

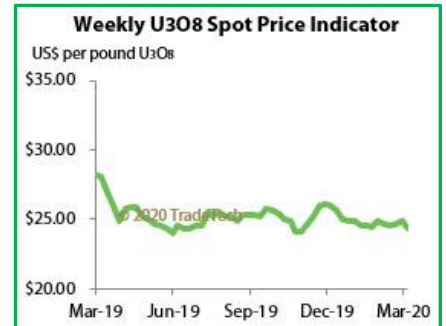
# Uraniumletter INTERNATIONAL

the international independent information and advice bulletin for uranium resource investments

## Overviews as at March 31, 2020



Marino G. Pieterse, publisher and editor



► As long as long-term price at \$ 32.50 is not moving, recovery of U3O8 spot price from low of \$ 23.95 to \$ 27.35 not a reliable signal for a cyclical upturn

OVERVIEW of U3O8 PRICES					
	Spot	Long-term		Spot	Long-term
<b>2020</b>					
March 30	27.35	32.50			
March 20	23.95	32.50	Year-end 2016	20.25	30.00
February 21	24.70	32.50	Year-end 2015	34.23	44.00
January 31	24.45	32.50	May 31, 2015 (high)	39.50	50.00
► Year-end 2019	25.00	32.50	Year-end 2014	35.50	49.50
November 29	26.05	32.50	May 14, 2014 (low)	28.25	49.00
October 31	24.85	31.50	Year-end 2013	34.50	50.00
September 30	25.80	31.00	Year-end 2012	43.50	56.50
August 30	25.30	31.50	Year-end 2011	61.75	64.00
June 28	24.30	31.00			
May 27 (low)	24.10	32.00	Pre-Fukushima accident		
April 30	25.20	32.00	March 11, 2011	67.75	73.00
February 28	28.60	32.00			
January 31 (high)	28.85	32.00			
► Year-end 2018	28.70	32.00			
November 30 (high)	29.10	31.25			
October 29	27.95	31.25			
September 24	27.35	31.75			
August 27	26.20	31.50			
July 31	25.70	31.50			
June 30	22.55	29.00			
May 28	22.75	29.00			
April 30 (low)	21.00	29.00			
March 26	21.10	29.50			
February 26	21.25	30.00			
January 29	21.88	30.00			
► Year-end 2017	22.32	30.67			
December 4 (high)	26.50	31.00			
September 27	20.25	31.50			
June 26	20.10	32.50			
May 29 (low)	19.25	32.50			
May 1	22.50	33.00			
March 27	24.50	33.99			
February 28	22.25	32.50			
February 6	26.00	32.50			
January 31	24.50	32.50			
► Year-end 2016	20.25	30.00			
November 28	18.00	33.00			
October 31	18.75	35.50			
September 26	23.75	38.00			
June 27	27.00	40.50			
March 28	29.15	43.50			

\* 12-year low      month-end prices published by UxC and TradeTech

- COVID-19 puts already deplorable financial position of US uranium producers under further pressure
- Reactor shutdowns outweigh start-ups in 2019 (see table on page 2 and 3)
- Since Fukushima accident in March 2011 no growth in uranium required but shift to China and Russia (page 3)
- By having suspended production at its last majority-owned and operated Cigar Lake mine, Cameco has lost its status as prominent top producer

## WORLD NUCLEAR POWER REACTORS & URANIUM REQUIREMENTS of the world's major nuclear energy generating countries (as at March 2020)

Country		Reactors operable	% total electricity generation	Under construction	Planned x	Uranium required in tonnes 2020
USA		96	19.3	4	3	19,746
France	*	57	71.7	1	-	8,936
China		47	4.2	12	42	9,834
Russia		38	17.9	4	24	4,834
South Korea	**	24	23.7	4	-	4,903
India		22	3.1	7	14	967
Canada		19	14.9	-	-	1,538
Ukraine		15	53.0	-	2	1,893
United Kingdom		15	17.7	1	3	1,820
Germany	***	6	11.7	-	-	1,264
Japan x	****	9	6.2	-	-	2,000
<b>Total</b>		<b>348</b>		<b>33</b>	<b>88</b>	<b>57,735</b>
<b>Total world</b>		<b>441</b>	<b>10.3</b>	<b>54</b>	<b>109</b>	<b>68,240</b>
<b>Top 11 in % world total</b>		<b>78</b>		<b>64</b>	<b>72</b>	<b>85</b>

x Future reactors envisaged in specific plans and proposals and expected to be operating by 2030

\* **France** generates 71.6% from its electricity from nuclear energy. To be more balanced through an increase of renewables, this share may be reduced to 50% or approximately 40 reactors by 2025

\*\* **South Korea's** 2017 elected government has introduced strongly opposed nuclear phase-out plans by 2040; nuclear production to drop from 31% today to 22% by 2030

\*\*\* Up until 2011, **Germany** obtained 25% of its electricity from its 17 nuclear reactors, but nuclear energy phased out in 2011 when 8 reactors shut down immediately and currently 7 remaining reactors to be closed by 2019

\*\*\*\* Up until 2011, **Japan** was generating some 30% of electricity from its 55 reactors and this was expected to increase to at least 40% by 2017. The plan is now for at least 20% by 2030 from a depleted fleet. Currently, 42 reactors are operable, with 9 having restarted since, 18 reactors are currently in the process of restart approval

New plants coming online are largely balanced by old plants being retired. Over 1996-2018, 89 reactors were retired as 98 started operations. The reference scenario in the 2019 edition of The Nuclear Fuel Report has 154 reactors closing by 2020 and 289 new ones coming online, including 22 restarted Japanese reactors

source : WNA

### ► Reactor shutdowns outweigh start-ups in 2019

In January 2020, the **World Nuclear Association** reported that global nuclear generation stood at 392.4 GWe net at the end of 2019, down slightly from 2018, according to their data. Six power reactors were added to the grid last year and construction of three large projects started, Nine units were permanently shiw down.

### ► Six New nuclear reactors with a combined generating capacity of 5,241 MWe came online in 2019.

**Two of those** – Taishan 2 and Yangjian 6 were in **China**. Unit 4 of **South Korea's Ushin Kori** plant was also connected to the grid, as was **Russia's Novoronezh II unit 2**. Russia's first floating nuclear power plant, the Akademik Lomonosov - comprising two 32 MWe reactors – was also connected to the grid towards the end of the year.

In 2018, 10,420 MWe of new nuclear generating capacity was connected to the grid, while 3,345 MWe was added in 2017.

### ► Power uprates of existing reactors also added 212 NWe of generating capacity during 2019.

Some 35 MWe was added at the Embalse plant in **ArgEntina**, while 155 MWe and 22 MWe were added at **USA's Browns Ferry 2** and Peach Bottom 2 units, respectively.

In comparison, four uprates in the **USA** added 350 MWe of capacity in 2018.

► **Construction** was started last year of three new power reactors: unit 2 of the Kursk II plant in Russia; unit 1 of China's Zhangzhou plant; and unit 2 of Iran's Buser plant.

► **Nine more reactors with a combined capacity of 5,976 MWe were officially shut down in 2019.**

These were Bulibino 1 in Russia, Chinshan 2 in Taiwan, Genkai 2 in Japan, Mühleberg in Switzerland, Philippsburg 2 in Germany, Pilgrim in the USA, Ringhals 2 in Sweden and Three Mile Island 1 in the USA. South Korea's Wolsong plant, which had not operated since June 2018, was declared as having been shut down on December 24, 2019.

Source: WNA

<b>WORLD NUCLEAR POWER REACTORS &amp; URANIUM REQUIREMENTS</b>											
<b>of the world's major nuclear energy generating countries - comparison March 2020 to February 2011</b>											
Developed countries:	Reactors operable		% Electricity Generation		Under construction		Planned x		Uranium required (in tonnes)		
	March 2020	Febr.2011	March 2020	Febr.2011	March 2020	Febr.2011	March 2020	Febr.2011	March 2020	Febr. 2011	
USA	96	104	19.3	20.2	4	1	3	9	19,746	19,427	
France	57	58	71.7	75.2	1	1	0	1	8,936	9,221	
Canada	19	18	14.9	14.8	0	2	0	3	1,538	1,884	
United Kingdom	15	19	17.7	17.9	1	0	3	4	1,820	2,235	
Germany	6	17	11.7	26.1	0	0	0	0	1,264	3,453	
South Korea	24	21	34.8	34.8	4	5	0	6	4,903	3,586	
Japan x	9	55	6.2	28.9	0	2	0	12	2,000	8,195	
<b>Subtotal</b>	<b>226</b>	<b>292</b>			<b>10</b>	<b>11</b>	<b>6</b>	<b>35</b>	<b>40,207</b>	<b>48,001</b>	
<b>Emerging countries:</b>											
China	47	13	4.2	1.9	12	27	42	50	9,834	4,402	
Russia	38	32	17.9	17.8	4	10	24	14	4,834	3,757	
India	22	20	3.1	2.2	7	5	14	18	967	1,053	
Ukraine	15	15	53.0	0	0	2	2	2	1,893	2,037	
<b>Subtotal</b>	<b>122</b>	<b>80</b>			<b>23</b>	<b>44</b>	<b>82</b>	<b>84</b>	<b>17,528</b>	<b>11,249</b>	
<b>Total world</b>	<b>441</b>	<b>443</b>	<b>10.3</b>	<b>14</b>	<b>62</b>		<b>156</b>		<b>68,240</b>	<b>68,971</b>	
		<b>2020</b>	<b>2011</b>								
Developed countries in % total world		<b>50</b>	<b>66</b>								
Emerging countries in % total world		<b>28</b>	<b>18</b>								

## Overview of strategic geopolitical uranium blocks

	Uranium production 2018 (tonnes)	in %	Uranium required 2018 (tonnes)	Surplus (+) Deficit (-)
<b>USSR</b>				
Kazakhstan	21,705	41.3	0	21,705
Russia	2,904	5.5	5,616	-2,712
Uzbekistan	2,404	4.6	0	2,404
Ukraine	582	1.1	1,890	-1,308
	27,595	52.5	7,506	20,089
<b>USA</b>				
USA	1,180	2.2	19,461	-18,281
Canada	7,001	13.3	1,616	5,385
	8,181	15.5	21,077	-12,896
<b>China</b>				
China	1,885	3.6	8,713	-6,828
Australia	6,517	12.4	0	6,517
	8,402	16.0	8,713	-311
<b>Japan *</b>				
Japan *	0	0.0	1336 <b>xx</b>	-1,336
South Korea	0	0.0	4592	-4,592
	0	0.0	5,928	-5,928
<b>Namibia</b>				
Namibia	5,525	10.5	0	5,525
<b>Niger</b>				
Niger	2,911	5.5	0	2,911
	2,911	5.5	0	2,911
<b>Total strategic blocks</b>	<b>52,614</b>	<b>100</b>		
<b>Total world production</b>	<b>53,498</b>			

**x surplus in production 10,390 tonnes**

**xx** uranium required based on 5 operating nuclear reactors; 22 reactors are in process of restart

## World Top 10 uranium producing countries

	Production	2018 in %	Production							2010 in %
	in tonnes U	world total	in tonnes U	2016	2015	2014	2013	2010	world total	
	2018		2017							
Kazakhstan	21,705	41	23,321	24,575	23,800	23,127	22,451	17,803	33	
Canada	7,001	13	13,116	14,039	13,325	9,134	9,331	9,783	18	
Australia	6,517	12	5,882	6,315	5,672	5,001	6,350	5,900	11	
Namibia	5,525	10	4,224	3,315	2,993	3,255	4,323	4,496	8	
Niger	2,911	5	3,449	3,477	4,116	4,057	4,518	4,198	8	
Russia	2,904	5	2,917	3,004	3,055	2,990	3,135	3,562	7	
Uzbekistan (est)	2,404	4	2,404	2,404	2,385	2,400	2,400	2,400	4	
China (est)	1,885	4	1,885	1,616	1,616	1,500	1,500	827	2	
USA	1,180	2	940	1,125	1,256	1,919	1,792	1,660	3	
Ukraine (est)	<u>582</u>	1	<u>550</u>	<u>1,005</u>	<u>1,200</u>	<u>926</u>	<u>922</u>	<u>850</u>	<u>2</u>	
<b>Top-10 total</b>	<b>52,614</b>	<b>98</b>	<b>58,688</b>	<b>60,875</b>	<b>59,418</b>	<b>54,309</b>	<b>56,722</b>	<b>51,479</b>	<b>96</b>	
Others	<u>884</u>	<u>2</u>	<u>843</u>	<u>1,137</u>	<u>1,100</u>	<u>1,908</u>	<u>2,648</u>	<u>2,192</u>	<u>4</u>	
<b>Total world production tU</b>	<b>53,498</b>	<b>100</b>	<b>59,531</b>	<b>62,012</b>	<b>60,518</b>	<b>56,217</b>	<b>59,370</b>	<b>53,671</b>	<b>100</b>	

source: WNA

## Top 10 uranium producing companies in 2018

	tonnes U	%
KazAtomProm	11,074	22
Orano (previously Areva)	5,809	11
Cameco	4,613	9
Uranium One	4,385	8
CGN	3,185	6
BHP Billiton	3,159	6
ARMZ	2,904	5
Rio Tinto	2,602	5
Navoi Mining	2,404	4
Energy Asia	2,204	4
CNNC	1,983	4
General Atomics/Quasar	1,663	3
VostGok	1,180	2
Sopamin	1,002	2
Other	4701	9
<b>Total world</b>	<b>52,868</b>	<b>100</b>

## Largest producing uranium mines in 2018

Mine	Country	Main Owner	Type	Production (tonnes U)	% of world
Cigar Lake	Canada	Cameco/Orano	underground	6,924	13
Olympic Dam	Australia	BHP Billiton	by-product/underground	3,159	6
Husab	Namibia	Swakop Uranium (CGN)	open pit	3,028	6
Inkai, sites 1-3	Kazakhstan	Kazatomprom/Cameco	ISL	2,643	5
Rössing	Namibia	Rio Tinto	open pit	2,102	4
Budenovskoye 2	Kazakhstan	Ur anium One / Kazatimprom	ISL	2,081	4
Tortkuduk	Kazakhstan	Orano / Kazatomprom	ISL	1,900	4
SOMAIR	Niger	Orano / Kazatomprom	open pit	1,783	3
Ranger	Australia	Rio Tinto / Era	open pit	1,695	3
Kharasan 2	Kazakhstan	Kazatomprom	ISL	1,631	3
<b>Total top 10</b>				<b>26,946</b>	<b>51</b>

## Peer Group of the world's top listed Uranium Companies

March 31, 2020		Trade symbol		Share price		Change in %	12 months		Net shares issued million	Market cap. million	
Location of mining		March 31 2020	year-end 2019	H	L		local	US\$			
<b>Kazakhstan (1)</b>		<b>US\$</b>	<b>US\$</b>	<b>US\$</b>	<b>US\$</b>				<b>US\$</b>	<b>US\$</b>	
Kazatomprom	1)	LSE	KAP:LI	12.60	13.00	-3	15.80	10.20	259.4	3,268.4	<b>3,268.4</b>
<b>Canada (8)</b>		<b>C\$</b>	<b>C\$</b>	<b>C\$</b>	<b>C\$</b>				<b>C\$</b>	<b>US\$</b>	
Cameco		TSX	CCO	10.86	11.54	-6	16.15	7.70	395.8	4,298.4	3,051.9
NexGen Energy		TSX	NXE	1.14	1.67	-32	2.46	0.76	360.3	410.7	291.6
Denison Mines		TSX	DML	0.34	0.54	-38	0.78	0.24	597.2	200.1	142.0
Fission Uranium		TSX	FCU	0.15	0.29	-50	0.59	0.10	486.6	70.6	50.1
Global Atomic	* 2)	TSX.V	GLO	0.42	0.48	-13	0.57	0.24	145.4	61.1	43.4
GovEx Uranium	*	TSX.V	GXU	0.13	0.16	-22	0.21	0.08	438.6	54.8	38.9
UEX	3)	TSX	UEX	0.12	0.15	-20	0.20	0.07	394.2	47.3	33.6
Laramide Resources		TSX	LAM	0.24	0.20	20	0.47	0.11	165.4	39.7	28.2
<b>Sub-total</b>									<b>5,182.7</b>	<b>3,679.7</b>	
<b>United States (4)</b>		<b>US\$</b>	<b>US\$</b>	<b>US\$</b>	<b>US\$</b>				<b>US\$</b>	<b>US\$</b>	
Energy Fuels		NYSE MKT	UUUU	1.18	1.91	-38	3.73	0.78	111.4	131.5	131.5
Uranium Energy	4)	AMEX	UEC	0.56	0.92	-39	1.58	0.35	183.9	103.0	103.0
Ur-Energy		NYSE MKT	URG	0.39	0.59	-34	0.99	0.27	160.5	62.6	62.6
Peninsula Energy		NYSE OTC	PENMF	0.10	0.11	-9	0.23	0.06	315.1	31.5	31.5
<b>Sub-total</b>									<b>328.6</b>	<b>328.6</b>	
<b>Australia (5)</b>		<b>A\$</b>	<b>A\$</b>	<b>A\$</b>	<b>A\$</b>				<b>A\$</b>	<b>US\$</b>	
Energy Resources of Australia	5)	ASX	ERA	0.15	0.17	-12	0.20	0.14	3,690.0	553.5	337.6
Paladin Energy	* 6)	ASX	PDN	0.05	0.10	-50	0.16	0.04	2,030.0	101.5	61.9
Boss Resources	7)	ASX	BOE	0.04	0.05	-20	0.07	0.03	1,590.0	63.6	38.8
Deep Yellow	*	ASX	DYL	0.21	0.29	-28	0.45	0.11	244.9	51.4	31.4
Berkeley Energia		ASX	BKY	0.15	0.22	-32	0.40	0.10	258.6	38.8	23.7
<b>Sub-total</b>									<b>808.8</b>	<b>493.4</b>	

\* featured as a **Special Situation** and included in Shortlist of investment recommendations

1) listed on London Stock Exchange) as at November 16, 2018 through an IPO offering of 15% of the Company's outstanding shares at US\$ 11.60

2) also 49% interest in zinc project in Turkey

3) also cobalt-nickel deposit

4) combined uranium-vanadium project

5) Rio Tinto sold entire 68.62% interest in Rössing Mine, Namibia to CNNC of China

6) holds 75% interest in flagship uranium-vanadium Langer Heinrich Mine in Namibia; CNNC of China holds 25% stake; also assets in Canada and Australia; sold 85% interest in uranium mine in Malawi to Lotus Resources

7) also nickel/copper project in Sweden and gold project in Senegal

**Total market capitalization top listed uranium companies - March 31, 2020: US\$ 7,770.1 million**

## MARKET VALUATION OF THE WORLD'S LISTED URANIUM PRODUCERS and STANDBY PRODUCERS

(in US\$ million)

Country focus	Company Name		March 31 2020	Year-end 2019	Year-end 2018	Change in %	Year-end 2017	Year-end 2016	Year-end 2015	Year-end 2014	Year-end 2012	Year-end 2011	Year-end 2010	Change % 2019 / 2010
Kazakhstan	<a href="#">Kazatomprom</a>	1)	3268.4	3,372	3,530	-4								
Canada	<a href="#">Cameco</a>		291.6	3,508	4,491	-22	3,630	4,112	4,865	6,477	7,744	7,306	15,866	-78
United States	<a href="#">Energy Fuels</a>	2)	131.5	189	255	-26	133	109	134	121	123	167	158	19
	<a href="#">Uranium Energy</a>	3)	103.0	169	222	-24	276	132	105	160	218	253	421	-60
	<a href="#">Ur-Energy</a>	4)	62.6	94	104	-9	99	76	138	110	101	96	303	-69
	<a href="#">Peninsula Energy</a>	5)	31.5	33	36	-10	81	75	85	113	122	122	158	-79
Australia	<a href="#">ERA (68% CNNC)</a>	6)	337.6	62	91	-32	367	164	136	549	676	663	2,165	-97
Namibia	<a href="#">Paladin Energy</a> *	7)	61.9	142	230	-38	67	111	300	489	902	1,118	3,649	-96
	<b>Total</b>		<b>4288.1</b>	<b>7,569</b>	<b>8,959</b>	<b>-16</b>	<b>4,653</b>	<b>4,779</b>	<b>5,763</b>	<b>8,019</b>	<b>9,886</b>	<b>9,725</b>	<b>22,720</b>	<b>-67</b>
<b>U3O8 spot price (March 20, 2020)</b>			<b>23.95</b>	<b>25.00</b>	28.70	-13	<b>22.32</b>	<b>20.25</b>	<b>34.23</b>	<b>35.50</b>	<b>43.50</b>	<b>51.75</b>	<b>62.50</b>	-60
<b>U3O8 long-term price</b>			<b>32.50</b>	<b>32.50</b>	31.25	4	<b>30.67</b>	<b>30.00</b>	<b>44.00</b>	<b>49.50</b>	<b>56.50</b>	<b>64.00</b>	<b>65.00</b>	-50

\* featured as [Special Situation](#) and included in [2020 Shortlist](#) of investment recommendations

1) listed on London Stock Exchange as at November 16, 2018 through an IPO offering of 15% of the Company's outstanding shares at a price of US\$ 11.60

2) stand-by producer; also vanadium recovery operations from company's [White Mesa Mill](#), Utah

3) ISR production commencement in November 2010; stopped production since 2014; stand-by producer

4) ISR production commenced 1n August 2013

5) first ISR production commenced in December 2015

6) [Rio Tinto](#) sold entire 68.62% interest in [Rössing Mine](#), Namibia to [CNNC](#) of [China](#)

7) stand-by producer; [CNNC Overseas Uranium Holding](#) of [China](#) holds 25% equity interest; IN flagship [Langer Heinrich Mine](#); also assets in [Canada](#) and [Australia](#); sold 85% in [Kavalekera Mine](#), [Malawi](#) to [Lotus Resources](#); 15% owned by Malawi government

## MARKET VALUATION OF THE WORLD'S MOST ADVANCED LISTED URANIUM DEVELOPMENT COMPANIES

(commercial production target <5 years)

(in US\$ million)

Country focus			March 31 2020	Year-end 2019	Year-end 2018	Change in %	Year-end 2017	Year-end 2016	Year-end 2015	Year-end 2014	Year-end 2012	Year-end 2011	Year-end 2010	Change in % 2019/2010
Canada	<a href="#">Denison Mines</a>		142.0	247.7	272.1	-9	305	276	261	491	428	464	1,248	-80
	<a href="#">UEX</a>		33.6	43.9	48.9	-10	89	54	27	58	131	145	456	-90
Australia	<a href="#">Boss Resources</a>		38.8	55.7	66.8	-17	42	38	-	-	-	-	-	
Spain	<a href="#">Berkeley Energia</a>		23.7	39.8	32.1	24	202	165	65	41	74	66	- x	
Namibia	<a href="#">Deep Yellow</a>	1)	31.4	50.1	55.8	-10	48	37	9	22	86	89	379	-87
Niger	<a href="#">Global Atomic</a>		43.4	53.6	40.7									x
	<a href="#">GoviEx Uranium</a>	2)	38.9	52.0	43.5	20	70	35	5	39 *	-	-	-	
	<b>Total</b>		<b>351.8</b>	<b>542.8</b>	<b>559.9</b>	<b>-3</b>	<b>756</b>	<b>605</b>	<b>367</b>	<b>651</b>	<b>719</b>	<b>764</b>	<b>2,083 x</b>	<b>-64</b>

x not included in year total

\* listing date June 20, 2014

1) strategic relationship with an affiliate of the [Spratt Group](#), completed on October 28, 2016 and concurrently an initial A\$ 1.42 million investment at A\$ 0.004 per share (after share holding a 15% equity interest in [Deep Yellow](#); announced a strategic earn-in agreement with JOGMEC of Japan in March 2017 to earn a 39.5% interest in the [Nova Venture](#) within 4 years

2) bought [African uranium assets](#) in [Zambia](#), [Mali](#) and [Namibia](#) from [Denison Mines](#) in consideration of 25% of [GoviEx](#)' shares; current equity interest 18.65%



**World's top listed uranium exploration/development companies  
focused on traditional countries (by market valuation)**

	<b>Country focus</b>	<b>Trade symbol</b>		<b>Share price March 31 2020</b>	<b>Share price Year-end 2019</b>	<b>Change Year-end 2019 in %</b>	<b>Market valuation (US\$ million)</b>
NexGen Energy	Canada	TSX.V	NXE	C\$ 1.14	C\$ 1.67	-32	291.6
Denison Mines	Canada	TSX	DML	C\$ 0.34	C\$ 0.54	-37	142.6
Fission Uranium	Canada	TSX	FCU	C\$ 0.15	C\$ 0.29	-48	50.1
Boss Resources	Australia	ASX	BOE	A\$ 0.04	A\$ 0.05	-20	38.8
UEX	Canada	TSX	UEX	C\$ 0.12	C\$ 0.15	-20	33.6
Laramide Resources	USA/Australia	TSX	LAM	C\$ 0.24	C\$ 0.20	20	28.2
Iso Energy	1) Canada	TSX.V	ISO	C\$ 0.42	C\$ 0.20	110	24.8
Azarga Uranium	2) USA	TSX.V	AZZ	C\$ 0.13	C\$ 0.20	-35	17.1
<b>Total market capitalization</b>							<b>626.8</b>
1) 63.30% held by <u>NexGen Energy</u>							
2) sold 93.1% owned subsidiary <u>UrAsia</u> , <u>Kyzqyz Republic</u> in November 2019 to government entity; entitled to 93.1% cash consideration of US\$ 250,000 and 2% NSR royalty on Kyrgyz project for up to US\$ 5.0 million							

**World's top listed uranium exploration/development companies  
focused on emerging countries (by market valuation)**

	<b>Country focus</b>	<b>Trade symbol</b>		<b>Share price March 31 2020</b>	<b>Share price Year-end 2019</b>	<b>Change Year-end 2019 in %</b>	<b>Market valuation (US\$ million)</b>
Global Atomic *	1) Niger	TSX.V	GLO	C\$ 0.42	C\$ 0.48	-13	43.4
GovEx *	Niger/other African countries	TSX.V	GXU	C\$ 0.13	C\$ 0.16	-19	38.9
Deep Yellow *	Namibia	ASX	DYL	A\$ 0.21	A\$ 0.29	-28	31.4
Berkeley Energia	Spain	ASX	BKY	A\$ 0.15	A\$ 0.22	-32	23.7
Forsys Metals	Namibia	TSX	FSY	C\$ 0.13	C\$ 0.12	8	15.4
Plateau Energy Metals	2) Peru	TSX.V	PLU	C\$ 0.24	C\$ 0.26	-8	14.3
Bannerman Resources	Namibia	ASX	BMN	A\$ 0.02	A\$ 0.04	-50	12.9
Lotus Resources	3) Malawi	ASX	LOT	A\$ 0.03	A\$ 0.05	-40	11.4
<b>Total market capitalization</b>							<b>191.4</b>
* featured as a <b>Special Situation</b> and included in the 2019 Shortlist of investment recommendations							
1) also 49% interest in operating zinc project in <u>Turkey</u>							
2) uranium-lithium project; main focus on lithium							
3) acquired 85% stake in major uranium project in <u>Malawi</u> from <u>Paladin Energy</u> ; also cobalt project in NSW Australia							

## Geographical overview of the world's highest valued uranium exploration and development companies

### Traditional countries (10)

(market capitalization in million as at March 31, 2020)

<b>Canada (5)</b>	<b>C\$</b>	<b>United States (3)</b>	<b>US\$</b>	<b>Australia (2)</b>	<b>A\$</b>
NexGen Energy	410.7	Laramide Resources	1) 28.2	Boss Resources	63.6
Denison Mines	200.1	Azarga Uranium	2) 17.1	Vimy Resources	1) 18.6
Fission Uranium	70.6	Encore Energy	15.3		
UEX	1) 47.3				
Iso Energy	2) 35.0				
<b>notes Canada:</b>		<b>notes US:</b>		<b>notes Australia:</b>	
1) also cobalt-nickel project		1) also uranium projects in		1) also stand-alone battery metals project	
2) 33.0 % owned by <u>NexGen Energy</u> from spin-off		2) sold 91% owned subsidiary <u>UrAsia</u> , Kyrgyz Republic to government entity			

## Geographical overview of the world's highest valued uranium exploration and development companies

### Emerging countries (8)

(market capitalization in million as at March 31, 2020)

<b>AFRICA (6)</b>		<b>Niger (2)</b>	<b>C\$</b>	<b>SOUTH AMERICA (1)</b>	
<b>Namibia (3)</b>	<b>A\$</b>	Global Atomic	61.1	<b>Peru (1)</b>	<b>C\$</b>
Deep Yellow	51.4	GoviEx Uranium	1) 54.8	Plateau Energy Metals	1) 20.1
Bannerman Resources	21.2				
	<b>C\$</b>	<b>Malawi (1)</b>		<b>EUROPE (1)</b>	
Forsys Metals	21.7	Lotus Resources	18.7	<b>Spain (1)</b>	<b>A\$</b>
				Berkeley Energia	38.8
		1) bought African uranium assets in <u>Zambia</u> , <u>Mali</u> and <u>Namibia</u> from <u>Denison Mines</u> in consideration of 25% of GoviEx' shares;		1) combined uranium-lithium project	

## Overviews of worldwide uranium production and exploration companies

March 31, 2020	Trade symbol		Share price		Change in %	12 months		Shares issued million	Market capitalization million	
			March 31 2020	year-end 2019		H	L		US\$	US\$
			C\$	C\$		C\$	C\$		US\$	US\$
<b>Canada</b>										
<b>Producers:</b>										
Cameco	TSX	CCO	10.86	11.54	-6	16.15	7.70	395.8	4,298.4	3,051.9
<b>Development / Exploration:</b>										
NexGen Energy	TSX	NXE	1.14	1.67	-32	2.46	0.76	360.3	410.7	291.6
Denison Mines	TSX	DML	0.34	0.54	-38	0.78	0.24	597.2	200.1	142.0
Fission Uranium	TSX	FCU	0.15	0.29	-50	0.59	0.10	486.6	70.6	50.1
UEX	TSX	UEX	0.12	0.15	-20	0.20	0.07	394.2	47.3	33.6
IsoEnergy	TSX.V	ISO	0.42	0.40	4	0.80	0.24	84.3	35.0	24.8
ValOre Metals 1)	TSX.V	VO	0.20	0.33	-41	0.41	0.14	85.0	16.6	11.8
Purepoint Uranium Group	TSX.V	PTU	0.05	0.06	-25	0.11	0.03	223.4	10.1	7.1
Forum Energy Metals	TSX.V	FMC	0.08	0.09	-11	0.11	0.03	108.7	8.7	6.2
Skyharbour Resources	TSX.V	SYH	0.11	0.17	-35	0.44	0.08	75.4	8.3	5.9
Fission 3.0	TSX.V	FUU	0.06	0.07	-21	0.14	0.03	141.9	7.8	5.5
CanAlaska Uranium	TSX.V	CVV	0.14	0.25	-46	0.32	0.10	57.6	7.8	5.5
ALX Resources 2)	TSX.V	AL	0.03	0.05	-40	0.08	0.02	128.8	3.9	2.7
Azincourt Energy 3)	TSX.V	AAZ	0.02	0.03	-33	0.07	0.02	151.9	3.0	2.2
Uravan Minerals	TSX.V	UVN	0.01	0.04	-75	0.05	0.01	47.3	0.5	0.3

1) also includes precious and base metals assets  
2) name change from ALX Uranium effective January 13, 2020  
3) also lithium joint venture in Canada and letters of intent to acquire lithium-uranium project in Peru and Ontario cobalt project

## Overview of uranium companies focused on the Athabasca Basin, Saskatchewan

March 31, 2020	Trade symbol		Share price		Change in %	12 months		Shares total million	Market capitalization million	
			March 31 2020	year-end 2019		H	L		US\$	US\$
			C\$	C\$		C\$	C\$		US\$	US\$
<b>Producers (1)</b>										
Cameco	TSX	CCO	10.86	11.54	-6	16.15	7.70	395.8	4,298.4	3,051.9
<b>Exploration / Development (16)</b>										
NexGen Energy	TSX	NXE	1.14	1.67	-32	2.46	0.76	360.3	410.7	291.6
Denison Mines	TSX	DML	0.34	0.54	-38	0.78	0.24	597.2	200.1	142.0
Fission Uranium	TSX	FCU	0.15	0.29	-50	0.59	0.10	486.6	70.6	50.1
UEX	TSX	UEX	0.12	0.15	-20	0.20	0.07	394.2	47.3	33.6
IsoEnergy	TSX.V	ISO	0.42	0.40	4	0.80	0.24	84.3	35.0	24.8
Purepoint Uranium Group	TSX.V	PTU	0.05	0.06	-25	0.11	0.03	223.4	10.1	7.1
Forum Energy Metals	TSX.V	FMC	0.08	0.09	-11	0.11	0.03	108.7	8.7	6.2
Skyharbour Resources	TSX.V	SYH	0.11	0.17	-35	0.44	0.08	75.4	8.3	5.9
CanAlaska Uranium	TSX.V	CVV	0.14	0.25	-46	0.32	0.10	57.6	7.8	5.5
Fission 3.0	TSX.V	FUU	0.06	0.07	-21	0.14	0.03	141.9	7.8	5.5
ALX Uranium	TSX.V	AL	0.03	0.05	-40	0.08	0.02	128.8	3.9	2.7
Azincourt Energy	TSX.V	AAZ	0.02	0.03	-33	0.07	0.02	151.9	3.0	2.2
Uravan Minerals	TSX.V	UVN	0.01	0.04	-75	0.05	0.01	47.3	0.5	0.3

## Overviews of worldwide uranium production and exploration companies

March 31, 2020	Trade symbol		Share price		Change	12 months		Shares	Market	
			March 31	year-end	in %	H	L	issued	capitalization	
			2020	2019				million	million	
<b>United States</b>										
<b>Producers:</b>										
Energy Fuels 1)		NYSE MKT UUUU	US\$ 1.18	US\$ 1.91	-38	US\$ 3.73	US\$ 0.78	111.4	US\$ 131.5	US\$ 131.5
Uranium Energy		AMEX UEC	0.56	0.92	-39	1.58	0.35	183.9	103.0	103.0
Ur-Energy		NYSE MKT URG	0.39	0.59	-34	0.99	0.27	160.5	62.6	62.6
Peninsula Energy 2)		NYSE OTC PENMF	0.10	0.11	-9	0.23	0.06	315.1	31.5	31.5
<b>Development / Exploration:</b>										
Western Uranium & Vanadium 3)	OTC	WSTRF	US\$ 0.45	US\$ 0.82	-45	US\$ 1.15	US\$ 0.15	30.1	US\$ 13.5	US\$ 13.5
<b>Laramide Resources 4)</b>										
	TSX	LAM	C\$ 0.24	C\$ 0.20	20	C\$ 0.47	C\$ 0.11	165.4	C\$ 39.7	US\$ 28.2
Azarga Uranium 5)	TSX	AZZ	0.13	0.20	-35	0.29	0.07	185.0	24.1	17.1
EnCore Energy	TSX.V	EU	0.14	0.17	-21	0.22	0.08	159.2	21.5	15.3
Anfield Energy	TSX.V	AEC	0.09	0.11	-23	0.26	0.04	82.9	7.0	5.0
Virginia Energy 6)	TSX.V	VUI	0.06	0.09	-39	0.38	0.04	57.2	3.1	2.2
1) combined uranium-vanadium project										
2) also uranium assets in South Africa										
3) uranium-vanadium project										
4) also projects in Australia										
5) also owns 70% interest in <u>UrAsia</u> active in <u>Kyrgyzstan</u>										
6) new battle on suing state of <u>Virginia</u> on uranium ban to access \$ 6 billion deposit; trial scheduled for February 10 to 14, 2020										

## Overviews of worldwide uranium production and exploration companies

March 31, 2020	Trade symbol		Share price		Change	12 months		Shares	Market	
			March 31	year-end	in %	H	L	issued	capitalization	
			2020	2019				million	million	
<b>Australia</b>										
<b>Producer:</b>										
Energy Resources of Australia	ASX	ERA	A\$ 0.15	A\$ 0.17	-12	A\$ 0.20	A\$ 0.14	3,690.0	A\$ 553.5	US\$ 337.6
<b>Development / Exploration:</b>										
Boss Resources 1)	ASX	BOE	0.04	0.05	-20	0.07	0.03	1,590.0	63.6	38.8
Toro Energy 2)	ASX	TOE	0.01	0.01	0	0.03	0.01	2,610.0	26.1	15.9
Vimy Resources 3)	ASX	VMY	0.03	0.05	-40	0.08	0.02	618.9	18.6	11.3
Energy Metals Ltd.	ASX	EME	0.06	0.09	-33	0.16	0.06	209.7	12.6	7.7
DevEx Resources	ASX	DEV	0.05	0.07	-29	0.13	0.03	190.4	9.5	5.8
Cauldron Energy 4)	ASX	CXU	0.01	0.02	-50	0.03	0.01	376.3	3.8	2.3
<b>Mega Uranium 5)</b>										
	TSX	MGA	C\$ 0.07	C\$ 0.10	-30	C\$ 0.12	C\$ 0.05	326.4	C\$ 22.8	US\$ 16.2
1) also nickel/copper project in Sweden_ and gold project in Senegal										
2) also recent focus on gold project										
3) acquisition of <u>Cameco's Alligator River Project</u> ; also stand-alone battery metals project										
4) also uranium assets in <u>Argentina</u>										
5) uranium properties in <u>Australia</u> and <u>Canada</u> ; equity position in <u>Uranium Royalty Corp</u> ; 18.28% equity interest in <u>Toro Energy</u> and 5.44% investment in <u>NexGen Energy</u>										

## Overviews of worldwide uranium production and exploration companies

March 31, 2020	Trade symbol		Share price		Change in %	12 months		Shares issued million	Market capitalization million	
				March 31 2020		year-end 2019	H		L	US\$
<b>CENTRAL ASIA</b>										
<b>Kazakhstan</b>										
<b>Producers:</b>										
Kazatomprom 1)	LSE	KAP:LI	US\$	US\$	-3	US\$	US\$	259.4	3,268.4	3,268.4
			12.60	13.00		15.80	10.20			
<b>AFRICA</b>										
<b>Namibia</b>										
<b>Standby producers:</b>										
Paladin Energy	ASX	PDN	A\$	A\$	-50	A\$	A\$	2,030.0	101.5	61.9
			0.05	0.10		0.16	0.04			
<b>Development / Exploration:</b>										
Deep Yellow 2)	ASX	DYL	A\$	A\$	-28	A\$	A\$	244.9	51.4	31.4
			0.21	0.29		0.45	0.11			
Bannerman Resources	ASX	BMN	A\$	A\$	-50	A\$	A\$	1,060.0	21.2	12.9
			0.02	0.04		0.06	0.02			
Marenica Energy	ASX	MEY	A\$	A\$	-33	A\$	A\$	117.0	7.0	4.3
			0.06	0.09		0.13	0.03			
Forsys Metals	TSX	FSY	C\$	C\$	8	C\$	C\$	166.9	21.7	15.4
			0.13	0.12		0.29	0.06			
<b>Niger</b>										
Global Atomic 3)	TSX.V	GLO	C\$	C\$	-13	C\$	C\$	145.4	61.1	43.4
			0.42	0.48		0.57	0.24			
GoviEx Uranium 4)	TSX.V	GXU	C\$	C\$	-22	C\$	C\$	438.6	54.8	38.9
			0.13	0.16		0.21	0.08			
<b>Malawi</b>										
Lotus Resources	ASX	LOT	A\$	A\$	-40	A\$	A\$	622.4	18.7	11.4
			0.03	0.05		0.07	0.01			
<b>Mauritania</b>										
Aura Energy 5)	ASX	AEE	A\$	A\$	-50	A\$	A\$	1,740.0	8.7	5.3
			0.005	0.01		0.02	0.005			

1) listed on London Stock Exchange) as at November 16, 2018 through an IPO offering of 15% of the Company's outstanding shares at a price of US\$ 11.60

2) strategic relationship with an affiliate of the Sprott Group concurrently with an initial A\$ 1.42 million investment at A\$ 0.04 per share equivalent to a 15% equity interest in Deep Yellow; announced a strategic earn-in agreement with JOGMEC of Japan on March 29, 2017 to earn a 39.5% interest in the Nova Joint Venture within 4 years

3) also 49% interest in operating zinc project in Turkey

4) also major uranium assets in Zambia, and assets in Mali and Namibia

5) also one of world's largest undeveloped vanadium resources in Sweden

## Overviews of worldwide uranium production and exploration companies

March 31, 2020	Trade symbol		Share price		Change in %	12 months		Shares issued million	Market capitalization million	
			March 31 2020	year-end 2019		H	L		C\$	US\$
<b>LATIN + CENTRAL AMERICA</b>										
<b>Peru</b>										
Plateau Energy Metals 1)	TSX.V	PLU	C\$ 0.24	C\$ 0.25	-6	C\$ 0.75	C\$ 0.16	85.5	C\$ 20.1	US\$ 14.3
<b>Argentina</b>										
Blue Sky Uranium 2)	TSX.V	BSK	C\$ 0.08	C\$ 0.11	-32	C\$ 0.24	C\$ 0.05	120.1	C\$ 9.0	US\$ 6.4
1) combined uranium-lithium project										
2) uranium-vanadium project										

## Overviews of worldwide uranium production and exploration companies

March 31, 2020	Trade symbol		Share price		Change in %	12 months		Shares issued million	Market capitalization million	
			March 31 2020	year-end 2019		H	L		A\$	US\$
<b>Other countries: EUROPE</b>										
<b>Spain</b>										
Berkeley Energia	ASX	BKY	A\$ 0.15	A\$ 0.22	-32	A\$ 0.40	A\$ 0.10	258.6	A\$ 38.8	US\$ 23.7

# CALENDAR OF MINING EVENTS



Uraniumletter INTERNATIONAL

Strategic Metals & Rare Earths Letter  
INTERNATIONAL

## EVENTS being **POSTPONED** due to Coronavirus crisis – **New dates to be set in due course**

May	18 – 20	<b>MINEX Tajikistan – Dushambe, Tajikistan</b>
June	1	<b>Energy Mines and Money – Brisbane, Australia</b>

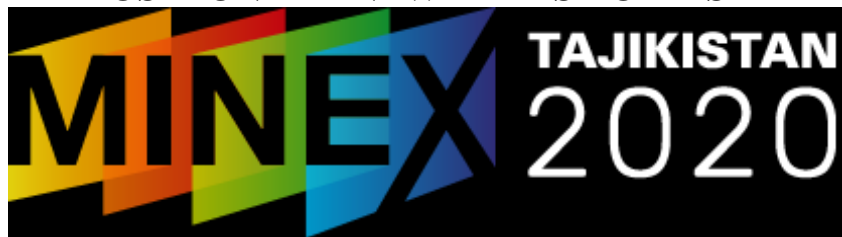
## We will regularly check on any future postponements

June	22 – 23	<b>Mining Journal Select – London</b>
June	25 – 26	<b>BME Mining Investment Botswana – Gaborone, Botswana</b>
July	7 – 8	<b>ARAB &amp; AFRICAN MINING – London</b>
July	14 – 16	<b>4<sup>th</sup> CHINA Gold Congress and Expo – Beijing, China</b>
September	9 – 11	<b>World Nuclear Symposium – London</b>
October	6 – 8	<b>MINEX Russia - Moscow, Russia</b>
October	7 – 9	<b>DRC Mining Week – Lubumbashi – Democratic Republic Congo</b>
October	27 – 29	<b>IMARC Intern. Mining and Resource Conference – Melbourne, Australia</b>
November	10 – 12	<b>MINEX Kazakhstan – Nur Sultan, Kazakhstan</b>
November	16 – 17	<b>Mining Peru 2020 – Lima, Peru</b>
November	17 – 18	<b>The Mining Show - Dubai</b>
November	24 – 25	<b>ZIMEC 2020 - Lusaka, Zambia</b>
November	25 – 26	<b>2<sup>nd</sup> Lithium Latin America Congress – Buenos Aires, Argentina</b>
November	30	<b>MINEX Eurasia – London</b>

## **POSTPONEMENT TO 2021 – new date:**

June	2 – 4	<b>WAMPEX 2021 - Accra, Ghana</b>
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**POSTPONED – NEW DATES TO BE SET**



**POSTPONED – NEW DATES TO BE SET**







**中国国际黄金大会**  
**CHINA GOLD CONGRESS**

14-16 July 2020, Beijing China  
China Gold Association / World Gold Council



**WORLD NUCLEAR**  
**ASSOCIATION**





**DRC MINING WEEK** EXPO & CONFERENCE



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The Pullman Lubumbashi  
Grand Karavia Hotel, DRC



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CONFERENCE + EXPO**  
**27 - 29 OCTOBER 2020**

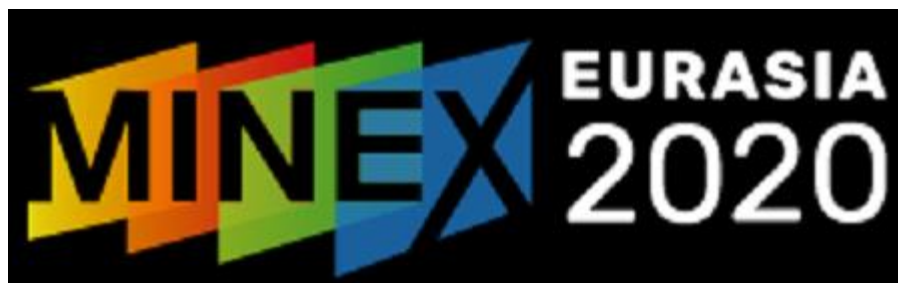


**KAZAKHSTAN**  
**MINEX 2020**



**MINING  
PERU 2020**  
CONGRESS AND EXHIBITION

**16-17 NOVEMBER  
2020**  
**PERU, LIMA**



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