

# Domestic Uranium Production Report 4th Quarter 2018

February 2019















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# **Contacts**

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### Introduction

In this report, the U.S. Energy Information Administration (EIA) reports U.S. uranium production from 1996 through the fourth quarter of 2018. Data in this report are based on information reported on Form EIA-851A, *Domestic Uranium Production Report (Annual)*, and Form EIA-851Q, *Domestic Uranium Production Report (Quarterly*).

Previous issues of this report are available on the EIA website.

Definitions for terms used in this report are available in EIA's Energy Glossary.

### Fourth quarter of 2018

U.S. production of uranium concentrate ( $U_3O_8$ ) in the fourth quarter of 2018 was 345,425 pounds, down 35% from the third quarter of 2018 and down 45% from the fourth quarter of 2017. During the fourth quarter of 2018, U.S. uranium was produced at six U.S. uranium facilities, one fewer than in the third quarter of 2018.

U.S. uranium mill in production (state)

• White Mesa Mill (Utah)

U.S. uranium in-situ leach plants in production (state)

- Crow Butte Operation (Nebraska)
- Lost Creek Project (Wyoming)
- Nichols Ranch ISR Project (Wyoming)
- Ross CPP (Wyoming)
- Smith Ranch-Highland Operation (Wyoming)

### **Preliminary 2018 total production**

Preliminary U.S. uranium concentrate production totaled 1,466,496 pounds  $U_3O_8$  in 2018. This amount is 40% lower than the 2,442,789 pounds  $U_3O_8$  produced in 2017 and is the lowest annual production since 1950, when approximately 920,000 pounds  $U_3O_8$  were produced. If only primary uranium concentrate production (which excludes recycled materials) is counted, the 2018 level is the lowest annual production total since 1949 (the first year that EIA has data and the start of the U.S. uranium industry), when approximately 360,000 pounds  $U_3O_8$  were produced.

Table 1. Total production of uranium concentrate in the United States, 1996–4th quarter of 2018 pounds  $U_3O_8$ 

Calendar- year quarter	1st quarter	2nd quarter	3rd quarter	4th quarter	Calendar- year total
1996	1,734,427	1,460,058	1,691,796	1,434,425	6,320,706
1997	1,149,050	1,321,079	1,631,384	1,541,052	5,642,565
1998	1,151,587	1,143,942	1,203,042	1,206,003	4,704,574
1999	1,196,225	1,132,566	1,204,984	1,076,897	4,610,672
2000	1,018,683	983,330	981,948	973,585	3,975,545
2001	709,177	748,298	628,720	553,060	2,639,256
2002	620,952	643,432	579,723	500,000	2,344,107
2003	400,000	600,000	400,000	600,000	2,000,000
2004	600,000	400,000	588,738	600,000	2,282,406
2005	709,600	630,053	663,068	686,456	2,689,178
2006	931,065	894,268	1,083,808	1,196,485	4,105,626
2007	1,162,737	1,119,536	1,075,460	1,175,845	4,533,578
2008	810,189	1,073,315	980,933	1,037,946	3,902,383
2009	880,036	982,760	956,657	888,905	3,708,358
2010	876,084	1,055,102	1,150,725	1,146,281	4,228,192
2011	1,063,047	1,189,083	846,624	892,013	3,990,767
2012	1,078,404	1,061,289	1,048,018	957,936	4,145,647
2013	1,147,031	1,394,232	1,171,278	946,301	4,658,842
2014	1,242,179	1,095,011	1,468,608	1,085,534	4,891,332
2015	1,154,408	789,980	774,541	624,278	3,343,207
2016	626,522	745,306	818,783	725,947	2,916,558
2017	450,215	726,375	643,212	622,987	2,442,789
P2018	226,780	365,421	528,870	345,425	1,466,496

E = Estimated data P = Preliminary data NA = Not available = Not applicable

Notes: The reported 4th-quarter 2002 production amount was adjusted by rounding to the nearest 100,000 pounds to avoid disclosure of individual company data. This adjustment also affects the 2002 annual production. The reported production amounts in 2003 and the 1st, 2nd, and 4th quarters of 2004 were adjusted by rounding to the nearest 200,000 pounds to avoid disclosure of individual company data. The reported 2004 total is the actual production for 2004. Totals may not equal the sum of components because of independent rounding.

Production reflects primary-source uranium from five operating in-situ leach facilities as well as primary, alternate, and recycled feed at the White Mesa Mill in Utah. The owner of the White Mesa Mill, Energy Fuels Inc., provides additional information on the mill's operations in its financial filings, including the amount of  $U_3O_8$  produced from alternative feeds. The company's financial filings are available at http://www.energyfuels.com/investors/financials/.

Table 2. Number of uranium mills and plants producing uranium concentrate in the United States

 $<sup>^{\</sup>scriptsize 1}$  Milling uranium-bearing ore.

<sup>&</sup>lt;sup>2</sup> Not milling ore, but producing uranium concentrate from other (non-ore) materials.

<sup>&</sup>lt;sup>3</sup> Not including in-situ-leach plants that only produced uranium concentrate from restoration.

<sup>&</sup>lt;sup>4</sup> Uranium concentrate as a byproduct from phosphate production.

Table 3. U.S. uranium mills and heap leach facilities by owner, location, capacity, and operating status

		County, state	Capacity (short	Operating status at end of							
Owner	Mill and Heap Leach <sup>1</sup> Facility name	(existing and planned locations)	tons of ore per day)	2017	1st quarter 2018	2nd quarter 2018	3rd quarter 2018	4th quarter 2018			
Anfield Resources Inc.	Shootaring Canyon Uranium Mill	Garfield, Utah	750	standby	standby	standby	standby	standby			
EFR White Mesa LLC	White Mesa Mill	San Juan, Utah	2,000	operating- processing alternate feed							
Energy Fuels Wyoming Inc	Sheep Mountain	Fremont, Wyoming	725	undeveloped	undeveloped	undeveloped	undeveloped	undeveloped			
Kennecott Uranium Company/Wyoming Coal Resource Company	Sweetwater Uranium Project	Sweetwater, Wyoming	3,000	standby	standby	standby	standby	standby			
Total Capacity			6,475								

<sup>&</sup>lt;sup>1</sup> Heap leach solutions: The separation, or dissolving-out from mined rock, of the soluble uranium constituents by the natural action of percolating a prepared chemical solution through mounded (heaped) rock material. The mounded material usually contains low-grade mineralized material and/or waste rock produced from open pit or underground mines. The solutions are collected after percolation is completed and processed to recover the valued components.

#### - = No data reported

Notes: Capacity for the 4th quarter of 2018. An operating status of operating indicates the mill usually was producing uranium concentrate at the end of the period.

Table 4. U.S. uranium in-situ-leach plants by owner, location, capacity, and operating status

		County, state	Production capacity					
		(existing and	(pounds		Oper	ating status at e	nd of	
In-situ-leach plant		planned	U₃O <sub>8</sub> per		1st quarter	2nd quarter	3rd quarter	4th quarter
owner	In-situ-leach plant name	locations)	year)	2017	2018	2018	2018	2018
				partially	partially	partially	partially	partially
		Campbell,		permitted	permitted	permitted	permitted	permitted
AUC LLC	Reno Creek	Wyoming	2,000,000	and licensed	and licensed	and licensed	and licensed	and licensed
		Fall River and		partially	partially	partially	partially	partially
		Custer, South		permitted	permitted	permitted	permitted	permitted
Azarga Uranium Corp	Dewey Burdock Project	Dakota	1,000,000	and licensed	and licensed	and licensed	and licensed	and licensed
		Dawes,						
Cameco	Crow Butte Operation	Nebraska	1,000,000	operating	operating	operating	operating	operating
				partially	partially	partially	partially	partially
		McKinley, New		permitted	permitted	permitted	permitted	permitted
Hydro Resources, Inc.	Church Rock	Mexico	1,000,000	and licensed	and licensed	and licensed	and licensed	and licensed
				partially	partially	partially	partially	partially
		McKinley, New		permitted	permitted	permitted	permitted	permitted
Hydro Resources, Inc.	Crownpoint	Mexico	1,000,000	and licensed	and licensed	and licensed	and licensed	and licensed
		Sweetwater,						
Lost Creek ISR LLC	Lost Creek Project	Wyoming	2,000,000	operating	operating	operating	operating	operating
Mestena Uranium								
LLC	Alta Mesa Project	Brooks, Texas	1,500,000	standby	standby	standby	standby	standby
Power Resources, Inc.								
doing business as		Converse,						
Cameco Resources	Smith Ranch-Highland Operation	Wyoming	5,500,000	operating	operating	operating	operating	operating
South Texas Mining								
Venture	Hobson ISR Plant	Karnes, Texas	1,000,000	standby	standby	standby	standby	standby
South Texas Mining								
Venture	La Palangana	Duval, Texas	1,000,000	standby	standby	standby	standby	standby
Strata Energy Inc	Ross CPP	Crook, Wyoming	375,000	operating	operating	operating	operating	operating

Table 4. U.S. uranium in-situ-leach plants by owner, location, capacity, and operating status (cont.)

		County, state (existing and	Production capacity (pounds	Operating status at end of				
In-situ-leach plant owner	In-situ-leach plant name	planned locations)	U₃O <sub>8</sub> per year)	2017	1st quarter 2018	2nd quarter 2018	3rd quarter 2018	4th quarter 2018
Uranerz Energy Corporation (An Energy Fuels	Nichala Davida ICD Davicet	Johnson and Campbell,	2 000 000					
company)	Nichols Ranch ISR Project	Wyoming	2,000,000	operating	operating	operating	operating	operating
Uranium Energy				partially permitted	partially permitted	partially permitted	partially permitted	partially permitted
Corp.	Goliad ISR Uranium Project	Goliad, Texas	1,000,000	and licensed	and licensed	and licensed	and licensed	and licensed
Uranium One Americas, Inc.	Jab and Antelope	Sweetwater, Wyoming	2,000,000	developing	developing	developing	developing	developing
Uranium One		Campbell,		partially permitted	partially permitted	partially permitted	partially permitted	partially permitted
Americas, Inc.	Moore Ranch	Wyoming	500,000	and licensed	and licensed	and licensed	and licensed	and licensed
Uranium One USA, Inc.	Willow Creek Project (Christensen Ranch and Irigaray)	Campbell and Johnson, Wyoming	1,300,000	operating	operating	operating	operating	standby
Total Production Capacity			24,175,000					

Notes: Production capacity for the 3rd quarter of 2018. An operating status of *Operating* indicates the in-situ-leach plant usually was producing uranium concentrate at the end of the period. Hobson ISR Plant processed uranium concentrate that came from La Palangana. Hobson and La Palangana are part of the same project. ISR stands for insitu recovery. Christensen Ranch and Irigaray are part of the Willow Creek Project. Uranerz Energy has a tolling arrangement with Cameco Resources. Uranium is first processed at the Nichols Ranch plant and then transported to the Smith Ranch-Highland Operation plant for final processing into uranium concentrate. CPP stands for central processing plant.

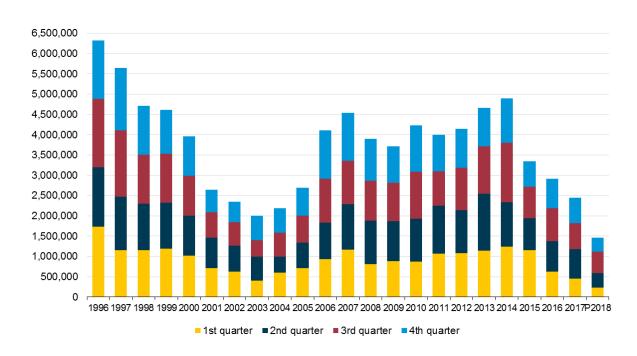


Figure 1. Uranium concentrate production in the United States, 1996–4th quarter of 2018 pounds U308

P = Preliminary data