

# Domestic Uranium Production Report 4th Quarter 2016

February 2017















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## **Contacts**

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## **Preface**

The U.S. Energy Information Administration (EIA) reports data spanning 1996 through fourth quarter 2016 on U.S. uranium production activities in this report, *Domestic Uranium Production Report 4th Quarter 2016*. 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 may be found on the EIA website at <a href="http://www.eia.gov/uranium/production/quarterly">http://www.eia.gov/uranium/production/quarterly</a>

Definitions for terms used in this report can be found in EIA's Energy Glossary: <a href="http://www.eia.gov/tools/glossary/">http://www.eia.gov/tools/glossary/</a>.

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#### 4th Quarter 2016

U.S. production of uranium concentrate in the fourth quarter 2016 was 725,947 pounds  $U_3O_8$ , down 11% from the third quarter 2016 and up 16% from the fourth quarter 2015. During the fourth quarter 2016, U.S. uranium was produced at seven U.S. uranium facilities, the same number as in the third quarter 2016.

U.S. uranium mill in production (state)

1. White Mesa Mill (Utah)

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

- 2. Crow Butte Operation (Nebraska)
- 3. Lost Creek Project (Wyoming)
- 4. Nichols Ranch ISR Project (Wyoming)
- Ross CPP (Wyoming)
- 6. Smith Ranch-Highland Operation (Wyoming)
- 7. Willow Creek Project (Wyoming)

#### **Preliminary 2016 total**

U.S. uranium concentrate production totaled 2,916,558 pounds  $U_3O_8$  in 2016. This amount was 13% lower than the 3,343,207 pounds produced in 2015 and the lowest annual U.S. production since 2,689,178 pounds produced in 2005.

Table 1. Total production of uranium concentrate in the United States, 1996 – 4th Quarter 2016 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	E500,000	E2,344,107
2003	E400,000	E600,000	E400,000	E600,000	E2,000,000
2004	E600,000	E400,000	588,738	E600,000	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
P2016	626,522	745,306	818,783	725,947	2,916,558

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 also affects the 2002 annual production. The reported 2003 and 1st, 2nd, and 4th quarter 2004 production amounts 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 sum of components because of independent rounding.

Source: U.S. Energy Information Administration: Form EIA-851A and Form EIA-851Q, "Domestic Uranium Production Report."

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

Source: U.S. Energy Information Administration: Form EIA-851A and Form EIA-851Q, "Domestic Uranium Production Report."

<sup>&</sup>lt;sup>1</sup> 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 <i>Heap</i> <i>Leach¹ Facility</i> name	(existing and planned locations)	tons of ore per day)	2015	2nd quarter 1st quarter 2016 2016		3rd quarter 2016	4th quarter 2016	
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	
Pinon Ridge Corporation	Pinon Ridge Mill	Montrose, Colorado	500	Permitted and Licensed					
Total Capacity:			6,975						

<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.

Notes: Capacity for 4th Quarter 2016. An operating status of "Operating" indicates the mill usually was producing uranium concentrate at the end of the period. Source: U.S. Energy Information Administration: Form EIA-851A and Form EIA-851Q, "Domestic Uranium Production Report."

<sup>- =</sup> No data reported

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

		County, state	Production capacity	Operating status at end of				
In-situ-leach plant owner	In-situ-leach plant name	(existing and planned locations)	(pounds U <sub>3</sub> O <sub>8</sub> per year)	2015	1st quarter 2016	2nd quarter 2016	3rd quarter 2016	4th quarter 2016
				Partially	Partially	Partially	Partially	Partially
				Permitted And	Permitted And	Permitted And	Permitted And	Permitted And
AUC LLC	Reno Creek	Campbell, Wyoming	2,000,000	Licensed	Licensed	Licensed	Licensed	Licensed
		Fall River and		Partially	Partially	Partially	Partially	Partially
Azarga Uranium	Dewey Burdock	Custer, South		Permitted And	Permitted And	Permitted And	Permitted And	Permitted And
Corp	Project	Dakota	1,000,000	Licensed	Licensed	Licensed	Licensed	Licensed
	Crow Butte							
Cameco	Operation	Dawes, Nebraska	1,000,000	Operating	Operating	Operating	Operating	Operating
				Partially	Partially	Partially	Partially	Partially
Hydro Resources,		McKinley, New		Permitted And	Permitted And	Permitted And	Permitted And	Permitted And
Inc.	Church Rock	Mexico	1,000,000	Licensed	Licensed	Licensed	Licensed	Licensed
				Partially	Partially	Partially	Partially	Partially
Hydro Resources,		McKinley, New		Permitted And	Permitted And	Permitted And	Permitted And	Permitted And
Inc.	Crownpoint	Mexico	1,000,000	Licensed	Licensed	Licensed	Licensed	Licensed
Lost Creek ISR LLC	Lost Creek Project	Sweetwater, 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. dba Cameco Resources	Smith Ranch- Highland Operation	Converse, Wyoming	5,500,000	Operating	Operating	Operating	Operating	Operating
South Texas Mining Venture	Hobson ISR Plant	Karnes, Texas	1,000,000	Operating	Standby	Standby	Standby	Standby
South Texas Mining Venture	La Palangana	Duval, Texas	1,000,000	Operating	Standby	Standby	Standby	Standby
Ctrata Fnormula				Changing License		Operation	Operation	
Strata Energy Inc	Ross CPP	Crook, Wyoming	375,000	to Operational	Operating	Operating	Operating	Operating
URI, Inc.	Kingsville Dome	Kleberg, Texas	1,000,000	Restoration	Restoration	Restoration	Restoration	Restoration
URI, Inc.	Rosita	Duval, Texas	1,000,000	Reclamation	Reclamation	Reclamation	Reclamation	Reclamation

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

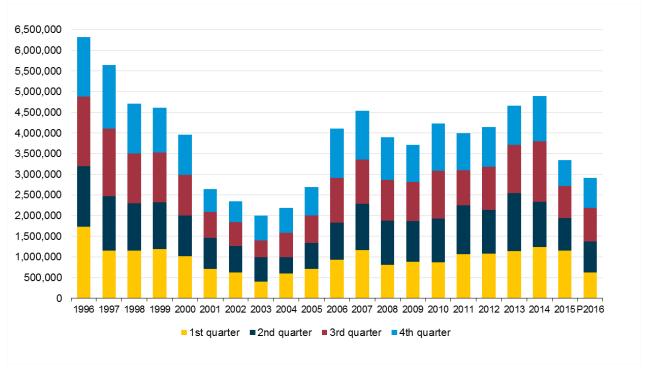
				Operating status at end of				
In-situ-leach plant owner	In-situ-leach plant name	County, state (existing and <i>planned</i> locations)	Production capacity (pounds U₃O <sub>8</sub> per year)	2015	1st quarter 2016	2nd quarter 2016	3rd quarter 2016	4th quarter 2016
URI, Inc.	Vasquez	Duval, Texas	800,000	Restoration	Restoration	Restoration	Restoration	Restoration
Uranerz Energy Corporation (An Energy Fuels	Nichols Ranch ISR	Johnson and Campbell,	500,000					
company)	Project	Wyoming	2,000,000	Operating	Operating	Operating	Operating	Operating
Uranium Energy Corp.	Goliad ISR Uranium Project	Goliad, Texas	1,000,000	Permitted And Licensed	Permitted And Licensed	Permitted And Licensed	Permitted And Licensed	Permitted And Licensed
Uranium One Americas, Inc.	Jab and Antelope	Sweetwater, Wyoming	2,000,000	Developing	Developing	Developing	Developing	Developing
Uranium One Americas, Inc.	Moore Ranch	Campbell, Wyoming	500,000	Permitted And Licensed	Permitted And Licensed	Permitted And Licensed	Permitted And Licensed	Permitted And Licensed
Uranium One USA,	Willow Creek Project (Christensen Ranch and Irigaray)	Campbell and Johnson, Wyoming	1,300,000	Operating	Operating	Operating	Operating	Operating
Total Production Capacity:			26,975,000	· · · · · · · · · · · · · · · · · · ·		<u> </u>	<u>-</u>	· · · · · · · · · · · · · · · · · · ·

Notes: Production capacity for 4th Quarter 2016. 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 in-situ 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 Uranerz's uranium concentrate. CPP stands for central processing plant.

Source: U.S. Energy Information Administration: Form EIA-851A and Form EIA-851Q, "Domestic Uranium Production Report."

Figure 1. Uranium concentrate production in the United States, 1996 – 4th Quarter 2016

pounds U<sub>3</sub>O<sub>8</sub>



P = Preliminary data.

Source: U.S. Energy Information Administration: Form EIA-851A and Form EIA-851Q, "Domestic Uranium Production Report."