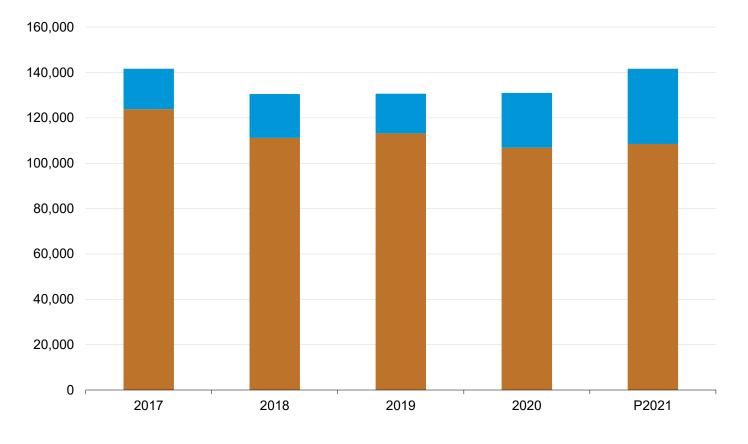
P = Preliminary data. Final 2020 inventory data reported in the 2021 survey.

W = Data withheld to avoid disclosure of individual company data.

Note: Totals may not equal sum of components because of independent rounding.

Figure 20. Commercial inventories of natural and enriched uranium as of end of year, 2017–2021

thousand pounds U₃O₈ equivalent



Owners and operators of U.S. civilian nuclear power reactors inventories

U.S. supplier inventories

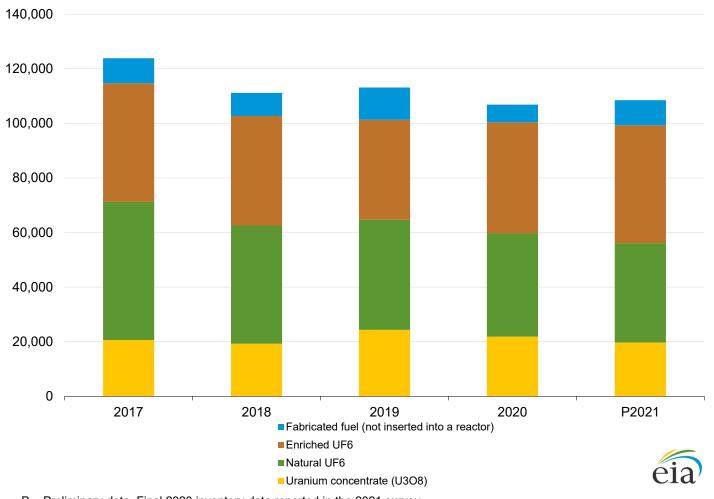
P = Preliminary data. Final 2020 inventory data reported in the 2021 survey. Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2018–2021)

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Figure 21. Owners and operators of U.S. civilian nuclear power reactors inventories by material type as of end of year, 2017–2021

thousand pounds U₃O₈ equivalent



P = Preliminary data. Final 2020 inventory data reported in the 2021 survey. Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2018–2021)

Table 23. Inventories of uranium by owner as of end of year, 2017–2021

thousand pounds U₃O₈ equivalent

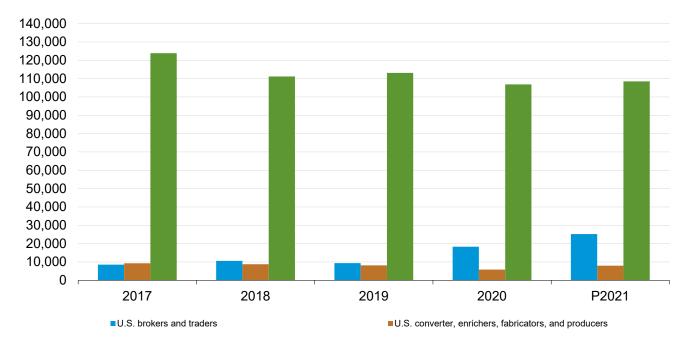
	Inventories at the End of Year					
Owner of uranium inventory	2017	2018	2019	2020	P2021	
Owners and operators of U.S. civilian nuclear power reactors	123,850	111,174	113,146	106,863	108,503	
U.S. brokers and traders	8,519	10,601	9,385	18,311	25,187	
U.S. converter, enrichers, fabricators, and producers	9,299	8,743	8,132	5,846	7,969	
Total commercial inventories	141,668	130,519	130,662	131,020	141,658	

P = Preliminary data. Final 2020 inventory data reported in the 2021 survey.

Note: Totals may not equal sum of components because of independent rounding.

Figure 22. Commercial inventories of uranium by owner as of end of year, 2017–2021

thousand pounds U₃O₈ equivalent



Owners and operators of U.S. civilian nuclear power reactors

P=Preliminary data. Final 2020 inventory data reported in the 2021 survey. Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2018–2021)

2019	2020	2021
AREVA / AREVA NC, Inc./ AREVA Resources Canada	Canada/Framatome	Canada/Framatome
ARMZ (AtomRedMetZoloto)	ARMZ (AtomRedMetZoloto)	BHP Billiton Olympic Dam Corporation Pty Ltd
BHP Billiton Olympic Dam Corporation Pty Ltd	BHP Billiton Olympic Dam Corporation Pty Ltd	CAMECO
CAMECO	CAMECO	CGN Global Uranium Limited
CGN Global Uranium Limited	CGN Global Uranium Limited	ConverDyn
ConverDyn	ConverDyn	Curzon Uranium Trading Limited
Deutsche Bank	Curzon Uranium Trading Limited	Energy USA, Inc.
Energy Fuels Resources, Inc.	Energy USA, Inc.	Itochu Corporation / Itochu International
Energy Northwest	Itochu Corporation / Itochu International	Joshua Energy DAC
Energy USA, Inc.	Joshua Energy DAC	Kazatomprom
Itochu Corporation / Itochu International	Kazatomprom	Louisiana Energy Services LLC
Kazatomprom	Louisiana Energy Services LLC	Macquarie Bank
Macquarie Bank	Luminious Designated Activity Company	MTM Trading, LLC
Mitsui & Co.	Macquarie Bank	Nuclear Fuel Services, Inc.
MTM Trading, LLC	MTM Trading, LLC	Nufcor International Limited
Nufcor International Limited	Nuclear Fuel Services, Inc.	NUKEM, Inc. / RWE Nukem
NUKEM, Inc. / RWE Nukem	Nufcor International Limited	NYNCO Trading
NYNCO Trading, Ltd.	NUKEM, Inc. / RWE Nukem	Orano
Paladin Resources Limited / Paladin Energy	Orano	Peninsula Energy / Strata Energy
Peninsula Energy / Strata Energy	Peninsula Energy / Strata Energy	Rio Tinto Uranium Limited
Rio Tinto Uranium Limited	Rio Tinto Uranium Limited	TENAM Corporation
Rossing Uranium Limited	TENAM Corporation	TENEX(Techsnabexport)
SOPAMIN (Société de Patrimoine des Mines du Niger		
"Heritage Society of Mines in Niger")	TENEX(Techsnabexport)	
Southern Cross Resources Australia		TH Kazakatom AG
TENAM Corporation	TH Kazakatom AG	Traxys North America, LLC
TENEX(Techsnabexport)	Traxys North America, LLC	U Co., Ltd.
Traxys North America, LLC	UG U.S.A., Inc.	UG U.S.A., Inc.
UG U.S.A., Inc.	USEC, Inc. (United States Enrichment Corporation)	USEC, Inc. (United States Enrichment Corporation
USEC, Inc. (United States Enrichment Corporation)	Uranium Energy Corporation	Uranium One
Jranerz Energy Corporation	Uranium One	URENCO, Inc.
Uranium One	UrAsia Energy Limited	Western Uranium Corp.
URENCO, Inc.	URENCO, Inc.	WMC Energy BV
Ur-Energy / Ur-Energy USA Inc	Ur-Energy / Ur-Energy USA Inc	
Westinghouse Electric Company, LLC	WMC Energy BV	

Table 24. Uranium sellers to owners and operators of U.S. civilian nuclear power reactors, 2019–2021

2019	2020	2021
AREVA Enrichment Services, LLC / AREVA NC, Inc.	Advance Uranium Asset Management	AREVA Enrichment Services, LLC / AREVA NC, Inc.
CNEIC (China Nuclear Energy Industry Corporation)	AREVA Enrichment Services, LLC / AREVA NC, Inc.	Centrus Energy Corp.
Energy Northwest	CNEIC (China Nuclear Energy Industry Corporation)	CNEIC (China Nuclear Energy Industry Corporation)
LES, LLC (Louisiana Energy Services)	Energy Northwest	Energy Northwest
TENAM Corporation	Itochu Corporation	LES, LLC (Louisiana Energy Services)
TENEX (Techsnabexport Joint Stock Company)	LES, LLC (Louisiana Energy Services)	Nukem, Inc.
TENAM Corporation	Nukem, Inc.	TENAM Corporation
UG USA	TENAM Corporation	TENEX (Techsnabexport Joint Stock Company)
URENCO, Inc. (Deutschland GmbH, Nederland B.V., UK Limited)	TENEX (Techsnabexport Joint Stock Company)	URENCO, Inc. (Deutschland GmbH, Nederland B.V., UK Limited)
URENCO USA, Inc.	UG USA	USEC, Inc. (United States Enrichment Corporation)
USEC, Inc. (United States Enrichment Corporation)	URENCO, Inc. (Deutschland GmbH, Nederland B.V., UK Limited)	Westinghouse Electric Company, LLC
Westinghouse Electric Company, LLC	URENCO USA, Inc.	
	USEC, Inc. (United States Enrichment Corporation)	
	Westinghouse Electric Company, LLC	

Table 25. Enrichment service sellers to owners and operators of U.S. civilian nuclear power reactors, 2019–2021