



2022 Uranium Marketing Annual Report

June 2023

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Introduction

In this report, EIA provides detailed data on uranium marketing activities in the United States from 2017 through 2022 and summary data back to 2001.

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.

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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 40.5 million pounds U_3O_8e (equivalent¹) of deliveries from U.S. suppliers and foreign suppliers during 2022, at a weighted-average price of \$39.08 per pound U_3O_8e . The 2022 total of 40.5 million pounds U_3O_8e was 13% lower than the 2021 total of 46.7 million pounds U_3O_8e . The 2022 weighted-average price of \$39.08 per pound U_3O_8e was 15% higher than the 2021 weighted-average price of \$33.91 per pound U_3O_8e (Table 1) and the highest price since 2016.

The largest sources of uranium delivered in 2022 was of foreign-origin with Canada the top source at 27% of total deliveries, followed closely by Kazakhstan with 25% of total deliveries. Uzbekistan-origin material accounted for 11% of total deliveries and Australia was fourth at 9% of total deliveries. United States material accounted for 5% of total deliveries in 2022 (Table 3).

COOs purchased three material types of uranium for 2022 deliveries from 31 sellers (Table 4, Table 24). During 2022, 15% of the uranium delivered was purchased under spot contracts at a weighted-average price of \$40.70 per pound. The remaining 85% was purchased under long-term contracts at a weighted-average price of \$38.81 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 2022, COOs signed 27 new purchase contracts with deliveries in 2022 of 4.6 million pounds U_3O_8e at a weighted-average price of \$41.87 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 (UF_6) 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 2022, the maximum uranium deliveries for 2023 through 2032 under existing purchase contracts for COOs totaled 223 million pounds U_3O_8e (Table 10). Also at the end of 2022, unfilled uranium market requirements for 2023 through 2032 totaled 179 million pounds U_3O_8e (Table 11). These contracted deliveries and unfilled market requirements combined represent the maximum anticipated market requirements of 402 million pounds U_3O_8e over the next 10 years for COOs.

Uranium feed, enrichment services, uranium loaded

In 2022, COOs delivered 35 million pounds U_3O_8e of natural uranium feed to U.S. and foreign enrichers. U.S. enrichment suppliers received 41% of the feed, and the remaining 59% was delivered to foreign enrichment suppliers (Table 13). Fourteen million separative work units (SWU)² were purchased under enrichment services contracts from nine sellers in 2022 (Table 16, Table 25). The average price paid by the COOs for the 14 million SWU was \$101.03 per SWU in 2022, a slight uptick from the \$99.54 per SWU paid in 2021. In 2022, the U.S.-origin SWU share was 27%, and the foreign-origin SWU accounted for the remaining 73%. Foreign-origin SWU included 24% from Russia, 12% from Germany, 11% from the United Kingdom, and 9% from the Netherlands (Table 16).

Uranium in fuel assemblies loaded into U.S. civilian nuclear power reactors during 2022 contained 44.4 million pounds U_3O_8e , the same volume loaded in 2021. During 2022, 3% of the uranium loaded was U.S.-origin uranium and 97% 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 32.1 million pounds U_3O_8e in 2022, and the weighted-average price was \$40.31 per pound U_3O_8e (Table 19). U.S. suppliers and COOs also sold uranium to foreign suppliers. Together, foreign sales totaled 2.5 million pounds U_3O_8e in 2022, and the weighted-average price was \$54.65 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 140 million pounds U_3O_8e at the end of 2022, down 1% from 141.7 million pounds at the end of 2021. Commercial uranium inventories owned at the end of 2022 by COOs totaled 103.8 million pounds U_3O_8e , a 4% decrease in inventories from the year-end 2021 level. Uranium inventories owned by U.S. suppliers (converters, enrichers, fabricators, producers, brokers and traders) totaled 36.2 million pounds U_3O_8e at the end of 2022, up 9% from 2021 year-end levels (Table 22).

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 $V(x) = (1 - 2x) \ln((1 - x)/x)$.

Table S1a. Uranium purchased by owners and operators of U.S. civilian nuclear power reactors, 2001–2022

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.S.-origin uranium	Foreign-origin uranium	Spot contracts ²	Short, medium, and long-term contracts ³
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	W	10.5	37.8
2020	48.9	W	6.4	W	38.4	W	W	11.8	37.0
2021	46.7	1.7	3.3	0.0	41.6	2.5	44.3	9.0	37.8
2022	40.5	W	W	0.0	38.0	2.1	38.5	5.9	34.6

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

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.

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

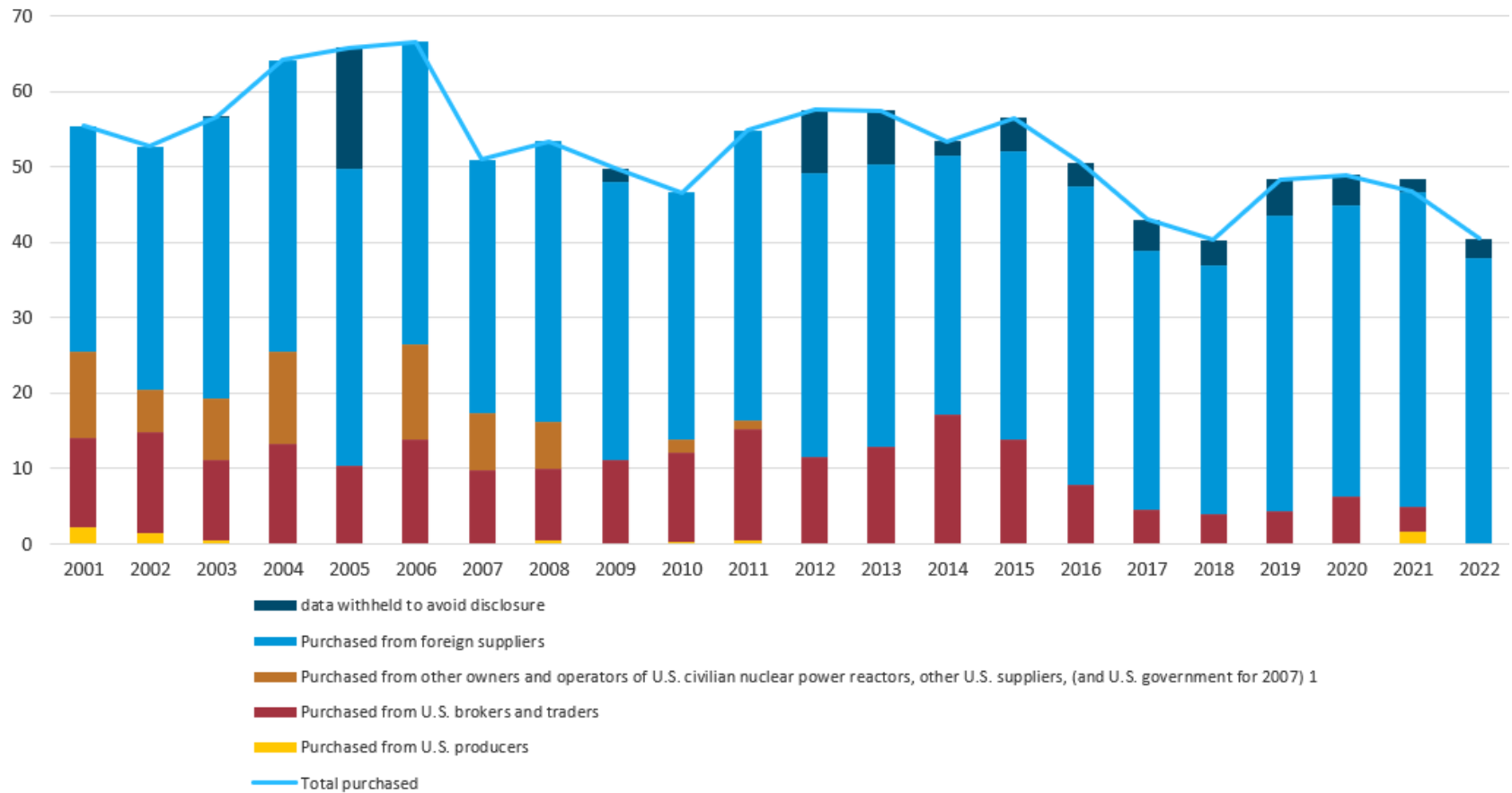
³ Short-, Medium-, and Long-Term Contracts: One or more deliveries to occur after a year following contract execution (signed date).

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

Data Sources: U.S. Energy Information Administration: *Uranium Industry Annual*, Tables 10, 11 and 16, 2001-2002. Form EIA-858, *Uranium Marketing Annual Survey*, 2003-2022

Figure S1. Uranium purchased by owners and operators of U.S. civilian nuclear power reactors, 2001–2022

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.

Data Sources: U.S. Energy Information Administration: *Uranium Industry Annual* reports, 2001–2002 and Form EIA-858, *Uranium Marketing Annual Survey* 2003–2022.

Table S1b. Weighted-average price of uranium purchased by owners and operators of U.S. civilian nuclear power reactors, 2001–2022

Delivery year	Total purchased (weighted-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	U.S.-origin uranium (weighted-average price)	Foreign-origin uranium (weighted-average price)	Spot contracts ² (weighted-average price)	Short-, medium-, and long-term contracts ³ (weighted-average price)
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	0.00	33.25	43.04	33.40	30.56	34.71
2022	39.08	W	W	W	39.78	W	W	40.70	38.81

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

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.

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

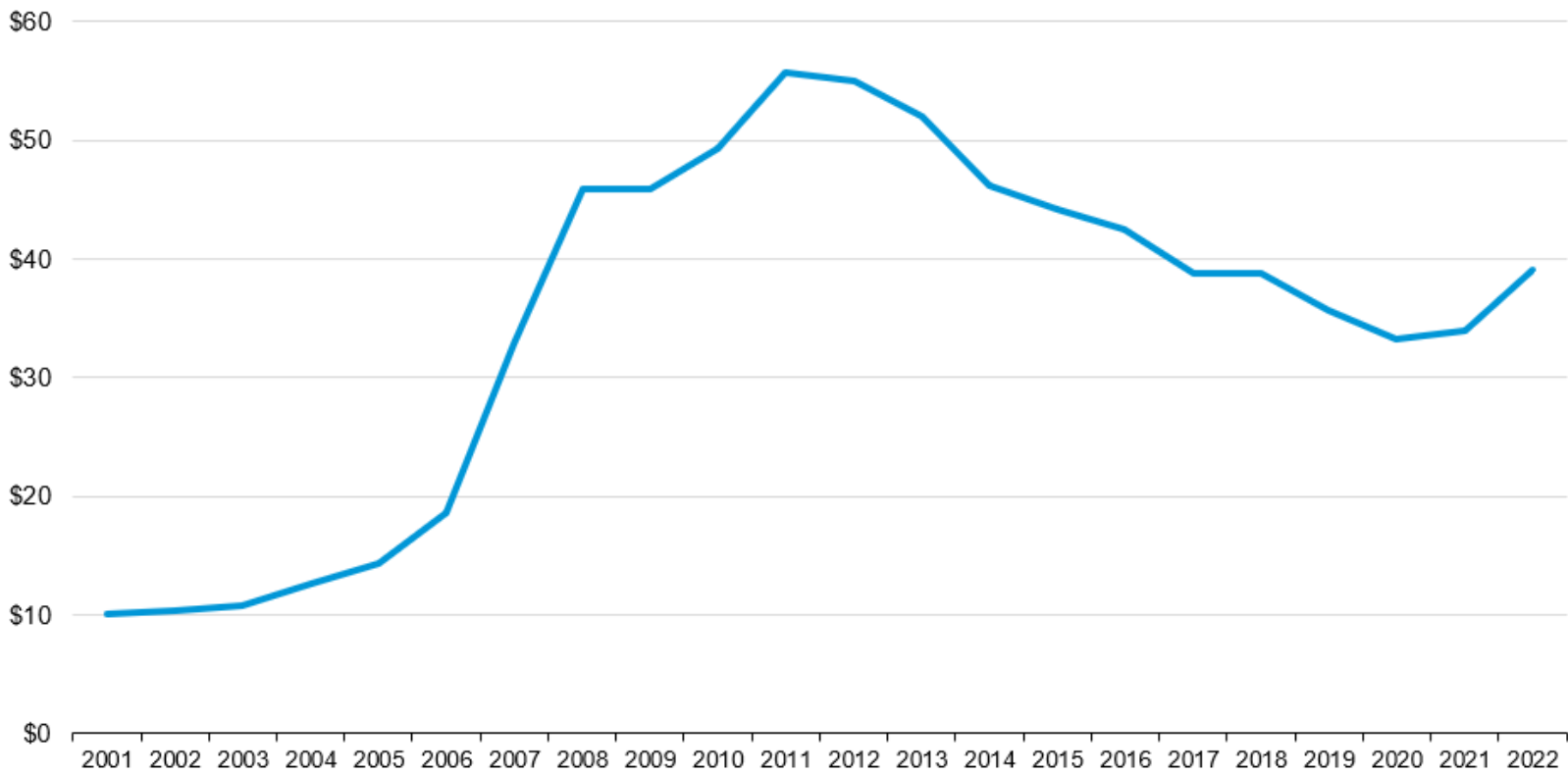
³ Short-, Medium-, and Long-Term Contracts: One or more deliveries to occur after a year following contract execution (signed date).

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

Data Sources: U.S. Energy Information Administration: *Uranium Industry Annual*, Tables 10, 11 and 16, 2001-2002. Form EIA-858, *Uranium Marketing Annual Survey*, 2002-2022

Figure S2. Weighted-average price of uranium purchased by owners and operators of U.S. civilian nuclear power reactors, 2001–2022

dollars per pound U₃O₈e equivalent



Data Sources: U.S. Energy Information Administration: *Uranium Industry Annual* reports, 2001-2002. 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, 2001–2022

Year	Million pounds U3O8 equivalent		Million separative work units (SWU)			Average price (US\$ per SWU)
	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.S.-origin enrichment services purchased	Foreign-origin enrichment services purchased	Total purchased enrichment services	
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
2022	34.6	44.4	3.9	10.3	14.2	101.03

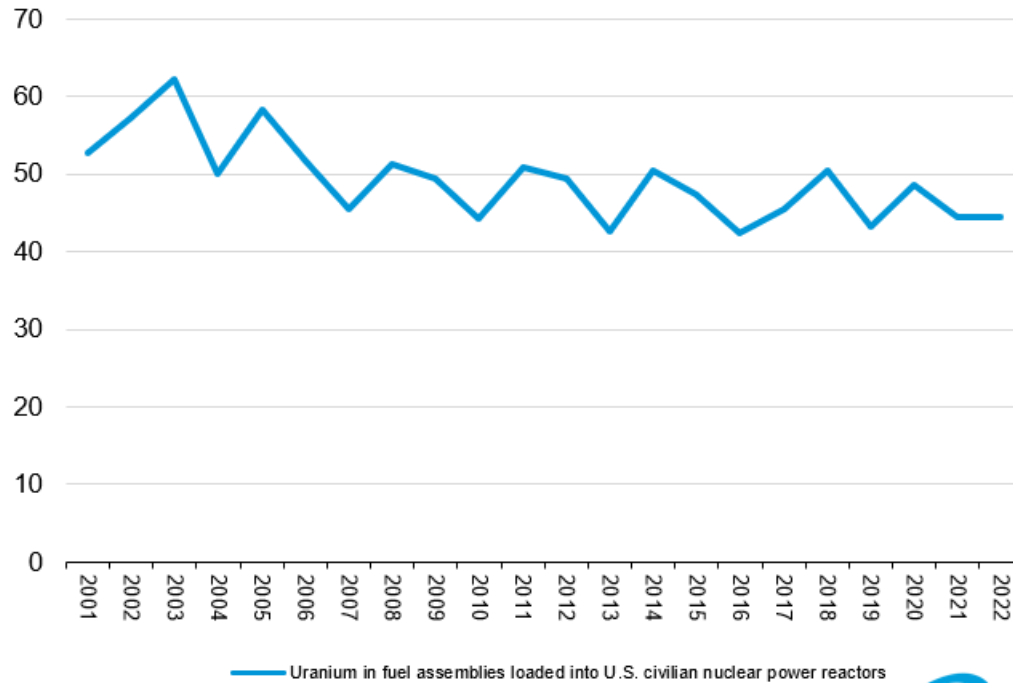
- = No data reported.

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

Data Sources: U.S. Energy Information Administration: *Uranium Industry Annual*, Tables 22, 23, 25, and 27, 2001-2002. Form EIA-858, *Uranium Marketing Annual Survey*, 2003-2022

Figure S3. Uranium loaded into U.S. civilian nuclear power reactors, 2001–2022

million pounds U₃O₈e equivalent

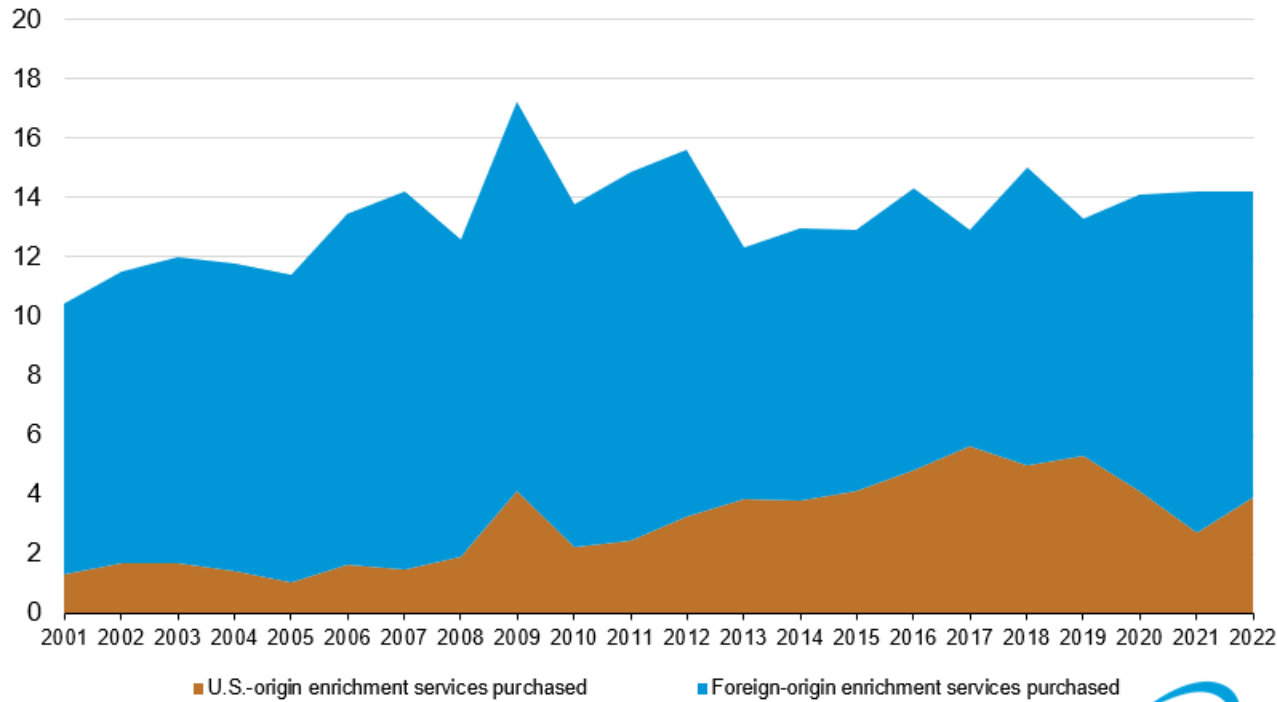


Data Sources: U.S. Energy Information Administration: *Uranium Industry Annual* reports, 2001-2002. Form EIA-858, *Uranium Marketing Annual Survey*, 2003-2022



Figure S4. Uranium enrichment services purchased by owners and operators of U.S. civilian nuclear power reactors, 2001–2022

million separative work units (SWU)



Data Sources: U.S. Energy Information Administration: *Uranium Industry Annual* reports, 2001-2002. Form EIA-858, *Uranium Marketing Annual Survey*, 2003-2022



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, 2001–2022

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
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
2022	10.1	22.0	32.1	9.6	2.5	36.2	103.8	140.0

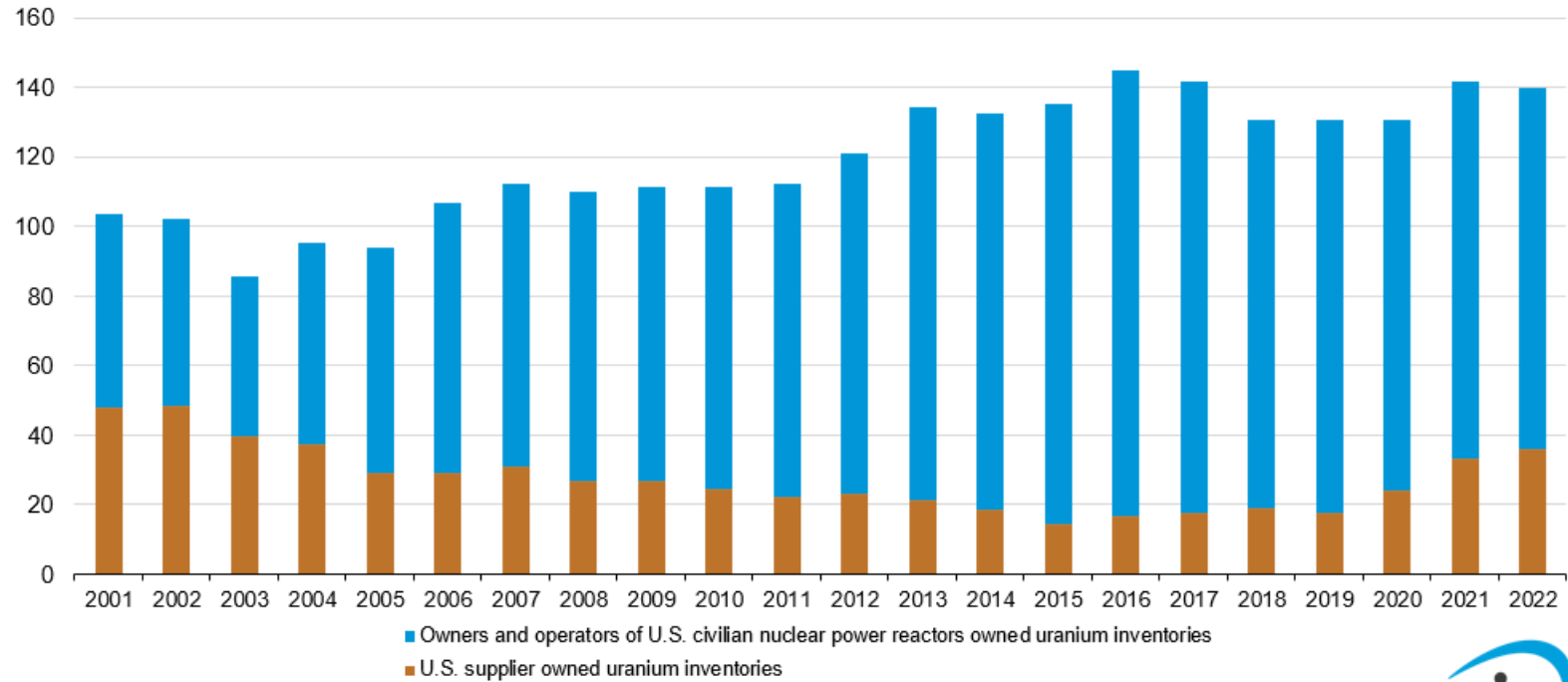
W = Data withheld to avoid disclosure of individual company data.

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.

Data Sources: U.S. Energy Information Administration: *Uranium Industry Annual*, Tables 28, 29, 30 and 31, 2001–2002. Form EIA-858, *Uranium Marketing Annual Survey*, 2003–2022

Figure S5. Total commercial uranium inventories of U.S. suppliers and owners and operators of U.S. civilian nuclear power reactors, 2001–2022

million pounds U₃O₈e equivalent



Data Sources: Energy Information Administration: *Uranium Industry Annual* reports, 2001–2002. Form EIA-858 *Uranium Marketing Annual Survey*, 2003–2022



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, 2001–2022

Delivery year	Foreign purchases by U.S. suppliers	Foreign purchases by owners and operators of U.S. civilian nuclear power reactors	Total foreign purchases (weighted-average price)	U.S. broker and trader purchases from foreign suppliers (weighted-average price)	Foreign sales (weighted-average price)
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
2022	42.48	39.40	40.31	42.36	54.65

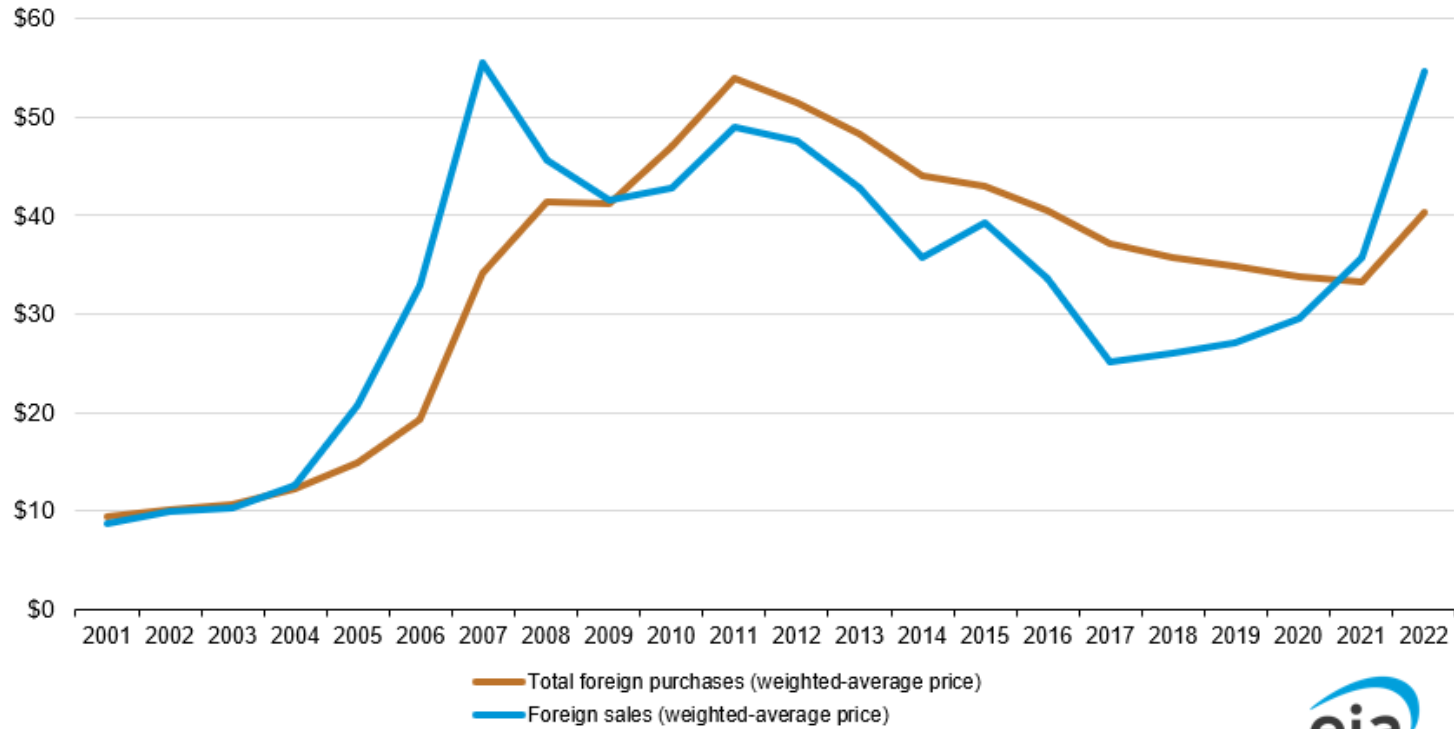
W = Data withheld to avoid disclosure of individual company data.

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.

Data Sources: U.S. Energy Information Administration: *Uranium Industry Annual*, Tables 28, 29, 30, and 31, 2001–2002. Form EIA-858, *Uranium Marketing Annual Survey*, 2003–2022

Figure S6. Weighted-average price of foreign purchases and foreign sales of uranium, 2001–2022

dollars per pound U₃O₈e equivalent



Data Sources: U.S. Energy Information Administration: *Uranium Industry Annual* reports, 2001–2002. Form EIA-858, *Uranium Marketing Annual Survey*, 2003–2022



Table 1. Uranium purchased by owners and operators of U.S. civilian nuclear power reactors by supplier and delivery year, 2017–2022thousand pounds U₃O₈ equivalent; dollars per pound U₃O₈ equivalent

Deliveries	2017	2018	2019	2020	2021	2022
Purchased from U.S. producers						
Purchases of U.S.-origin and foreign-origin uranium	1,762	1,520	W	891	1,650	W
Weighted-average price	48.77	46.59	W	36.01	32.32	W
Purchased from U.S. brokers and traders						
Purchases of U.S.-origin and foreign-origin uranium	4,548	3,897	4,395	6,412	3,308	W
Weighted-average price	51.80	52.51	48.16	30.09	39.67	W
Purchased from other owners and operators of U.S. civilian nuclear power reactors						
Purchases	W	W	W	0	0	W
Weighted-average price	W	W	W	0	0	W
Purchased from other U.S. suppliers						
Purchases of U.S.-origin and foreign-origin uranium	W	W	W	404	195	W
Weighted-average price	W	W	W	40.46	28.99	W
Purchased from foreign suppliers						
Purchases of U.S.-origin and foreign-origin uranium	34,384	33,044	39,208	38,418	41,583	38,009
Weighted-average price	41.16	39.82	36.28	35.27	33.35	39.78
Total purchased by owners and operators of U.S. civilian nuclear power reactors						
Purchases of U.S.-origin and foreign-origin uranium	43,033	40,293	48,328	48,934	46,736	40,519
Weighted-average price	38.80	38.81	35.59	33.27	33.91	39.08

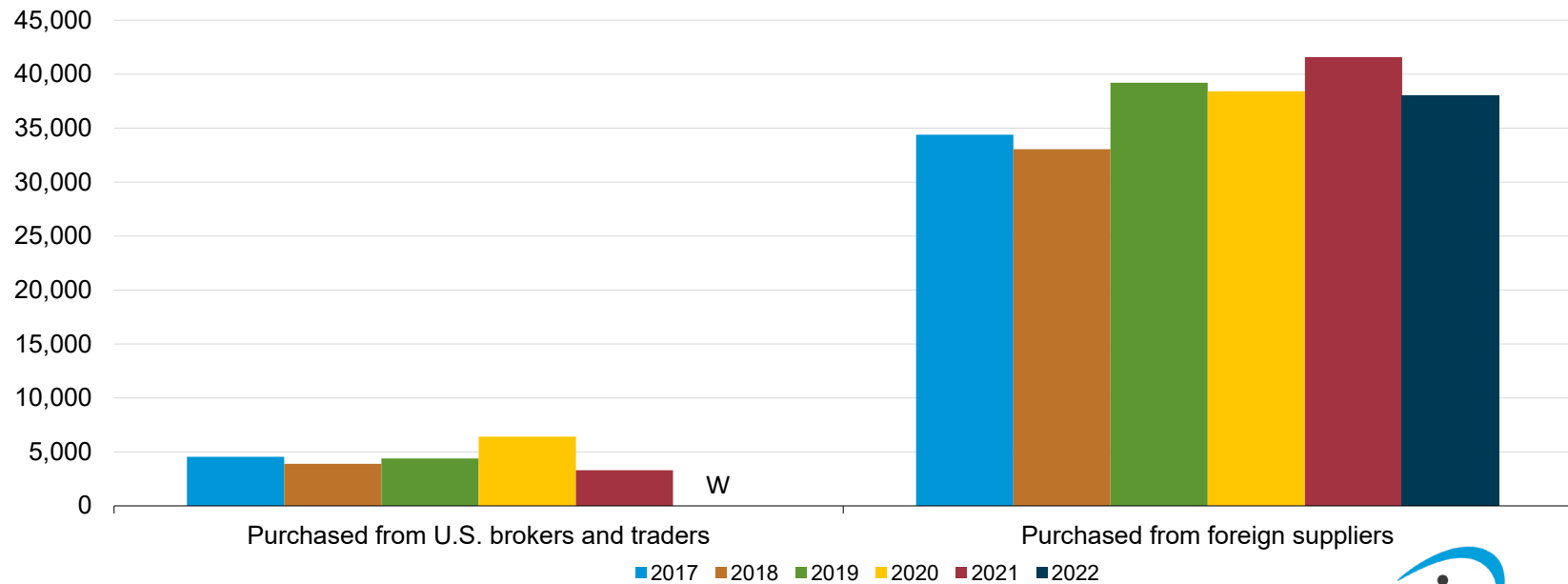
W = Data withheld to avoid disclosure of individual company data.

-- = 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. Weighted-average prices are not adjusted for inflation.Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey (2017–2022)*

Figure 1. Uranium purchased by owners and operators of U.S. civilian nuclear power reactors by supplier and delivery year, 2017–2022

thousand pounds U₃O₈e equivalent

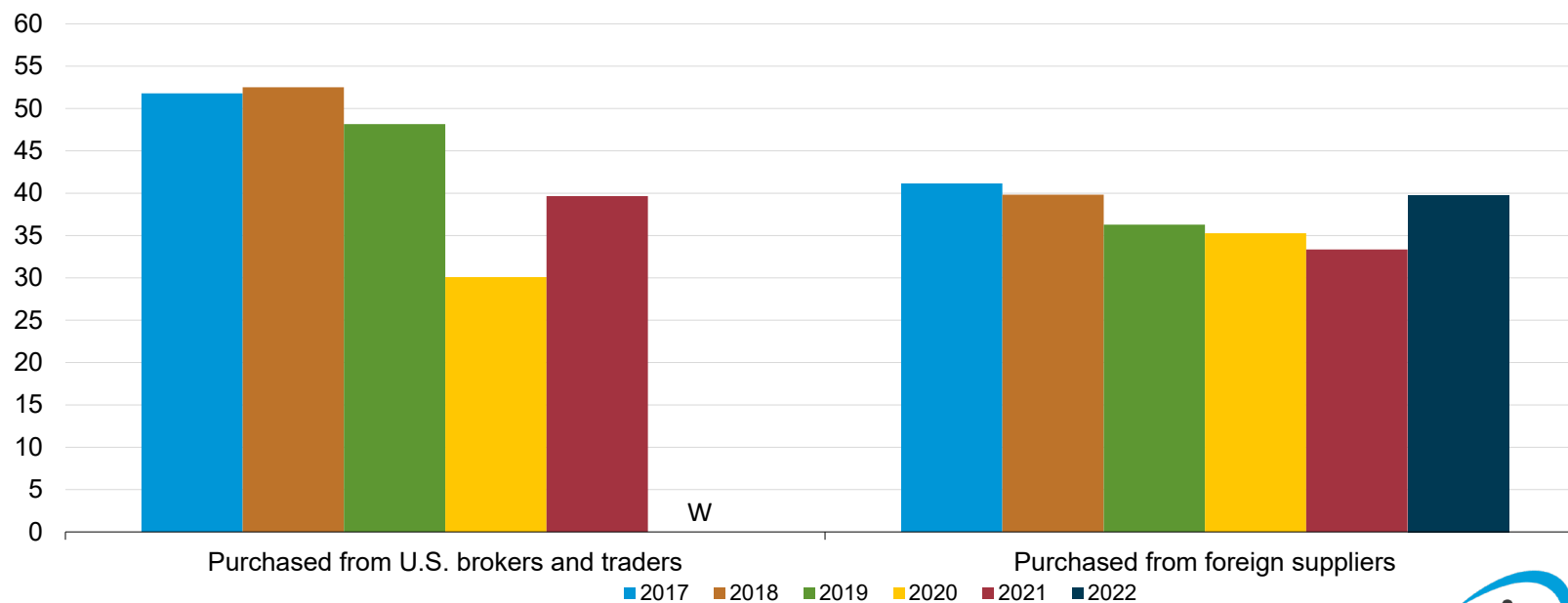


Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2017–2022)



Figure 2. Weighted-average price of uranium purchased by owners and operators of U.S. civilian nuclear power reactors by supplier and delivery year, 2017–2022

dollars per pound U₃O₈e equivalent



Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2017–2022)



Table 2. Uranium purchased by owners and operators of U.S. civilian nuclear power reactors by origin and delivery year, 2017–2022

thousand pounds U₃O₈e equivalent; dollars per pound U₃O₈e equivalent

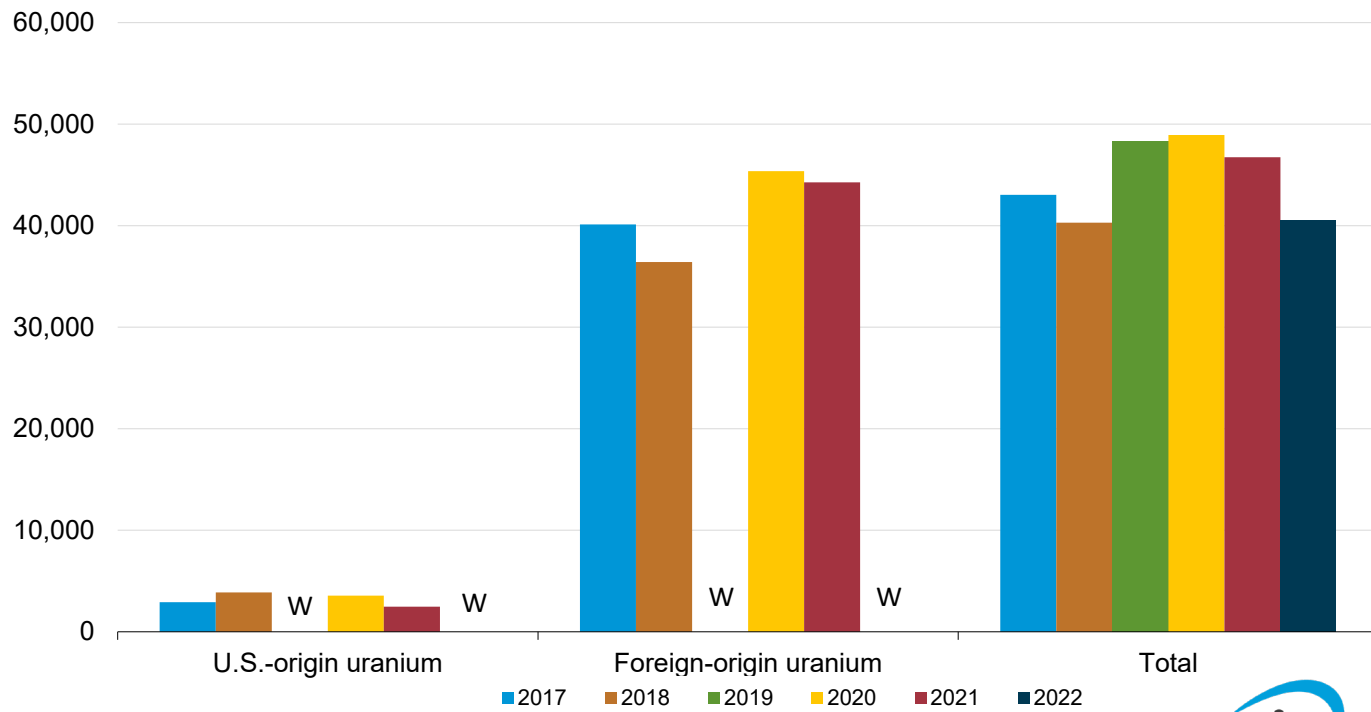
Deliveries	2017	2018	2019	2020	2021	2022
U.S.-origin uranium						
Purchases	2,916	3,878	W	3,567	2,474	W
Weighted-average price	35.55	45.26	W	30.09	43.04	W
Foreign-origin uranium						
Purchases	40,117	36,415	W	45,367	44,263	W
Weighted-average price	39.04	38.11	W	33.53	33.40	W
Total						
Purchases	43,033	40,293	48,328	48,934	46,736	40,519
Weighted-average price	38.80	38.81	35.59	33.27	33.91	39.08

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

Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2017–2022)

Figure 3. Uranium purchased by owners and operators of U.S. civilian nuclear power reactors by origin and delivery year, 2017–2022

thousand pounds U₃O₈e equivalent

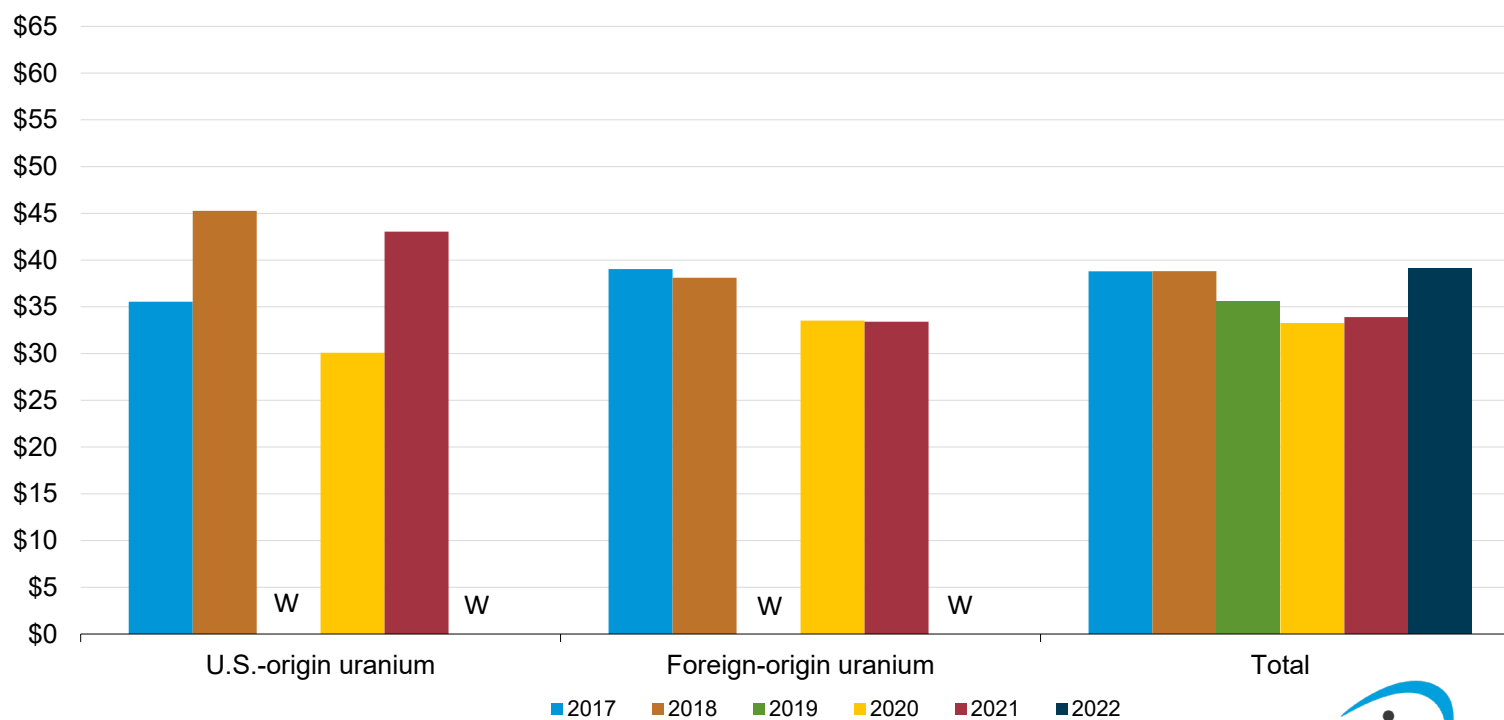


Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2017–2022)



Figure 4. Weighted-average price of uranium purchased by owners and operators of U.S. civilian nuclear power reactors by origin and delivery year, 2017–2022

dollars per pound U₃O₈e equivalent



Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2017–2022)



Table 3. Uranium purchased by owners and operators of U.S. civilian nuclear power reactors by origin country and delivery year, 2018–2022

thousand pounds U₃O₈e equivalent; dollars per pound U₃O₈e equivalent

Origin country	Deliveries in 2018		Deliveries in 2019		Deliveries in 2020		Deliveries in 2021		Deliveries in 2022	
	Purchases	Weighted-average price	Purchases	Weighted-average price	Purchases	Weighted-average price	Purchases	Weighted-average price	Purchases	Weighted-average price
Australia	7,167	40.24	8,504	35.39	5,597	39.86	6,712	36.88	3,620	42.08
Brazil	0	--	0	--	0	0	0	0	0	0
Bulgaria	0	--	0	--	0	0	0	0	0	0
Canada	9,556	37.74	10,172	33.06	10,976	35.05	6,908	35.09	11,100	37.22
China	W	W	0	--	141	24.45	0	0	0	0
Czech Republic	0	--	0	--	0	0	0	0	0	0
Germany	0	--	W	W	0	0	0	0	W	W
Hungary	0	--	0	--	0	0	0	0	0	0
Kazakhstan	8,168	40.98	8,760	35.69	10,828	33.37	16,557	34.16	10,019	39.05
Malawi	0	0.00	0	--	239	29.01	60	52.25	W	W
Namibia	2,178	40.42	2,450	40.40	2,517	35.28	3,214	36.01	W	W
Niger	W	W	998	41.21	2,050	34.36	1,773	39.08	W	W
Portugal	0	--	0	--	0	0	0	0	0	0
Russia	5,360	31.71	7,365	27.31	8,064	25.73	6,314	22.76	4,781	35.20
South Africa	W	W	0	--	0	0	1	31.04	W	W
Ukraine	0	--	0	--	0	0	0	0	0	0
United Kingdom	0	--	0	--	666	35.4	0	0	0	0
Uzbekistan	2,540	37.83	4,365	38.99	3,940	35.93	2,499	33.74	4,438	39.21
unknown	W	W	W	W	100	24.36	225	29.70	-	-
Foreign total	36,415	38.11	W	W	45,367	33.53	44,263	33.40	W	W
United States	3,878	45.26	W	W	3,567	30.09	2,474	43.04	W	W
Total purchases	40,293	38.81	48,328	35.59	48,934	33.27	46,736	33.91	40,519	39.08

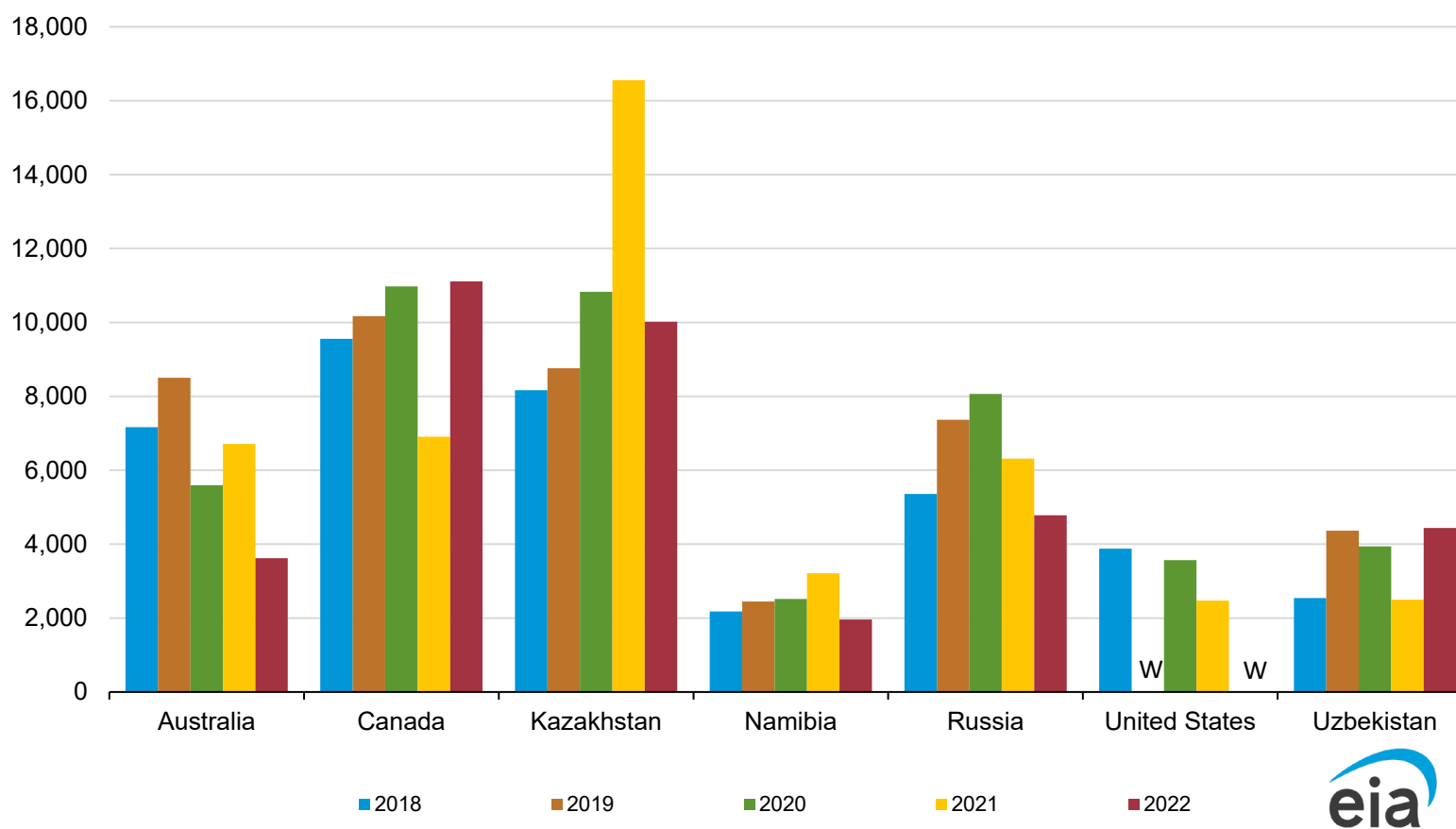
W = Data withheld to avoid disclosure of individual company data. -- = Not applicable.

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

Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2018–22)

Figure 5. Uranium purchased by owners and operators of U.S. civilian nuclear power reactors by selected origin country and delivery year, 2018–2022

thousand pounds U₃O₈e equivalent



Data Source: U.S. Energy Information Administration: Form EIA-858, *Uranium Marketing Annual Survey* (2018–2022). W = Withheld

Table 4. Uranium purchased by owners and operators of U.S. civilian nuclear power reactors by origin and material type, 2022 deliveriesthousand pounds U₃O₈e equivalent; dollars per pound U₃O₈e equivalent

Deliveries	Uranium concentrate	Natural UF ₆	Enriched UF ₆	Natural UF ₆ and Enriched UF ₆	Total
U.S.-origin uranium					
Purchases	W	W	W	W	W
Weighted-average price	W	W	W	W	W
Foreign-origin uranium					
Purchases	W	W	W	W	W
Weighted-average price	W	W	W	W	W
Total					
Purchases	23,514	7,996	9,008	17,004	40,519
Weighted-average price	39.97	39.85	36.09	37.86	39.08

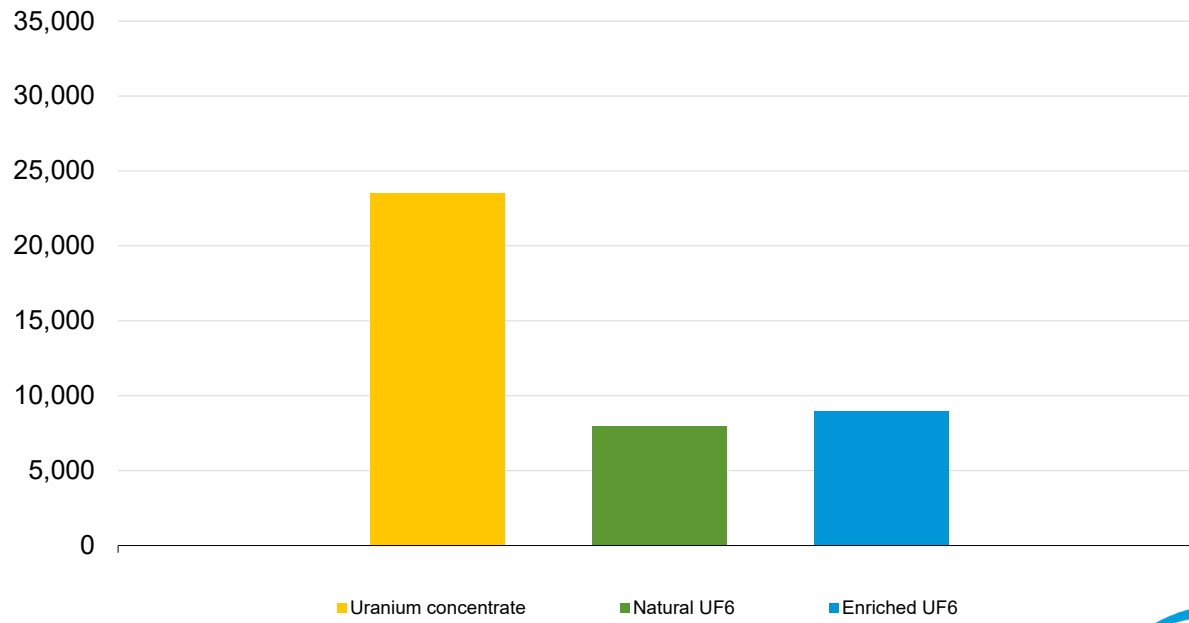
W = Data withheld to avoid disclosure of individual company data.

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 and enriched UF₆, it does not include the conversion service and enrichment service components.

Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2022). W = Withheld

Figure 6. Uranium purchased by owners and operators of U.S. civilian nuclear power reactors by material type, 2022 deliveries

thousand pounds U₃O₈e equivalent



Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2022)



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, 2021–2022

dollars per pound U₃O₈ equivalent; thousand pounds U₃O₈ equivalent

Pricing mechanisms	Domestic purchases ¹		Foreign purchases ²		Total purchases	
	2021	2022	2021	2022	2021	2022
Contract-specified (fixed and base-escalated) pricing						
Weighted-average price	34.38	41.00	38.25	35.90	35.90	36.51
Quantity with reported price	6,033	3,021	9,659	15,424	28,102	30,159
Spot-market pricing						
Weighted-average price	34.21	52.11	30.06	47.01	30.11	46.19
Quantity with reported price	550	498	4,542	2,477	6,664	5,045
Other pricing						
Weighted-average price	38.41	45.27	30.03	48.08	31.38	46.93
Quantity with reported price	1,663	927	10,126	4,061	11,969	5,314
All pricing mechanisms						
Weighted-average price	35.18	43.15	33.30	39.40	33.91	39.08
Quantity with reported price	8,246	4,446	24,327	21,961	46,736	40,519
Total quantity	8,246	4,446	24,327	21,961	46,736	40,519

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

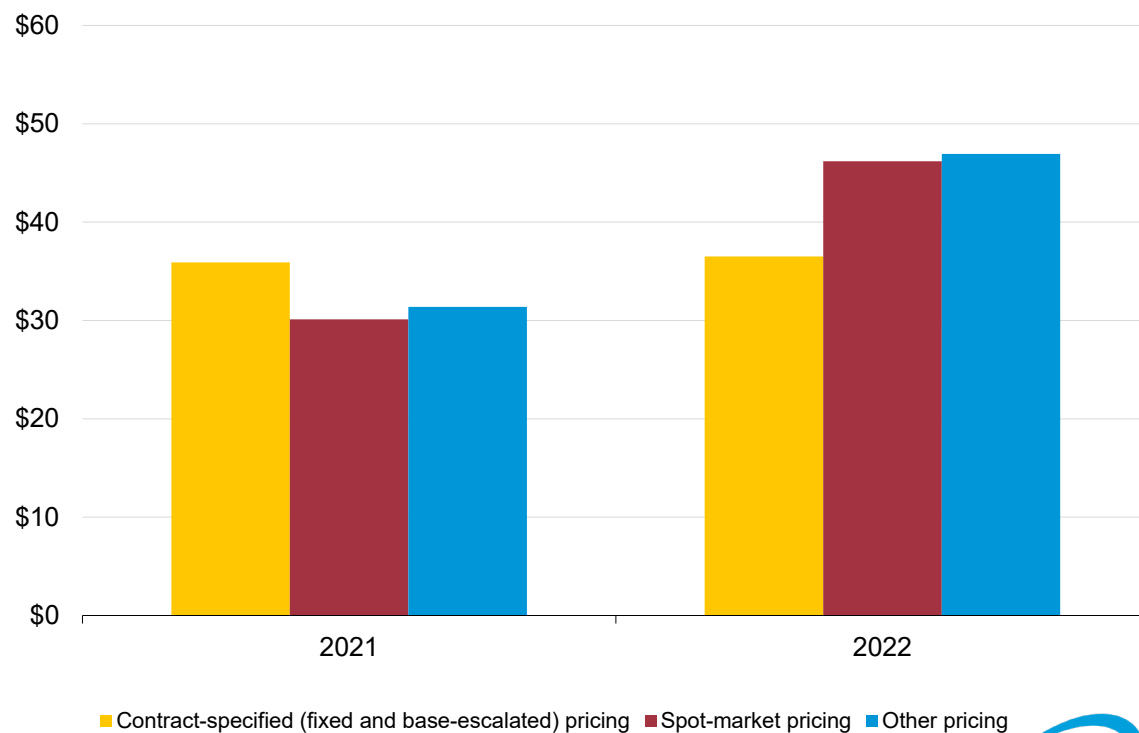
² A uranium purchase of foreign-origin uranium from a firm located outside of the United States.

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

Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2021–2022)

Figure 7. Average price for uranium purchased by owners and operators of U.S. civilian nuclear power reactors by pricing mechanisms and delivery year, 2021–2022

dollars per pound U₃O₈ equivalent



Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey (2021–2022)*



Table 6a. Uranium purchased by owners and operators of U.S. civilian nuclear power reactors ranked by price and distributed by quantity, 2020–2022 deliveries

thousand pounds U₃O₈ equivalent; dollars per pound U₃O₈ equivalent

Quantity distribution ¹	Deliveries in 2020		Deliveries in 2021		Deliveries in 2022	
	Quantity with reported price	Weighted-average price	Quantity with reported price	Weighted-average price	Quantity with reported price	Weighted-average price
First	6,109	15.09	5,842	20.33	5,065	20.61
Second	6,109	23.9	5,842	27.13	5,065	28.6
Third	6,109	25.58	5,842	29.11	5,065	30.93
Fourth	6,109	28.75	5,842	30.02	5,065	34.87
Fifth	6,109	31.45	5,842	31.23	5,065	40.79
Sixth	6,109	35.29	5,842	33.58	5,065	45.72
Seventh	6,109	45.92	5,842	45.36	5,065	49.24
Eighth	6,109	60.22	5,842	54.56	5,065	61.91
Total	48,871	33.27	46,736	33.91	40,519	39.08

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.

Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2020–2022)

Table 6b. Uranium purchased by owners and operators of U.S. civilian nuclear power reactors ranked by price and distributed by purchaser, 2020–2022 deliveries

thousand pounds U₃O₈ equivalent; dollars per pound U₃O₈ equivalent

Distribution of purchasers	Deliveries in 2020			Deliveries in 2021			Deliveries in 2022		
	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	19,668	26.03	7	20,014	27.36	6	6,176	27.75
Second	7	11,914	31.58	6	7,739	34.19	6	18,339	36.77
Third	7	10,039	38.01	6	12,954	38.94	6	9,575	43.70
Fourth	6	7,250	49.17	6	6,029	44.53	6	6,429	49.69
Total	27	48,871	33.27	25	46,736	33.91	24	40,519	39.08

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

Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2020–2022)

Table 7. Uranium purchased by owners and operators of U.S. civilian nuclear power reactors by contract type and material type, 2022 deliveries

thousand pounds U₃O₈ equivalent; dollars per pound U₃O₈ equivalent

Material type	Spot contracts ¹		Long-term contracts ²		Total	
	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	5,328	40.64	18,187	39.77	23,514	39.97
Natural UF ₆	W	W	W	W	7,996	39.85
Enriched UF ₆	W	W	W	W	9,008	36.09
Total	5,916	40.7	34,603	38.81	40,519	39.08

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. The natural 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.

Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2022). W = Withheld

Table 8. Contracts signed in 2022 by owners and operators of U.S. civilian nuclear power reactors by contract type

thousand pounds U₃O₈ equivalent; dollars per pound U₃O₈ equivalent

Purchase contract type (Signed in 2022)	Quantity of deliveries received in 2022	Weighted-average price	Number of purchase contracts for deliveries in 2022
Spot	2,087	48.43	20
Long-term	2,526	36.45	7
Total	4,613	41.87	27

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

Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2022)

Table 9. Contracted purchases of uranium by owners and operators of U.S. civilian nuclear power reactors, signed in 2022, by delivery year, 2023–2032

thousand pounds U₃O₈ equivalent

Year of delivery	Minimum	Maximum
2023	7,297	8,347
2024	7,313	8,822
2025	6,733	9,757
2026	6,566	8,381
2027	6,948	8,728
2028	4,853	6,223
2029	3,808	5,128
2030	3,248	4,993
2031	2,388	3,693
2032	2,388	3,348
Total	51,540	67,418

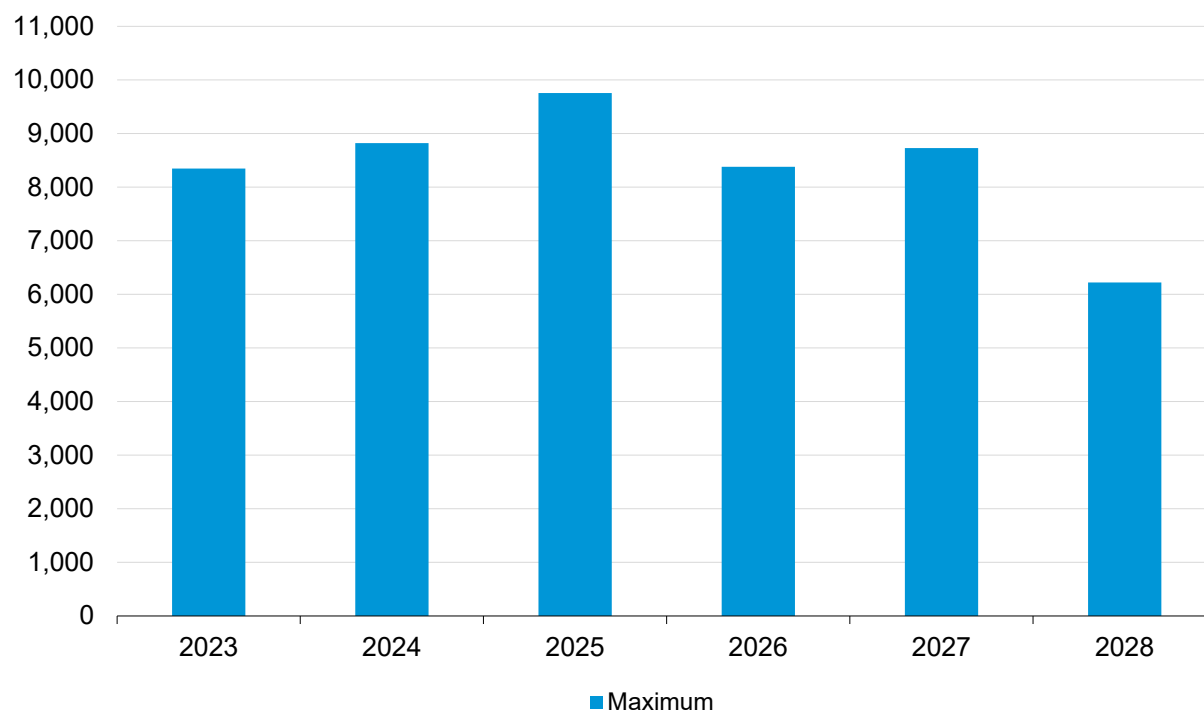
W = Data withheld to avoid disclosure of individual company data.

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

Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey (2022)*

Figure 8. Contracted purchases of uranium by owners and operators of U.S. civilian nuclear power reactors, signed in 2022, by delivery year, 2023–2028

thousand pounds U₃O₈ equivalent



Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2022)



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 2022, by delivery year, 2023–2032

thousand pounds U₃O₈ equivalent

Year of delivery	Contracted purchases from U.S. suppliers		Contracted purchases from foreign suppliers		Contracted purchases from all suppliers	
	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum
2023	2,040	2,197	32,053	40,595	34,093	42,793
2024	1,672	1,717	32,570	41,142	34,242	42,859
2025	2,009	2,199	23,973	34,679	25,982	36,878
2026	395	428	19,265	25,491	19,660	25,919
2027	W	W	W	W	18,063	23,598
2028	W	W	W	W	12,722	17,818
2029	W	W	W	W	10,921	14,544
2030	W	W	W	W	8,401	11,614
2031	W	W	W	W	W	W
2032	W	W	W	W	W	W
Total	7,110	7,884	161,966	215,497	169,076	223,381

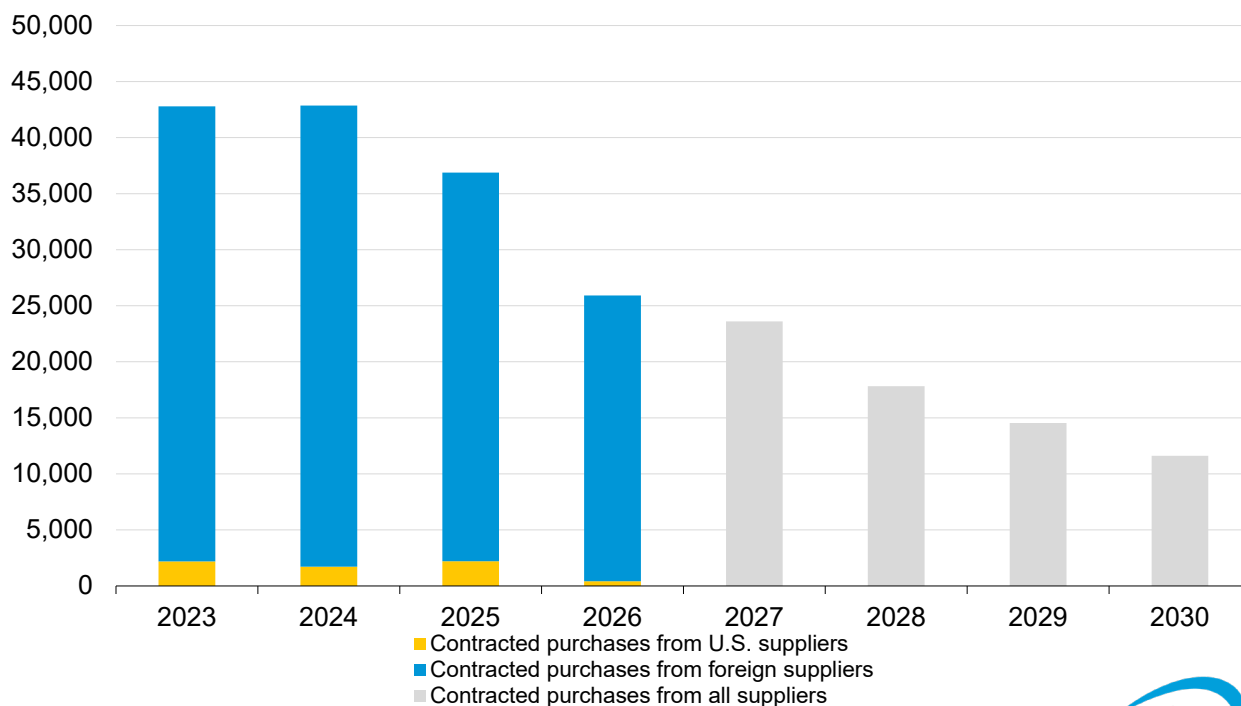
W = Data withheld to avoid disclosure of individual company data.

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

Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2022)

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 2022, by delivery year, 2023–2027

thousand pounds U₃O₈ equivalent



Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2022)



Table 11. Unfilled uranium market requirements of owners and operators of U.S. civilian nuclear power reactors, 2022–2032thousand pounds U₃O₈ equivalent

Year	As of December 31, 2021		As of December 31, 2022	
	Annual	Cumulative	Annual	Cumulative
2022	2,782	2,782	0	0
2023	3,564	6,346	2,100	2,100
2024	9,172	15,518	4,875	6,976
2025	12,710	28,228	5,276	12,252
2026	20,786	49,014	8,689	20,941
2027	19,823	68,837	10,356	31,297
2028	24,386	93,223	21,621	52,919
2029	26,872	120,095	24,979	77,898
2030	28,468	148,564	27,622	105,520
2031	33,532	182,095	36,644	142,164
2032	0	0	36,991	179,155

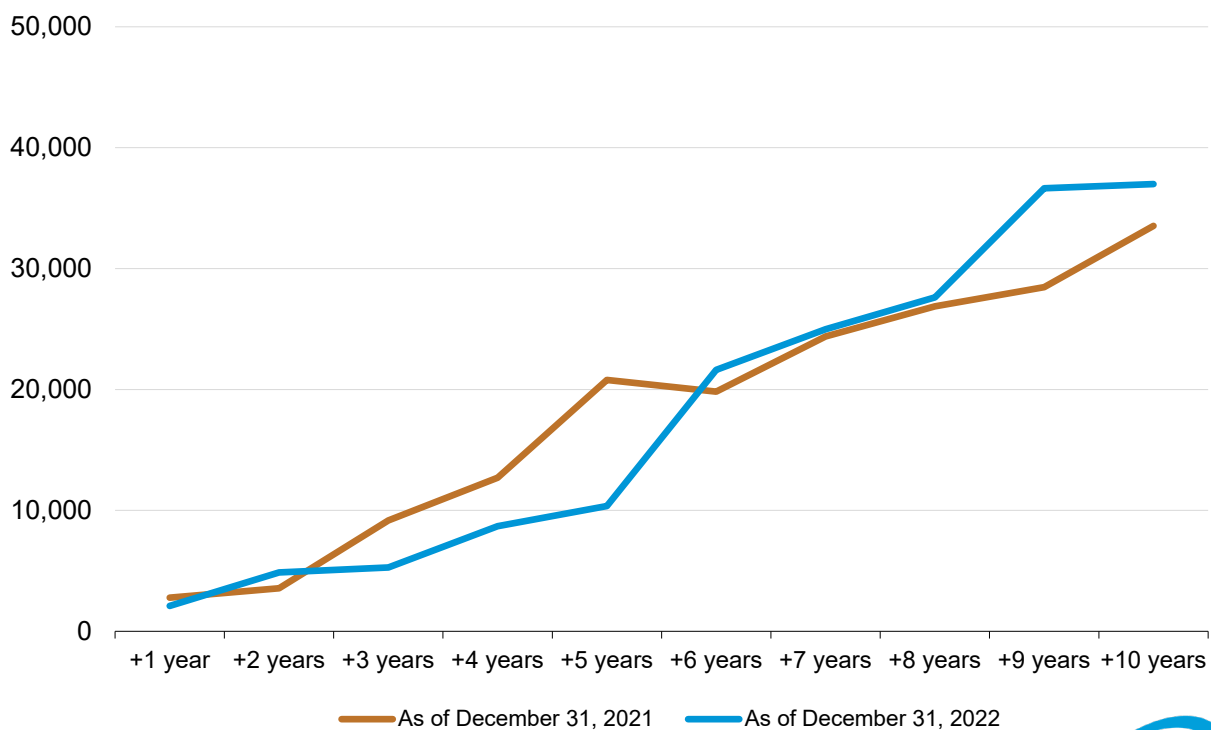
- = No data reported. -- = Not applicable.

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

Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2021–2022)

Figure 10. Annual unfilled uranium market requirements of owners and operators of U.S. civilian nuclear power reactors, at the end of 2021 and at the end of 2022

thousand pounds U₃O₈ equivalent



Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2021–2022)



Table 12. Maximum anticipated uranium market requirements of owners and operators of U.S. civilian nuclear power reactors, 2023–2032, at end of 2022

thousand pounds U₃O₈ equivalent

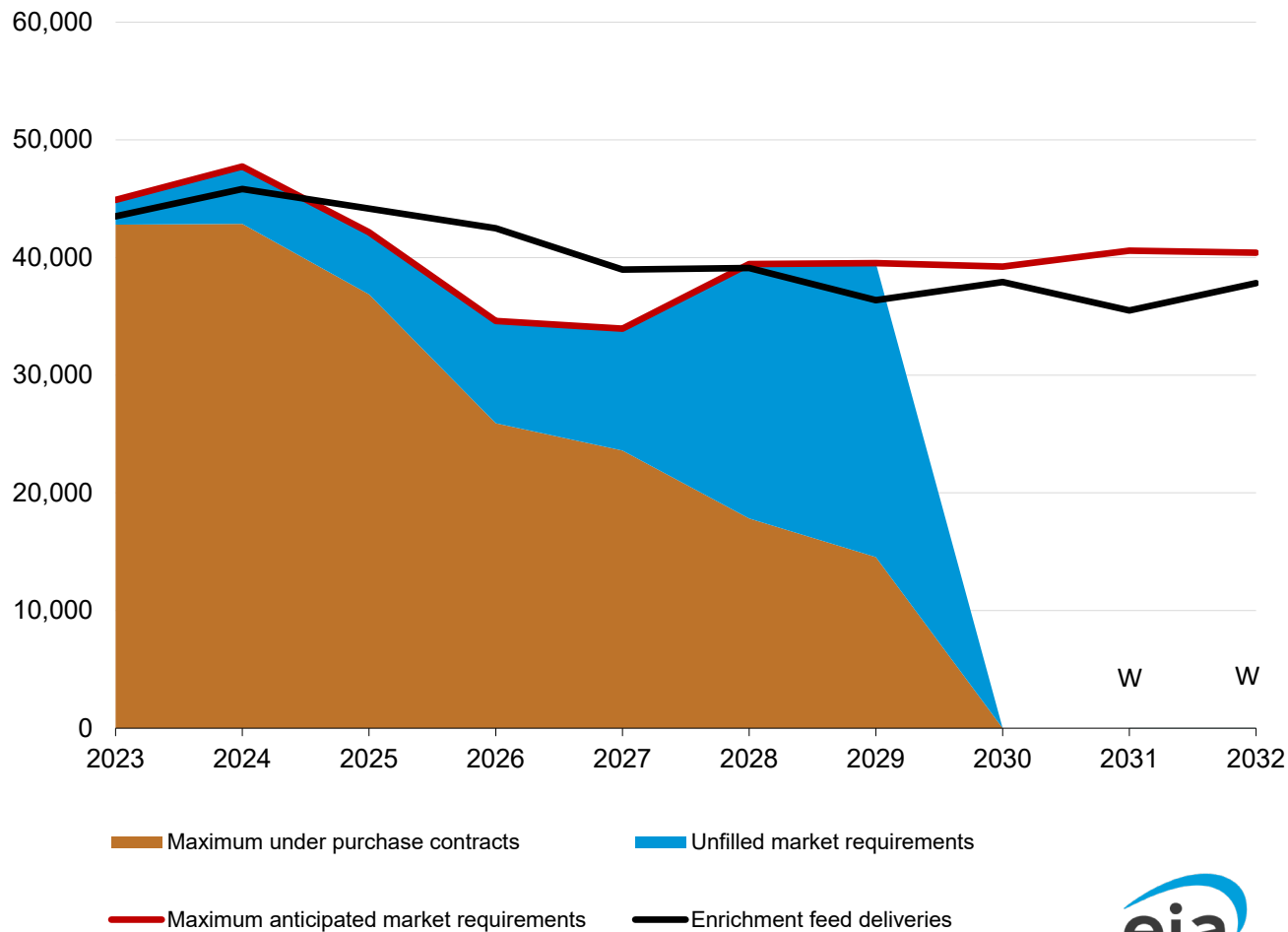
Year	Maximum under purchase contracts	Unfilled market requirements	Maximum anticipated market requirements	Enrichment feed deliveries
2023	42,793	2,100	44,893	43,507
2024	42,859	4,875	47,735	45,823
2025	36,878	5,276	42,154	44,166
2026	25,919	8,689	34,608	42,489
2027	23,598	10,356	33,955	38,976
2028	17,818	21,621	39,440	39,116
2029	14,544	24,979	39,523	36,380
2030	W	W	39,236	37,919
2031	W	W	40,587	35,501
2032	W	W	40,405	37,821
Total	223,381	179,155	402,536	401,696

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

Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2022)

Figure 11. Maximum anticipated uranium market requirements of owners and operators of U.S. civilian nuclear power reactors, 2023–2032, at end of 2022

thousand pounds U₃O₈ equivalent



Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2022) W = Withheld



Table 13. Deliveries of uranium feed by owners and operators of U.S. civilian nuclear power reactors by enrichment country and delivery year, 2020–2022

thousand pounds U₃O₈ equivalent

Enrichment country	Feed deliveries in 2020			Feed deliveries in 2021			Feed deliveries in 2022		
	U.S.-origin	Foreign-origin	Total	U.S.-origin	Foreign-origin	Total	U.S.-origin	Foreign-origin	Total
China	W	W	W	0	W	W	0	0	0
France	W	W	W	W	W	W	W	W	W
Germany	W	W	W	W	W	4,255	W	W	W
Netherlands	0	2,979	2,979	W	W	3,405	0	2,670	2,670
Russia	W	W	3,291	0	617	617	0	2,867	2,867
United Kingdom	0	3,601	3,601	W	W	2,959	0	1,097	1,097
Europe ¹	0	3,381	3,381	W	W	W	0	6,409	6,409
Foreign total	232	17,758	17,990	W	18,988	19,466	W	W	20,389
United States	1,939	14,444	16,382	W	W	14,689	W	W	14,199
Total	2,170	32,202	34,372	2,616	31,539	34,155	1,728	32,860	34,588

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

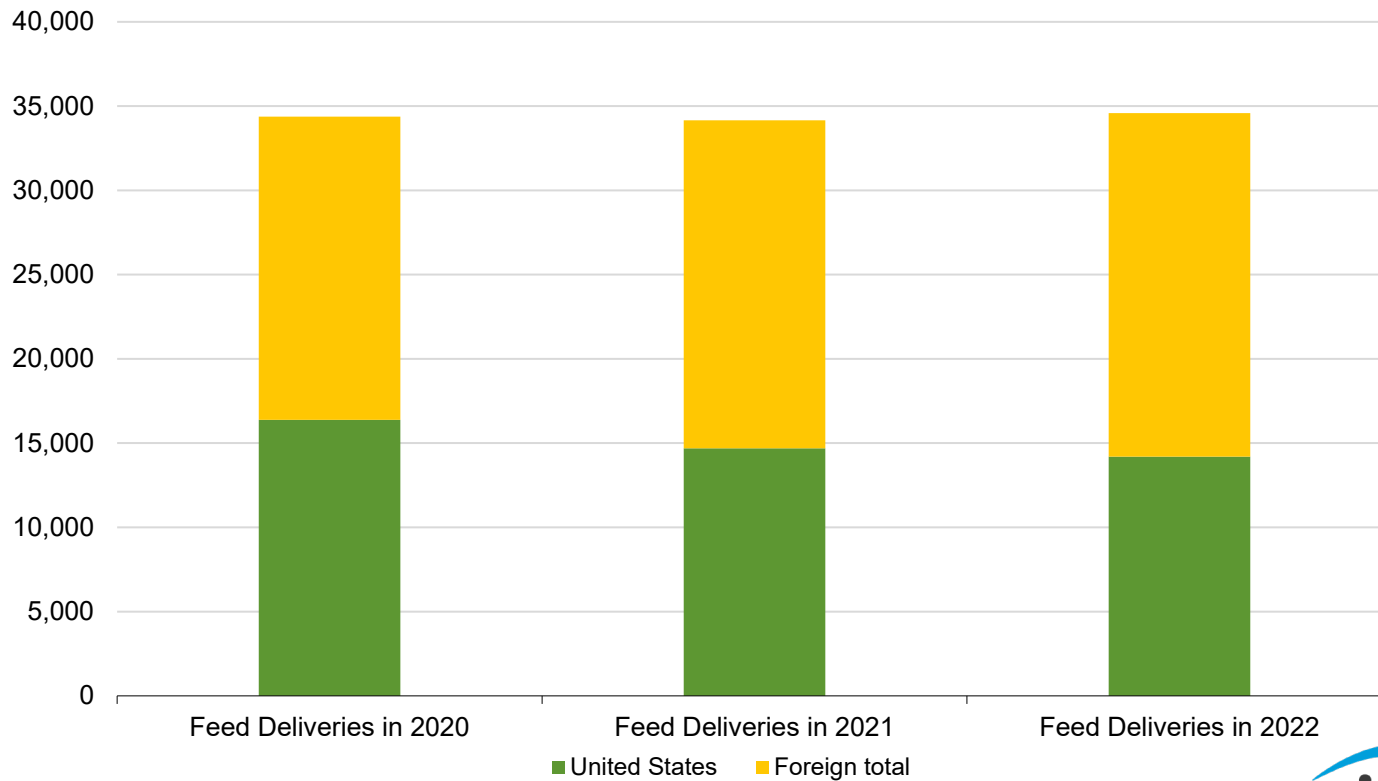
¹ Specific country in Europe was not reported.

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

Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2020–2022)

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, 2020–2022

thousand pounds U₃O₈ equivalent



Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2020–2022)



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, 2020–2022

thousand pounds U₃O₈ equivalent

Origin country of feed	Deliveries in 2020			Deliveries in 2021			Deliveries in 2022		
	U.S. enrichment	Foreign enrichment	Total	U.S. enrichment	Foreign enrichment	Total	U.S. enrichment	Foreign enrichment	Total
Australia	1,194	3,077	4,271	2,709	3,625	6,334	1,618	2,610	4,228
Brazil	W	W	W	0	0	0	0	0	0
Canada	6,927	4,495	11,422	5,013	4,254	9,266	8,382	5,342	13,724
China	W	W	W	0	0	0	0	0	0
Czech Republic	0	0	0	W	W	W	0	0	0
Kazakhstan	4,421	5,249	9,670	3,039	7,919	10,958	1,353	6,821	8,174
Malawi	0	0	0	W	W	W	W	W	W
Namibia	W	W	W	W	W	819	W	W	W
Niger	W	W	1,029	W	W	1,686	W	W	W
Portugal	0	0	0	0	0	0	0	0	0
Russia	W	W	1,303	W	W	W	W	W	W
South Africa	0	0	0	W	W	W	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	W	W	W	W	W	W	795	1,056	1,851
unknown/other	W	W	W	0	0	0	0	0	0
Foreign total	14,444	17,758	32,202	W	W	W	W	W	W
United States	1,939	232	2,170	W	W	W	W	W	W
Total	16,382	17,990	34,372	14,689	19,466	34,155	14,199	20,389	34,588

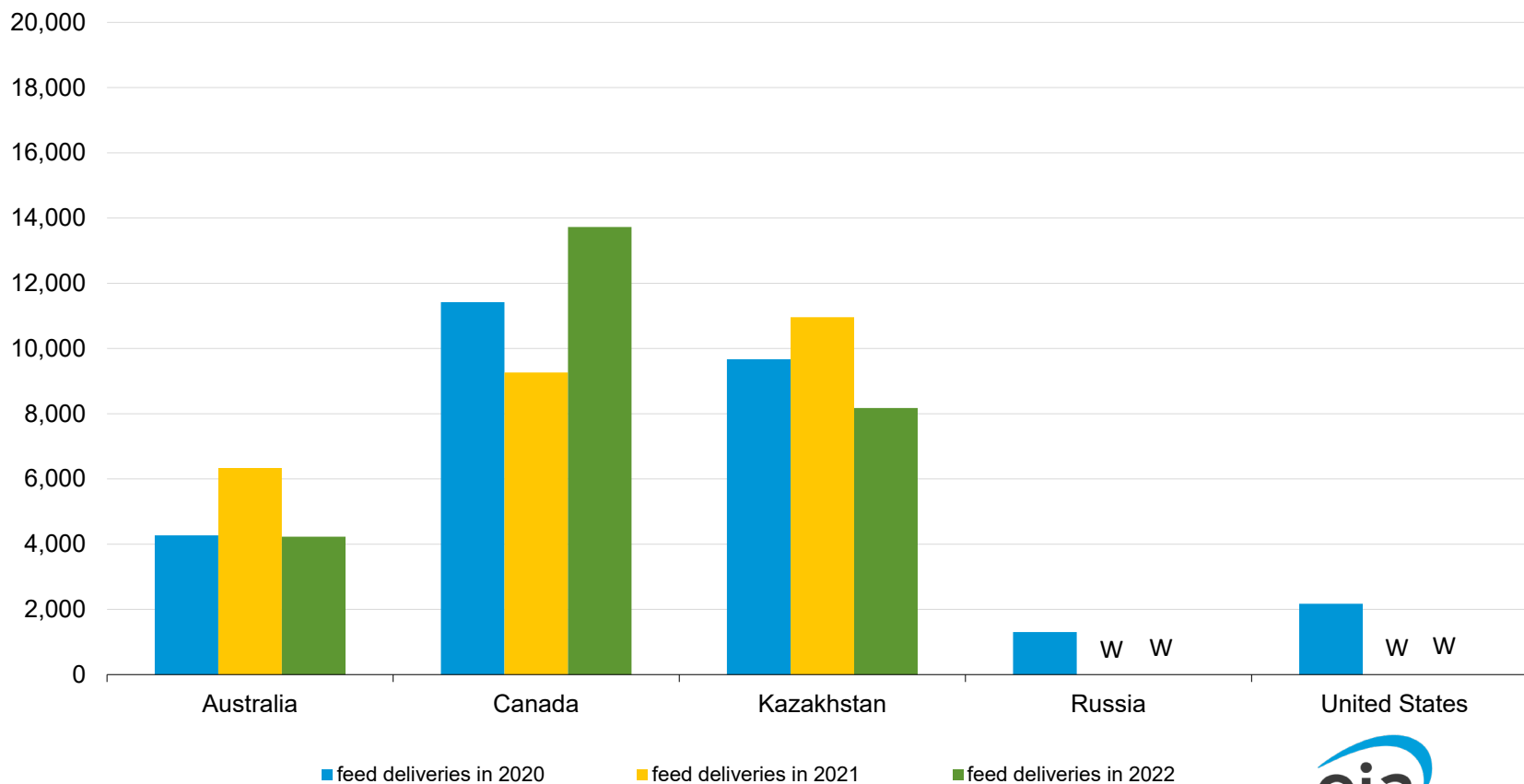
W = Data withheld to avoid disclosure of individual company data.

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

Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2020–22)

Figure 13. Deliveries of uranium feed for enrichment by owners and operators of U.S. civilian nuclear power reactors by selected origin country of feed and delivery year, 2020–2022

thousand pounds U₃O₈ equivalent



Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2020–22)



Table 15. Shipments of uranium feed by owners and operators of U.S. civilian nuclear power reactors to domestic and foreign enrichment suppliers, 2023–2032

thousand pounds U₃O₈ equivalent

Year of shipment	Amount of feed to be shipped		Change from 2021 to 2022	
	As of December 31, 2021	As of December 31, 2022	Annual	Cumulative
2023	40,172	43,507	3,335	3,335
2024	42,221	45,823	3,602	6,937
2025	36,390	44,166	7,776	14,713
2026	40,100	42,489	2,389	17,102
2027	35,913	38,976	3,063	20,165
2028	35,733	39,116	3,383	23,548
2029	34,996	36,380	1,384	24,932
2030	36,003	37,919	1,916	26,848
2031	31,548	35,501	3,953	30,801
2032	-	37,281	--	--

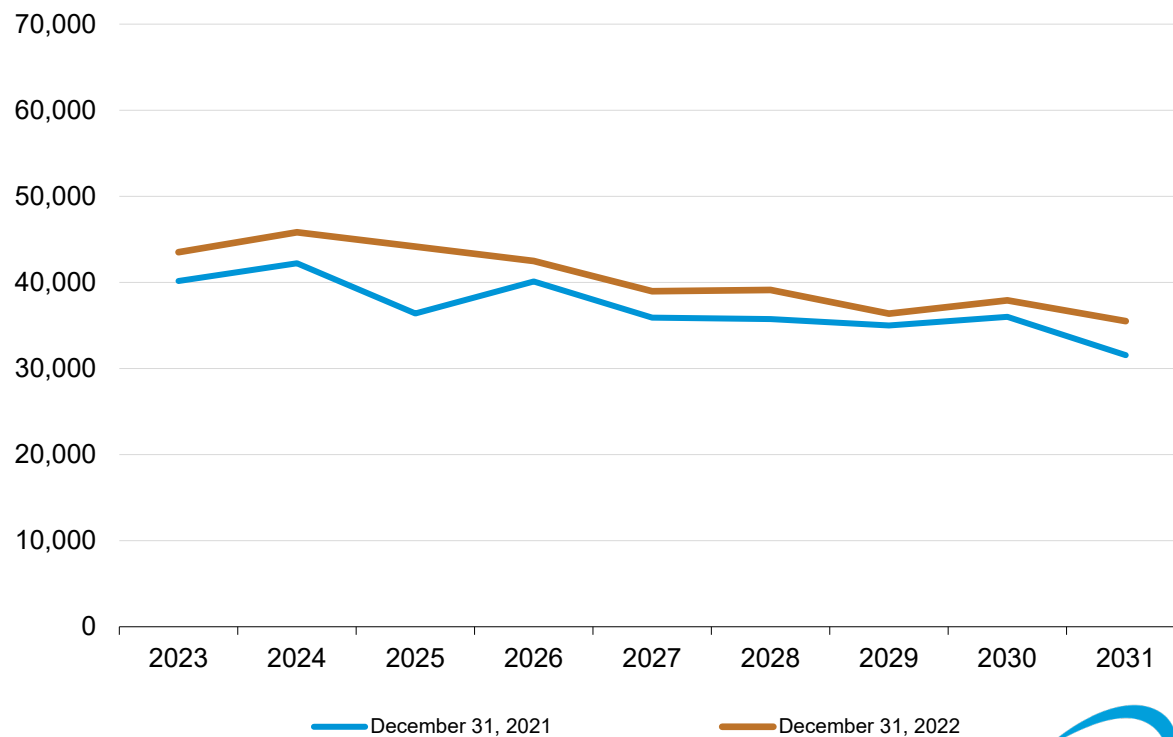
- = No data reported. -- = Not applicable.

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

Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2021–22)

Figure 14. Shipments of uranium feed by owners and operators of U.S. civilian nuclear power reactors to domestic and foreign enrichment suppliers, 2023–2031

thousand pounds U₃O₈ equivalent



Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2021–22)



Table 16. Purchases of enrichment services by owners and operators of U.S. civilian nuclear power reactors by origin country and year, 2018–2022

thousand separative work units (SWU)

Country of enrichment service (SWU-origin)	2018	2019	2020	2021	2022
China	W	W	W	W	W
France	0	W	W	W	W
Germany	1,444	1,238	1,175	1,825	1,763
Netherlands	2,864	1,367	1,885	1,583	1,303
Russia	3,473	3,087	3,220	3,953	3,409
United Kingdom	1,544	1,262	1,218	2,366	1,593
Europe ¹	W	W	W	W	W
Other ²	W	W	W	W	W
Foreign total	10,034	7,992	10,012	11,481	10,301
United States	4,979	5,289	4,132	2,736	3,876
Total	15,013	13,281	14,144	14,217	14,176
Average price (US\$ per SWU)	115.42	109.54	99.51	99.54	101.03

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

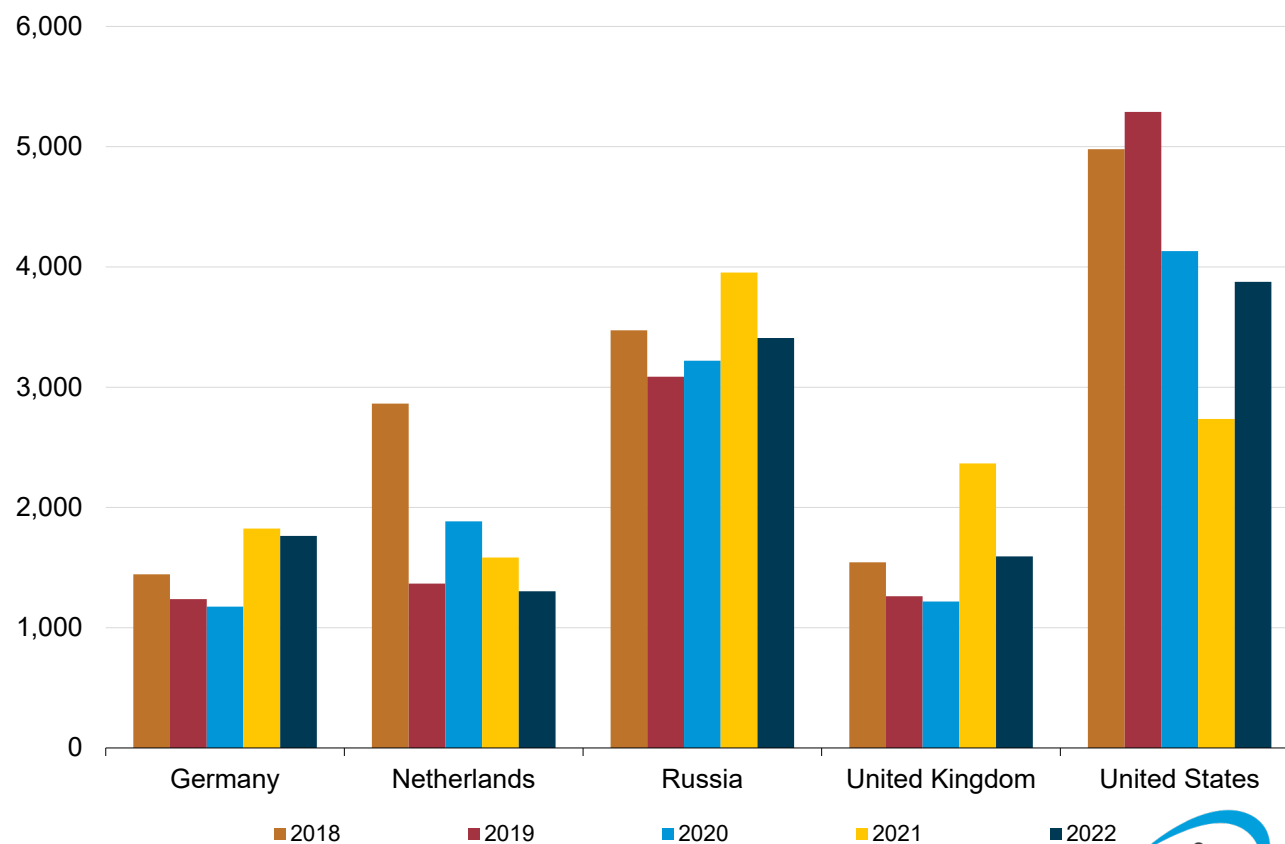
¹ Specific country in Europe was not reported.² Specific country was not reported.

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

Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2018–22)

Figure 15. Purchases of enrichment services by owners and operators of U.S. civilian nuclear power reactors by selected origin country and year, 2018–2022

thousand separative work units (SWU)



Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2018–22)



Table 17. Purchases of enrichment services by owners and operators of U.S. civilian nuclear power reactors by contract type in delivery year, 2022

thousand separative work units (SWU)

Enrichment service contract type	U.S. enrichment	Foreign enrichment	Total
Spot	W	W	W
Long-term	W	W	W
Total	3,876	10,301	14,176

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

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

Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2022)

Table 18. Uranium in fuel assemblies loaded into U.S. civilian nuclear power reactors by year, 2018–2022thousand pounds U₃O₈ equivalent

Origin of uranium	2018	2019	2020	2021	P2022
Domestic-origin uranium	4,957	4,051	8,678	3,289	1,507
Foreign-origin uranium	45,399	39,194	39,953	41,111	42,904
Total	50,355	43,245	48,631	44,400	44,411

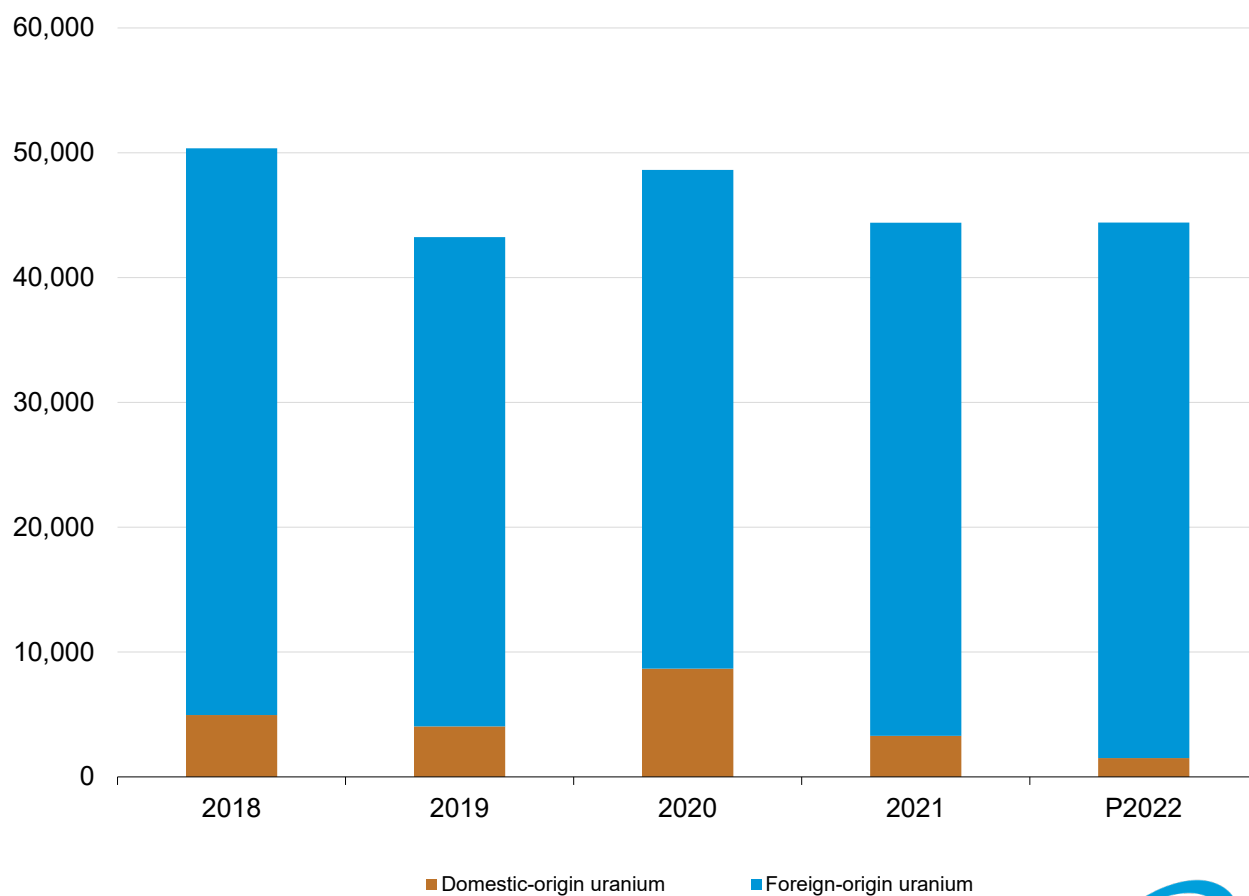
P = Preliminary data. Final 2021 fuel assembly data reported in the 2022 survey.

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.

Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2018–2022)

Figure 16. Uranium in fuel assemblies loaded into U.S. civilian nuclear power reactors by year, 2018–2022

thousand pounds U₃O₈ equivalent



P = Preliminary data. Final 2021 fuel assembly data reported in the 2022 survey.
 Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2018–2022)



Table 19. Foreign purchases of uranium by U.S. suppliers and owners and operators of U.S. civilian nuclear power reactors by delivery year, 2018–2022

thousand pounds U₃O₈ equivalent; dollars per pound U₃O₈ equivalent

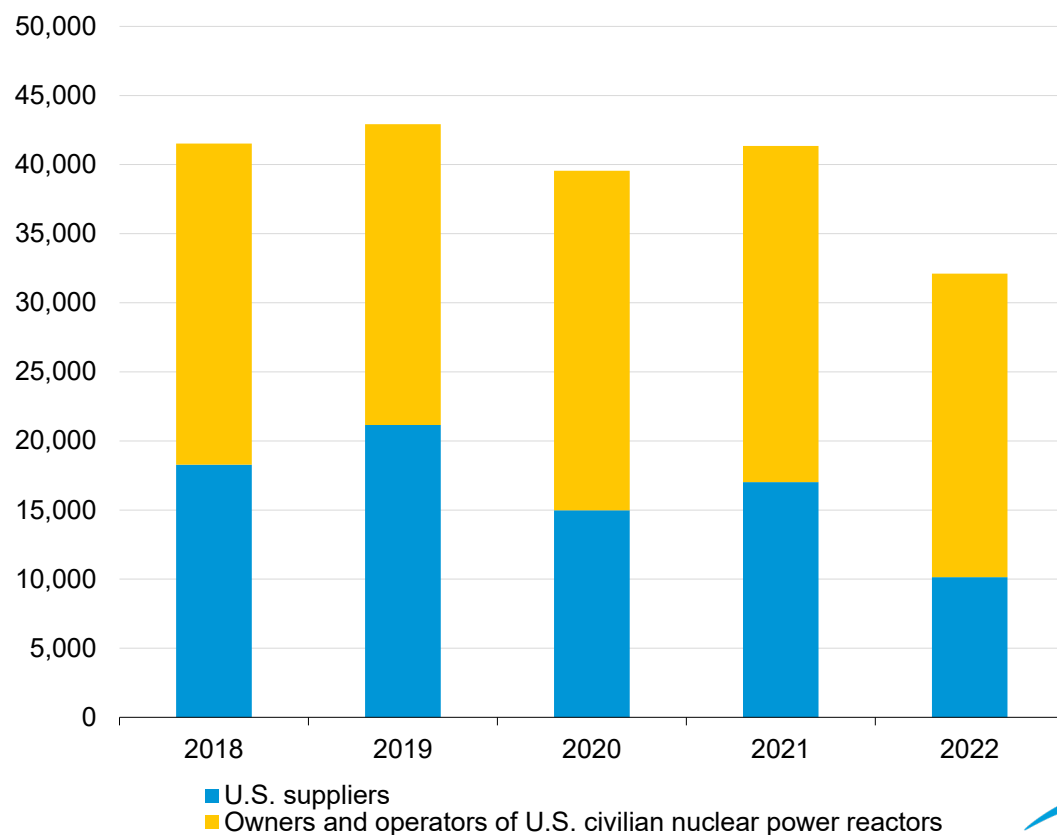
Deliveries	2018	2019	2020	2021	2022
U.S. suppliers					
Foreign purchases	18,278	21,160	14,983	17,021	10,145
Weighted-average price	30.93	33.17	31.27	33.19	42.48
Owners and operators of U.S. civilian nuclear power reactors					
Foreign purchases	23,246	21,763	24,572	24,327	21,961
Weighted-average price	39.32	36.28	35.33	33.30	39.40
Total					
Foreign purchases	41,524	42,923	39,555	41,348	32,107
Weighted-average price	35.73	34.77	33.79	33.26	40.31

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 of the United States. Weighted-average prices are not adjusted for inflation.

Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2018–2022)

Figure 17. Foreign purchases of uranium by U.S. suppliers and owners and operators of U.S. civilian nuclear power reactors by delivery year, 2018–2022

thousand pounds U₃O₈ equivalent



Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey (2018–2022)*



Table 20. U.S. broker and trader purchases of uranium by origin, supplier, and delivery year, 2018–2022thousand pounds U₃O₈ equivalent; dollars per pound U₃O₈ equivalent

Deliveries	2018	2019	2020	2021	2022
Received U.S.-origin uranium					
Purchases	1,765	W	W	938	393
Weighted-average price	28.20	W	W	42.71	43.64
Received foreign-origin uranium					
Purchases	34,400	W	W	42,537	31,304
Weighted-average price	30.61	W	W	34.94	43.87
Total received by U.S. brokers and traders					
Purchases	36,165	38,394	34,411	43,474	31,698
Weighted-average price	30.49	33.09	30.14	35.10	43.87
Received from foreign suppliers					
Purchases	18,870	20,757	14,436	16,637	9,620
Weighted-average price	30.84	33.43	31.51	33.53	42.36

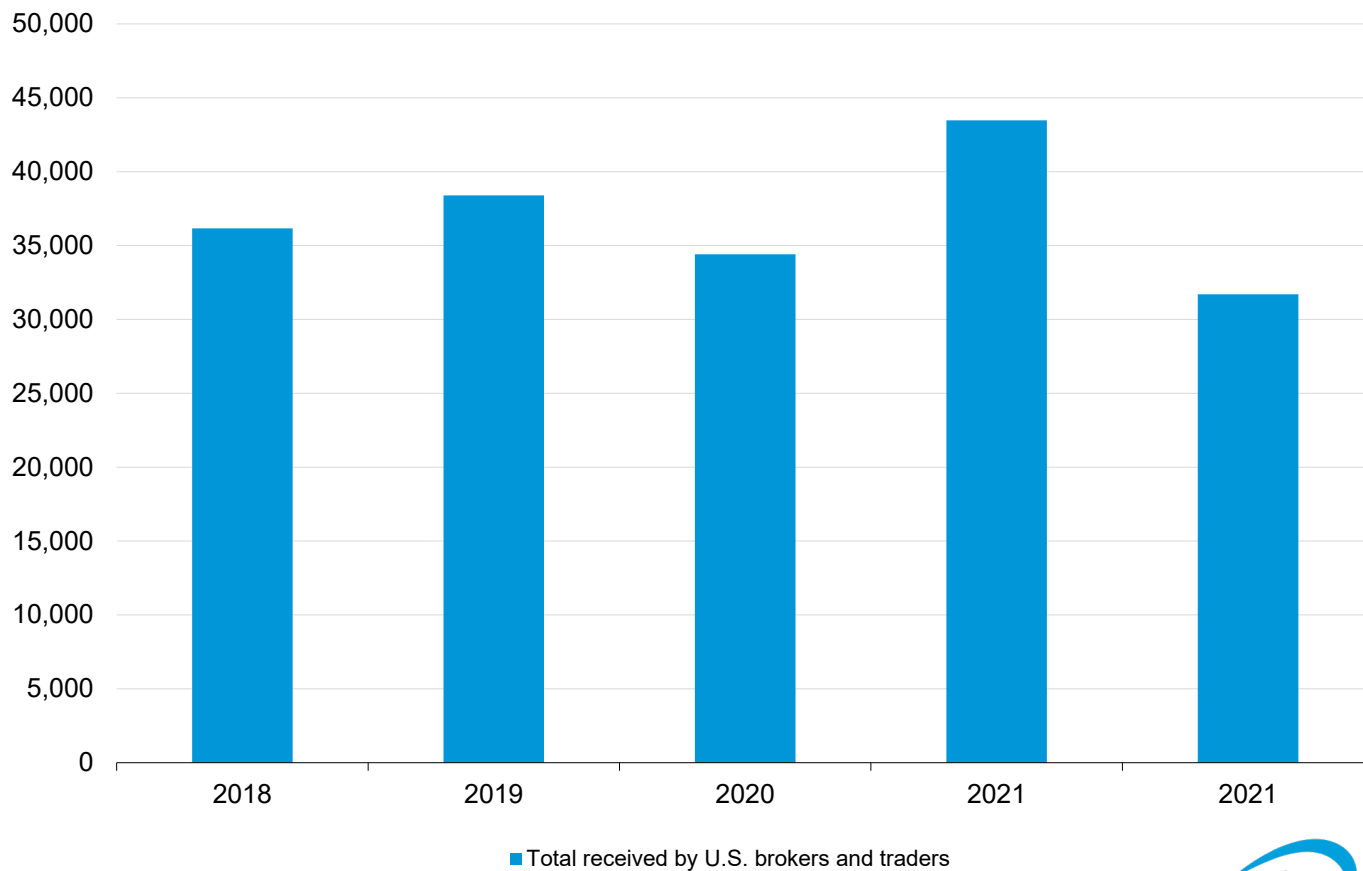
W = Data withheld to avoid disclosure of individual company data.

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

Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2018–2022)

Figure 18. U.S. broker and trader purchases of uranium by delivery year, 2018–2022

thousand pounds U₃O₈ equivalent



Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2018–2022)



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, 2018–2022

thousand pounds U₃O₈ equivalent; dollars per pound U₃O₈ equivalent

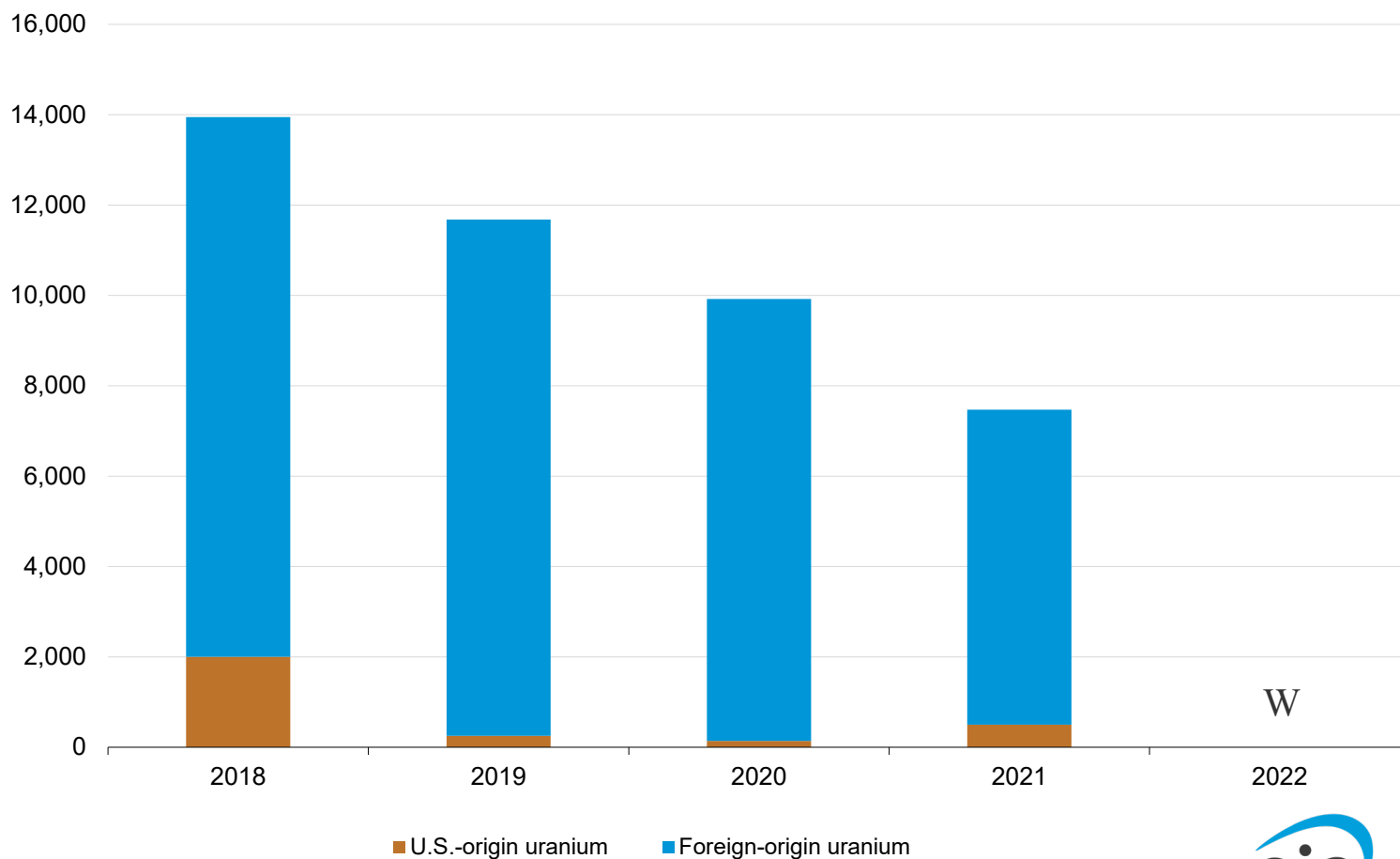
Deliveries to foreign suppliers and utilities	2018	2019	2020	2021	2022
U.S.-origin uranium					
Foreign sales	2,004	255	141	499	W
Weighted-average price	27.66	25.49	29.09	46.74	W
Foreign-origin uranium					
Foreign sales	11,942	11,424	9,781	6,973	W
Weighted-average price	25.75	27.20	29.58	35.04	W
Total sent:					
Foreign sales	13,947	11,679	9,922	7,471	2,464
Weighted-average price	26.02	27.16	29.57	35.82	54.65
From owners and operators of U.S. civilian nuclear power reactors, U.S. producers, and other U.S. suppliers					
Foreign sales	2,589	3,466	990	W	W
Weighted-average price	28.97	25.76	37.53	W	W
From U.S. brokers and traders					
Foreign sales	11,358	8,213	8,932	W	W
Weighted-average price	25.35	27.75	28.69	W	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. W = Withheld

Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2018–2022)

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, 2018–2022

thousand pounds U₃O₈ equivalent



Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2018–2022)



Table 22. Inventories of natural and enriched uranium by material type as of end of year, 2018–2022thousand pounds U₃O₈ equivalent

Type of uranium inventory owned by	Inventories at the end of the year				
	2018	2019	2020	2021	P2022
Owners and operators of U.S. civilian nuclear power reactors inventories	111,174	113,146	106,863	108,503	103,781
Uranium concentrate (U ₃ O ₈)	19,270	24,350	21,868	19,726	18,878
Natural UF ₆	43,312	40,375	37,806	36,400	31,069
Enriched UF ₆	40,107	36,608	40,712	43,195	47,436
Fabricated fuel (not inserted into a reactor)	8,485	11,813	6,477	9,182	6,398
U.S. supplier inventories	19,345	17,517	24,158	33,155	36,225
Uranium concentrate (U ₃ O ₈)	7,754	7,435	17,713	28,465	31,002
Natural UF ₆	W	W	W	W	W
Enriched UF ₆	W	W	W	W	W
Fabricated fuel (not inserted into a reactor)	0	0	0	0	0
Total Commercial Inventories	130,519	130,662	131,020	141,658	140,006

P = Preliminary data. Final 2021 inventory data reported in the 2022 survey.

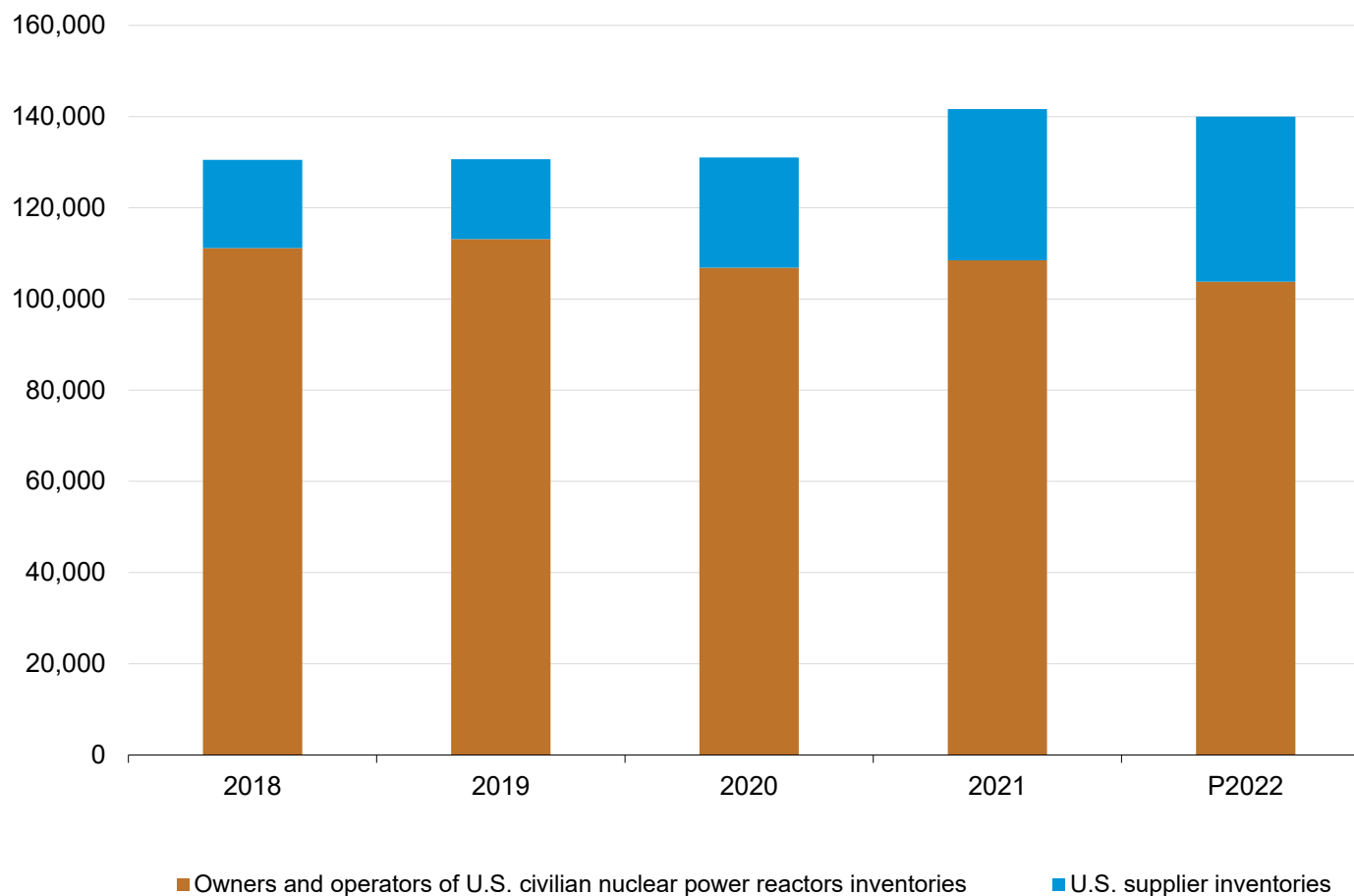
W = Data withheld to avoid disclosure of individual company data.

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

Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2018–2022)

Figure 20. Commercial inventories of natural and enriched uranium as of end of year, 2018–2022

thousand pounds U₃O₈ equivalent

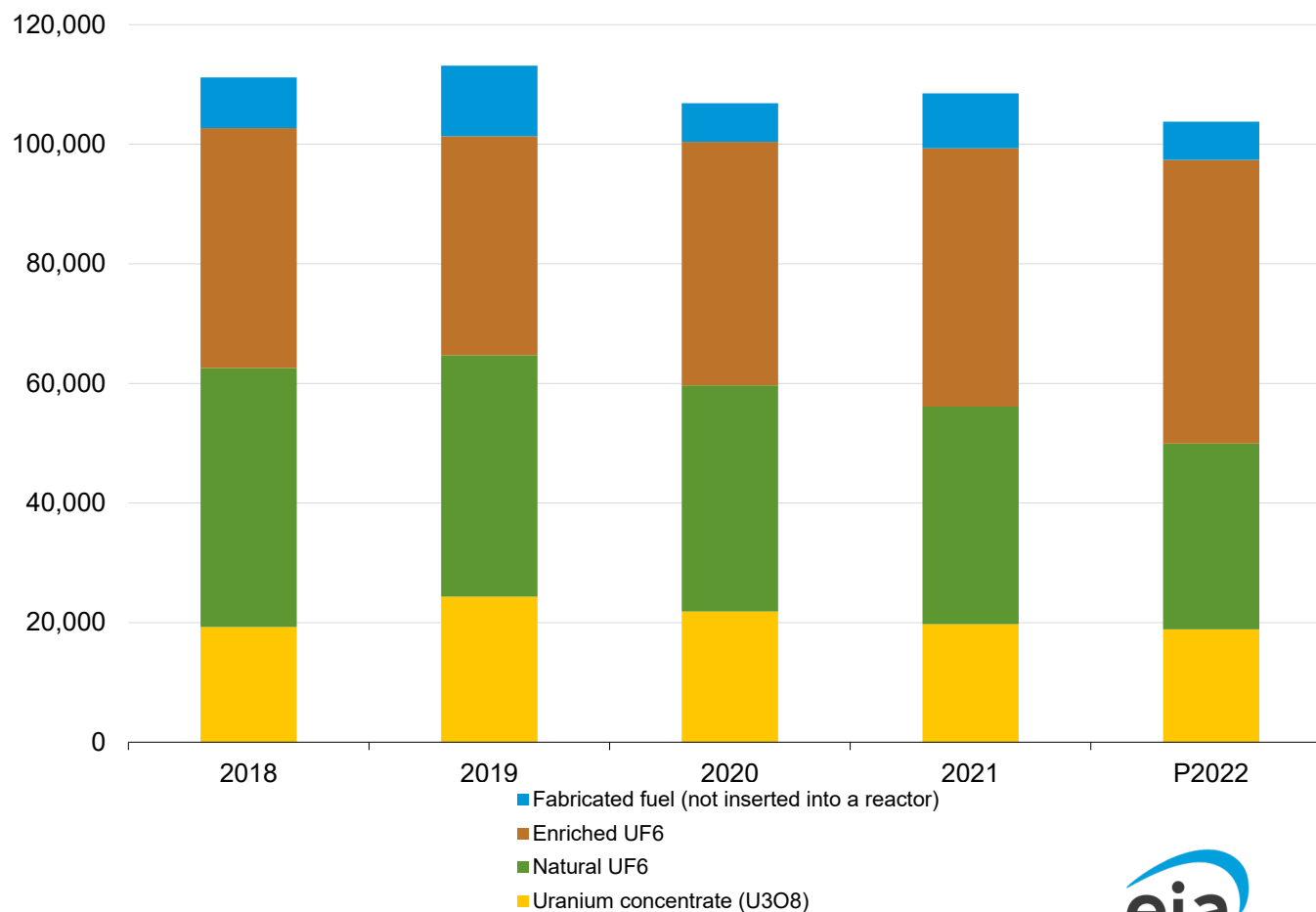


P = Preliminary data. Final 2021 inventory data reported in the 2022 survey.
 Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2018–2022)



Figure 21. Owners and operators of U.S. civilian nuclear power reactors inventories by material type as of end of year, 2018–2022

thousand pounds U₃O₈ equivalent



P = Preliminary data. Final 2021 inventory data reported in the 2022 survey.
 Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2019–2022)



Table 23. Inventories of uranium by owner as of end of year, 2018–2022thousand pounds U₃O₈ equivalent

Owner of uranium inventory	Inventories at the End of Year				
	2018	2019	2020	2021	P2022
Owners and operators of U.S. civilian nuclear power reactors	111,174	113,146	106,863	108,503	103,781
U.S. brokers and traders	10,601	9,385	18,311	25,187	27,536
U.S. converter, enrichers, fabricators, and producers	8,743	8,132	5,846	7,969	8,690
Total commercial inventories	130,519	130,662	131,020	141,658	140,006

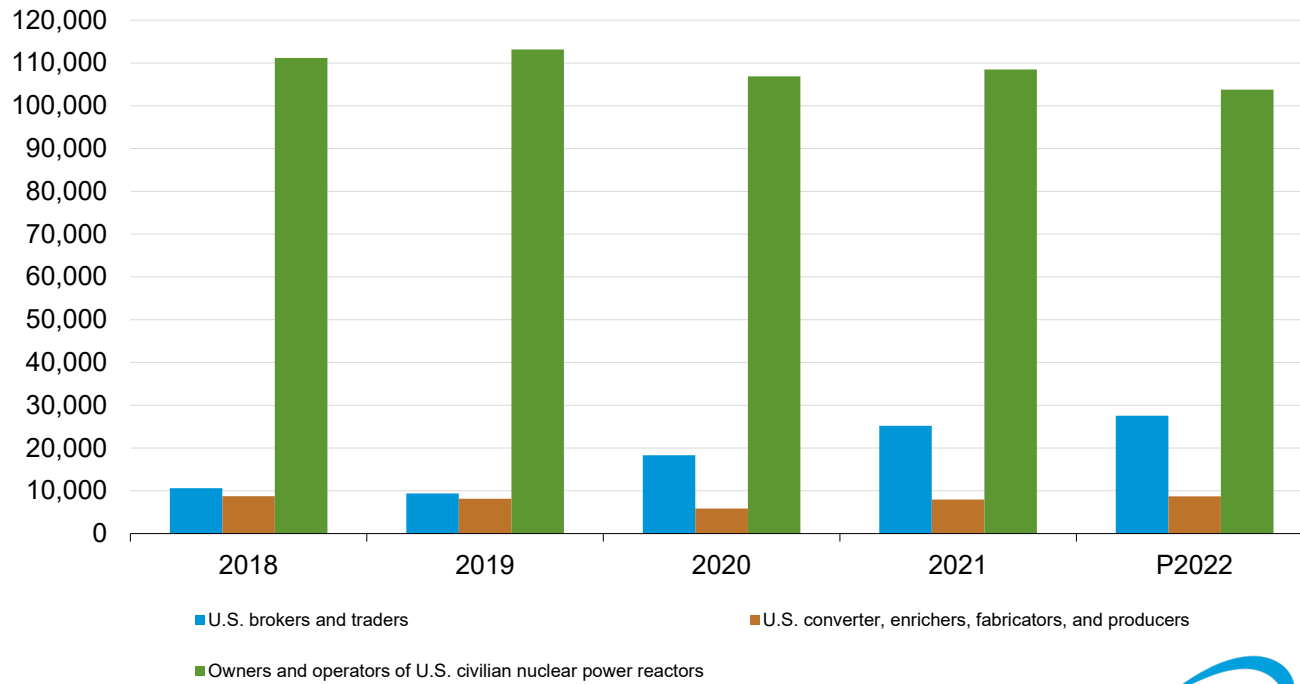
P = Preliminary data. Final 2021 inventory data reported in the 2022 survey.

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

Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2019–2022)

Figure 22. Commercial inventories of uranium by owner as of end of year, 2018–2022

thousand pounds U₃O₈ equivalent



P=Preliminary data. Final 2021 inventory data reported in the 2022 survey.

Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2019–2022)



Table 24. Uranium sellers to owners and operators of U.S. civilian nuclear power reactors, 2020–2022

2020	2021	2022
AREVA / AREVA NC, Inc./ AREVA Resources Canada/Framatome	AREVA / AREVA NC, Inc./ AREVA Resources Canada/Framatome	AREVA / AREVA NC, Inc./ AREVA Resources Canada/Framatome
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	Curzon Uranium Trading Limited
Curzon Uranium Trading Limited	Energy USA, Inc.	Energy USA, Inc.
Energy USA, Inc.	Itochu Corporation / Itochu International	Idemitsu
Itochu Corporation / Itochu International	Joshua Energy DAC	Itochu Corporation / Itochu International
Joshua Energy DAC	Kazatomprom	Joshua Energy DAC
Kazatomprom	Louisiana Energy Services LLC	Kazatomprom
Louisiana Energy Services LLC	Macquarie Bank	Louisiana Energy Services LLC
Luminious Designated Activity Company	MTM Trading, LLC	Macquarie Bank
Macquarie Bank	Nuclear Fuel Services, Inc.	MTM Trading, LLC
MTM Trading, LLC	Nufcor International Limited	Nuclear Fuel Services, Inc.
Nuclear Fuel Services, Inc.	NUKEM, Inc. / RWE Nukem	Nufcor International Limited
Nufcor International Limited	NYNCO Trading	Orano
NUKEM, Inc. / RWE Nukem	Orano	Quasar Resources
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	TENAM Corporation
TENAM Corporation	TENEX(Technabexport)	TENEX(Technabexport)
TENEX(Technabexport)	TEPCO Resources	TEPCO Resources
TEPCO Resources	TH Kazakatom AG	TH Kazakatom AG
TH Kazakatom AG	Traxys North America, LLC	Traxys North America, LLC
Traxys North America, LLC	U Co., Ltd.	U Co., Ltd.
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)	Uranium One
Uranium Energy Corporation	Uranium One	URENCO, Inc.
Uranium One	URENCO, Inc.	Western Uranium Corp.
UrAsia Energy Limited	Western Uranium Corp.	WMC Energy BV
URENCO, Inc.	WMC Energy BV	
Ur-Energy / Ur-Energy USA Inc		
WMC Energy BV		

Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2020–2022)

Table 25. Enrichment service sellers to owners and operators of U.S. civilian nuclear power reactors, 2020–2022

2020	2021	2022
Advance Uranium Asset Management	AREVA Enrichment Services, LLC / AREVA NC, Inc.	AREVA Enrichment Services, LLC / AREVA NC, Inc.
AREVA Enrichment Services, LLC / AREVA NC, Inc.	Centrus Energy Corp.	Centrus Energy Corp.
CNEIC (China Nuclear Energy Industry Corporation)	CNEIC (China Nuclear Energy Industry Corporation)	Energy Northwest
Energy Northwest	Energy Northwest	Itochu Corporation
Itochu Corporation	LES, LLC (Louisiana Energy Services)	LES, LLC (Louisiana Energy Services)
LES, LLC (Louisiana Energy Services)	Nukem, Inc.	TENAM Corporation
Nukem, Inc.	TENAM Corporation	TENEX (Techsnabexport Joint Stock Company)
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)	USEC, Inc. (United States Enrichment Corporation)
UG USA	USEC, Inc. (United States Enrichment Corporation)	
URENCO, Inc. (Deutschland GmbH, Nederland B.V., UK Limited)	Westinghouse Electric Company, LLC	
URENCO USA, Inc.		
USEC, Inc. (United States Enrichment Corporation)		
Westinghouse Electric Company, LLC		

Data Source: U.S. Energy Information Administration, Form EIA-858, *Uranium Marketing Annual Survey* (2020–2022)