#### Uraniumletter international

the international independent information and advice bulletin for uranium resource investments

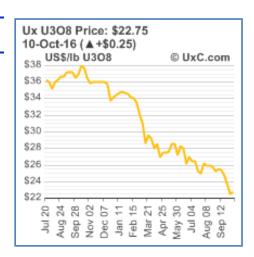
#### October 2016

#### **Uranium Market Outlook**



Marino G. Pieterse, publisher and editor

- ► European Union's climate change policy not realizable
- ► Existence of US uranium industry threatened due to fall of U3O8 prices



Five and a half year of the <u>Fukushima</u> accident in **Japan** on 11 March 2011, positive market comments on a recovery of uranium prices have not been fulfilled and in the contrary have not seen any signs of recovery, with the U3O8 spot price currently trading at more than a 2-year low of US\$ 25 and the long-term price having dropped to \$ 37.50, the lowest level since year-end 2015.

In this respect, it is striking to see that in particular company reports remain positive on what is called a normalization of the market to occur at some point and that will bring with it much higher prices.

	Spot	Long-term		Spot	Long-term
2016					
October 3 (2-year low)	22.50	37.50	Year-end 2015	34.25	44.00
September 26	23.75	38.00	May 31, 2015 (year high)	39.50	50.00
August 29	25.25	38.00	Year-end 2014	35.50	49.00
July 25	25.00	40.50	May 14, 2014 (year low)	28.25	49.00
June 27	27.00	40.50	Year-end 2013	34.50	50.00
June 20	26.15	41.00	Year-end 2012	43.50	56.50
May 30	27.25	41.00	Year-end 2011	61.75	64.00
April 25	27.50	43.50			
March 28	29.15	43.50	Pre-Fukushima accident		
February 29	33.50	44.00	March 11, 2011	67.75	73.00
January 31	34.75	44.00			

Key points of this optimism are well known, as they are used by all uranium market participants, thereby in particular referring to the expected strong growth of nuclear plants construction in emerging countries, led by <a href="#">China</a>, <a href="#">Russia</a> and <a href="#">India</a>.

This optimism is supported by the "World Nuclear Supply Report – 2016" published last week which includes scenarios for the evolution of nuclear power over the next two decades until 2035.

With currently, <u>447 commercial nuclear power reactors being</u> operable around the world (of which 47 offline in <u>Japan</u>), and <u>59 reactors under construction</u> and in addition specific plans for another <u>160 nuclear reactors</u>, these numbers seem to justify the optimistic outlook for nuclear power, and a strong growth of needed uranium to feed the new reactors.

There is hardly paid attention, however, to the fact that with 49 operable nuclear reactors having been put offline after the Fukushima accident in March 2011, the restart has taken significantly longer than originally anticipated and after more than five years only two restarts currently operable as a result of long time consuming judicial rulings and local consents.

A recent estimate by the <u>Institute of Energy Economic Japan (IEEJ)</u> now sees <u>19 restarts in operation by the end of March 2018</u> and 12 more one year later. Besides 5 reactors returned to service, of which 2 are operating currently, applications have been files to restart 22 additional reactors.

With Japan having enough uranium in stock to feed its 49 reactors before the Fukushima accident, this clarifies a strong short-term oversupply of uranium, which cannot be compensated for by the gradual growth of new operable uranium reactors in China, Russia and Japan in the next few years.

### ► Paris Climate Agreement confirms essential contribution of nuclear energy to limit global warming

On <u>12 December 2015</u>, 195 countries at the 21<sup>st</sup> Conference of the Partners of the UNFCCC in Paris adopted the first-ever universal climate agreement which sets out a global action plan to put the world on track to <u>avoid dangerous climate changes by limiting global warming to 1.5°C, due to enter into force in 2020.</u>

Under the conditional ratification/accession the plan had to be signed by 55 UNFCCC parties, accounting for 55% of greenhouse gas emissions. Having ratified the agreement in October 2016, the <u>European Union</u> was the first major economy to submit its intended contribution to the new agreement and already in March 2015 having taken steps to implement its target to reduce emission by at least 40% by 2030 on 1990 levels.

It was a surprise that at the occasion of the G20 Summit in Hangzhou, China, the <u>United States</u> and <u>China</u>, as the world's biggest emitters of greenhouse gasses, already on <u>3 September 2016</u> agreed on ratifying the Paris Climate Change Agreement as a significant advance in the battle against global arming

The <u>United States</u> had set a national determined contribution of cutting emissions by 40% by 2030 compared with 2005.

As of October 2016, 191 UNFCCC members had signed the treaty, 76 of which have ratified it. On 4 November 2016 the Agreement enters into force.

#### ► Nuclear energy is the key to decarbonized European Union

On 4 October 2016, <u>FORATOM</u> the <u>European Atomic Forum</u>, the Brussels-based trade association for the nuclear energy industry in Europe with membership of up to 16 national nuclear associations, published a Positive Paper entitled "<u>Nuclear power a key contributor to decarbonized EU</u>", that positions nuclear energy as a key part of the European energy mix and of the global transition to a decarbonized electricity required to comply with COP21 Paris commitments.

Nuclear energy generates in 14 of the 28 EU member States and currently provides 27% of Europe's electricity and 50% of its low carbon electricity. It contributes significantly to reducing dependence upon imported fossil fuels as a mature technology with high availability; nuclear is well positioned to strengthen Europe's energy security.

However, the current unsustainable design of the electricity market and the lower prices if fossil fuels and of wholesale electricity means the EU is facing a challenge to reach its 2030 climate policy objectives and COP21 Paris commitments.

Nuclear was identified as he main source of low carbon electricity in the Energy Roadmap 2050's scenario showing a low carbon electricity generation in the <a href="Energy Roadmap 2050's">Energy Roadmap 2050's</a> showing the lowest total energy costs. Variable renewable production cannot satisfy all the needs alone.

Nuclear power high availability, diversity from other sources, high energy density and low sensitivity to uranium price variations contributes to the EU's security of supply. It therefore contributed to the EU's key policy objectives. In terms of economic generation of nuclear power plants is one of the best options for low carbon power generation.

Nuclear new built lifecycle cost is close to that of on-shore wind while the service offered is greater with from, dispatch able and reliable capacity and with much smaller land size use.

Poorly targeted subsidies are distorting the energy market leading to overcapacity, low spot prices on the whole-sale market and at the same time high consumer prices.

Adequate long-term price signals for new energy investments are needed to incentivise investment in low carbon energy projects.

In the Position paper, FORATOM calls for action on electricity market design in order to restore confidence among potential investors in power generation projects of all types, but in articular in large-scale low-carbon generation projects such as new nuclear power plants.

FORATOM recommends that long-term price signals or Contracts for Difference (CfDs) are needed to encourage investment

The <u>IEA/NEA's 2015 Technology Roadmap for Nuclear Energy</u> concludes that global nuclear capacity needs to more than double by 2050 of the 2°C ceiling of CO2 emission is to be respected.

Similarly, the <u>IEA's World Energy Outlook 2015 "450 Scenario"</u>, again addressing the 2°C limit, <u>says that nuclear capacity should reach globally 540 GW (392 GW currently) in 2030 and the share of nuclear energy in power generation should increase to 13% in 2030 (11% currently).</u>

This means that demand for nuclear energy is foreseen to more than double by 2050.

### ► EU's new climate change policy objectives can be achieved only if nuclear energy is sustained at currently 27% of Europe's electricity

Nuclear energy makes it easier to combine security of supply, competitive electricity prices and larger GHG emissions within the next two decades with the 2030 target in view.

A share of 25% of electricity supply from an installed capacity of around 120 GWe should be the reference target fir 2050 according to the <a href="Energy Roadmap 2050">Energy Roadmap 2050</a>.

A larger share of nuclear would make decarbonisation harder to achieve could waste valuable capital assets and would reduce supply diversity, leading to increased use of fossil fuels as is currently happening for example in <u>Germany</u>, where phasing out the nuclear power plants leads to higher costs and higher CO2 emissions.

If nuclear would not be available in Germany and the capacity would be allocated proportionally to other energy sources, this would increase CO2 emissions by around 50 million tonnes/year, representing 15% GHG emissions. But currently the phased-out nuclear capacity is no allocated proportionally with the other sources being notice an intensive switch to coal making the CO2 emissions increase even more sensitive.

A high enough carbon price to attract new investment in low carbon generation s an efficient way to internationalise the climate change externally. However, governments must recognise that this is likely to take time and that price uncertainty induces increased investors' perception of market risk.

Under current coal and CO2 market price conditions, lignite coal and coal fired plants are the most competitive. At a price of at least € 30/t CO2 is required to switch from coal to gas; even higher to encourage new capital intensive projects under market uncertainty.

The ETS reform underway is unlikely to achieve such level before 2030.

According to the PINC beyond the horizon of 2025, the minimum carbon price from which new capacity would be deployed by means of private financing ranges from € 43 to € 72/t CO2.

The 2013 EU reference scenario projects ETS prices of between € 35/t CO2 in 2030 and € 100/t CO2 in 2050.

### ► USA world's largest producer of nuclear power accounting for more than 30% of worldwide nuclear generation of electricity

USA's 100 nuclear reactors produced 798 billion kWh in 2015, over 19% of total electrical output.

There are 4 reactors under construction which are expected to come online by 2021. These are resulting from 16 licence applications made since mid-2007 to build 24 reactors.

Government policy changes since the late 1990s have helped to pace the way for significant growth in nuclear capacity. However, some states have liberalized wholesale electricity markets, which makes the financing of capital intensive power projects difficult, and coupled with historically low market prices, have put the economic viability of some existing reactors and proposed projects in doubt.

Currently, almost all the uranium used in the US commercial reactors comes from abroad. <u>Domestic uranium mining now accounts for only 10%</u>.

To become less dependent on foreign uranium supply, the USA should subsidise the projects of domestic producers by securing break-even off-take prices in the next few years in order to prevent defaults, which would have a material negative impact on its already vulnerable position as a feed supplier for its reactors.

### ► US House of Representatives passes bipartisan legislation that promotes advanced nuclear technologies

On <u>14 September 2016</u> in a strong show of recognising advanced nuclear energy as an American resource, the U.S. House of Representatives passed by unanimous vote legislation that could ensure that advanced nuclear technology can be developed, licenced and constructed in the United States.

The bill directs the <u>Nuclear Regulatory Commission</u> to collaborate with the <u>U.S. Department of Energy</u> to develop an efficient, risk-informed technology neutral framework or advanced reactor design licencing by 2019. As part of this effort, the NRC is to explore opportunities to minimise the time from application submittal to final NRC approval.

Calling for promotion of the next generation of the nuclear industry now is to provide the certainty that the private sector needs to invest in innovative technologies as the United States is at of failing behind international competitors amid rising global interest in the development of advanced reactors to meet clean energy needs, which in particular applies to China and Russia.

#### ▶U.S uranium industry faces urgent problems to survive

Despite the fall of uranium prices since the Fukushima accident in March 2011, the U.S. uranium industry flour-ished by 4 companies, commencing commercial production, including <u>Uranium Energy</u>, <u>Ur-Energy</u>, <u>Energy Fuels</u> and Australia-based Peninsula Energy.

However, with the uranium equity market having crashed, operational cash flow came under strong pressure with benefits from forward sales agreements at premiums well above shrinking market prices.

As a result, all four companies are facing a negative cash flow, which made it increasingly difficult to be compensated for by attracting sufficient funding.

This situation has been enhanced by the fall of the market valuations of the respective companies since year-end 2010, in particular for <u>Uranium Energy</u> from \$ 421 million to \$ 115 million (-75%) and <u>Ur-Energy</u> from \$ 303 million to \$ 71 million (-72%).

Combined, the four companies showed a fall in market capitalization from \$ 1.04 billion at year-end 2010 to \$ 363 million, representing a dilution of \$ 677 million.

According to the domestic uranium production report <u>2Q 2016</u> published by the <u>U.S. Energy Information Administration</u>, production of uranium concentrate was 745,306 pounds U3O8, up 19% from 1Q 2016 and down 6% from the second quarter of 2015.

<u>During the second quarter 2016, U.S. uranium was produced at 7 U.S. uranium facilities</u>, one more than 1Q 2016, when <u>White Mesa Mill</u> in <u>Utah</u> restarted production.

For the first half of 2016, U.S. uranium concentrate production totalled 1.37 million pounds of U3O8. This amount is 29% lower than the 1.94 million pounds produced during the first half of 2015.

(in US\$ million)										
Company		30 Sept	Year-end	Year-end	Change	Year-end	Year-end	Year-end	Year-end	Change %
Name		2016	2015	2014	in %	2013	2012	2011	2010	2015 / 2010
					2016/2014					
Uranium Energy	1)	115	105	160	-28	179	218	253	421	-75
<b>Energy Fuels</b>	2)	105	134	121	-13	111	123	167	158	-15
Peninsula Energy	3)	82	138	113	-27	60	122	122	158	-12
Ur-Energy	4)	71	85	110	-35	170	101	96	303	-72
1) ISR production con	nmen	ncement in N	lovember 2010	); no production	in 2014 and 2	015				
2) Acquired in May 20	12 ali	l of Denison	Mines' US urar	nium assets in e	exchange for 42	5.44 million sh	ares valued at	Cdn\$ 81 milli	on; premium	of 37%;
including takeover	of <u>Ura</u>	anerz com	oleted on June	19, 201 <u>5</u>						
3) First ISR producti	on co	ommenced	in December 2	2015						
4) ISR production con	nmen	ced 1n Aug	ust 2013							

At the end of 2015, 5 US uranium ISL plants with a combined capacity of 13.8 million pounds U3O8 were operating.

Uranium Energy's Hobson ISR Plant/La Palangana ISR Project in Texas are on stand-by.

U.S. uranium mill in production		Operated by:	Annual capacity tU
White Mesa Mill	Utah	Energy Fuels	4,000
U.S. uranium in-situ-leach plant	s in productio	n	
Smith Ranch - Highland Operation	Wyoming	Cameco	2,100
Lost Creek Project	Wyoming	Ur-Energy	770
Willow Creek Project	Wyoming	Uranium One	500
		(wholly ownd by Russia's <b>ARMZ</b> )	
Crow Butte Operation	Nebraska	Cameco	385
Nichols Ranch ISR Project	Wyoming	Energy Fuels	300



**Uranium Energy's (UEC – AMEX)** fully-licenced <u>Hobson processing Plant</u> is central to all of its projects in <u>South Texas</u>, including the <u>Palangana in-situ recovery (ISR)</u> mine, the permitted <u>Goliad ISR project</u> and the development-stage <u>Burke Hollow ISR project</u>. Additionally, the

Company controls a pipeline of advanced-stage projects in Arizona, Colorado and Paraguay.

Although planned principal operations have commenced in November 2010, from which significant revenues from sales of uranium concentrates were realized for the fiscal years from 2012, **UEC** has yet to achieve profitability and has had a history of operating losses resulting in an accumulated deficit balance of \$ 205.58 million as at April 2016 and only accounting for a stockholders' equity of \$ 33.63 million compared to the Company's current market valuation of \$ 115 million.

With **UEC** not having any long-term delivery contracts left since 2014, the Company has a net cash flow deficit of \$ 10.32 million in the first 9 months ended April 230, 2016, which could be funded at a price of \$ 0.85 per unit for gross proceeds of \$ 10.51 million, as a result of which UEC could maintain a cash position around \$ 10 million.

However, with activities having been postponed due to the challenging market conditions, which have further worsened in the course of this year, doubt whether the Company will still be able to attract new funding to survive, based on which I give a sell advice.



**Energy Fuels (UUUU – NYSE MKT)** is the second largest US uranium mining company after <u>Cameco</u>, the world's largest uranium producer, based in <u>Canada</u>. In <u>April 2012</u> **Energy Fuels** agreed to take over all <u>Denison Mines</u>' S assets and operations, including the <u>White Mesa Mill</u> in a Cdn\$ 106 million merger. In <u>August 213</u>, the Company took over <u>Strathmore Minerals</u> in a Cdn\$ 29 million deal.

In <u>June 2015</u>, **Energy Fuels** completed its \$ 150 million takeover of <u>Uranerz Energy</u>, one of YSA's major ISR-producers.

The Company's takeover of Mesteña Resources was finalised in mid-2016.

**Energy Fuels** claims a licenced capacity of over 4,400 tU per year — with improved uranium prices and the receipt of additional permits — to produce about half of that on a sustainable basis. However, in the short term it expects to maintain production at today's reduced levels or less, with 36 tU in 2016, including 135 tU from Nichols Ranch and 230 tU through the White Mesa Mill, including 164 tU from Pinenut prospect and 308 tU in 2017, including 173 tU from White Mesa.

On <u>30 September 2016</u>, **Energy Fuels** closed a bought deal offering consisting of an aggregate of 8.34 million units at a price of US\$ 1.80 per unit for gross proceeds of \$ 15.0 million. Due to the significant dilution of issued shares by 14.4%, the share price came under strong pressure and lost 20% to a current market valuation of \$ 83 million.



**Ur-Energy (URG – NYSE MKT)** production from <u>Lost Creek</u> commenced in mid-2013 after construction of a 770 tU per year mill, following NRC licensing and Bureau of Land Management approval.

Extracted production in 2015 was 783,547 pounds U3O8, of which 717,125 pounds were shipped.

The Company has a total of about 8,500 tU as NI 43-101 compliant indicated resources and potential to double that.

On July 2014, **Ur-Energy** announced measured and indicated resources of 3,400 tU grading 0.194% U for its Shirley Basin project in Wyoming.

Lost Creek is now projected to produce between 600,000 and 700,000 pounds U3O8 in 2016, which will be more than sufficient to deliver into its remaining long-term sales commitments for the year. The Company has term contracts committing approximately 3.1 million pounds U3O8 between 2016-2021 and averaging \$ 49.81 per pound. This average pricing currently stands at approximately \$ 27 per pound above spot pricing.

Company	Focus	Ti	rading	Share	price	Cha	nge	Market	Market	Change
		S	ymbol	30 Sept.	Year-end	in	%	Capitalization	Capitalization	in %
				2016	2015	local	US\$	30 Sept. 2016	year-end 2015	2016/2015
Producers (4)										
				Cdn\$	Cdn\$			US\$mIn.	US\$ mln.	
Camec o	Canada	ABX	TSX	11.210	17.070	-34	-40	3.372	4.864.5	-31
				US\$	US\$					
Ur-Energy	United States	URG	NYSE	0.495	0.650	-24	-24	71	84.6	-16
				A\$	A\$					
Paladin Energy	Namibia	PDN	ASX	0.150	0.240	-38	-43	198	300.1	-34
Energy Resources of Australia	Australia	ERA	ASX	0.340	0.360	-6	-11	136	136.1	0
Advanced development comp	anies (5)									
				Cdn\$	Cdn\$					
Denison Mines	Canada	DML	TSX	0.610	0.630 1)	-3	-10	247	257 1	) -4
UEX	Canada	UEX	TSX	0.215	0.150	43	49	48	26.6	80
				A\$	A\$					
Berkeley Energia	Spain	BKY	ASX	0.790	0.490	61	66	122	65.0	88
Vimy Resources	Australia	VMY	ASX	0.250	0.360	-31	-36	49	60.0	-18
A-Cap Resources	Botsw ana	ACB	ASX	0.070	0.040 3)	75	79	46	7.0 3	) 557
Exploration/development com	panies (10)									
				Cdn\$	Cdn\$					
Laramide Resources	Australia/US	LAM	TSX	0.255	0.285	-11	-17	23	17.4	32
GoviEx	Niger	GXU	CNSX	0.140	0.045	211	217	28	4.8	483
Forsys Metals	Namibia	FSY	TSX	0.080	0.080	0	6	8	7.8	3
CanAlaska Uranium	Canada	CVV	TSX	0.500	0.420 2)	19	30	11	7.5 2	47
Purepoint Uranium	Canada	PTU	TSX.V	0.105	0.075 1)	40	47	15	10 1	) 50
				A\$	A\$					
Boss Resources	Australia/US	BOE	ASX	0.050	0.050 3)	0	4	35	31.0 3	
Cauldron Energy	Australia/US	CXU	ASX	0.060	0.120	-50	-55	13	23.7	-45
Deep Yellow	Namibia	DYL	ASX	0.0045	0.010	-55	-60	8	14.0	-43
Bannerman Resources	Namibia	BMN	ASX	0.030	0.030	0	5	16	8.7	84
Others - special situations(2)										
				Cdn\$	Cdn\$					
Mega Uranium	Australia	MGA	TSX	0.145	0.070	107	113	31	14.2	118
1) included as at 1 June 2016										
2) included as at 1 May 2016										
3) included as at 1 August 2016										
Removed as at:										
				31/8	31/12					
1 September 2016:				US\$	US\$					
Uranium Resources	US / Turkey	URRE	NASDAQ	1.280	6.240		-75	1		-61
Khan Resources	Mongolia	KRI	CNSX	<b>Cdn</b> \$ 0.880	<b>Cdn</b> \$ 0.440		106			121
				31/5	31/12					
1 June 2016:				A\$	A\$					
. Curio Edito.			ASX	74	7.0					

#### Overviews as at September 30, 2016

30 September 2016	Trade s	symbol	Share	price	Change	12 m	onths	Net shares	Marke	t cap.
				Ultimo	in %	Н	L	issued	milli	on
Location of Listing			current	2015				million	local	US\$
France (1)			Euro	Euro		Euro	Euro		Euro	US\$
	Euronex	t Paris			1					
AREVA 1)	FR00110		6.050	5.420	12	7.950	3.050	383.2	580	650
Canada (6)			Cdn\$	Cdn\$		Cdn\$	Cdn\$		Cdn\$	US\$
Cameco	TSX	CCO	11.210	17.070	-3/	19.110		395.8	4.437	3.372
NexGen Energy	TSX.V	NXE	2.000	0.720	178		0.560	303.9	608	3.372
Denison Mines 2)	TSX. V	DML	0.610	0.720	-13		0.300	533.4	325	247
,										
Fission Uranium	TSX	FCU	0.630	0.820	-23		0.530	483.9	305	232
UEX	TSX	UEX	0.215	0.150	43		0.110	296.5	64	48
GoviEx 3)	TSX.V	FXU	0.140	0.045	211	0.190	0.120	264.9	37	28
Sub-total									5.776	4.389
United States (5)			US\$	US\$		US\$	US\$		US\$	US\$
Uranium Energy	AMEX	UEC	0.987	1.060	-7		0.650	116.4	115	115
Energy Fuels 4)	NYSEM		1.590	2.950	-46		1.500	66.0	105	105
Peninsula Energy	NYSE	PENMF	0.460	0.780	-41	0.880	0.420	178.2	82	82
Ur-Energy	NYSEM		0.495	0.650	-24		0.441	143.6	71	71
Western Uranium	OTC	WSTRF	1.270	2.510	-49		1.150	17.9	23	23
Sub-total									396	396
A ( li (0)				4.6		4.0			4.6	
Australia (8)	4.01/	DDM	A\$	A\$		A\$	A\$	4 740 0	A\$	US\$
Paladin Energy	ASX	PDN	0.150	0.240	-38		0.150	1.713.0	257	198
Energy Resources of Australia	ASX	ERA	0.340	0.360	-6	0.430	0.290	517.7	176	136
Berkeley Energia	ASX	BKY	0.790	0.490	61	0.890	0.400	200.7	159	122
Toro Energy	ASX	TOE	0.050	0.070	-29		0.040	2.006.0	100	77
Vimy Resources	ASX	VMY	0.250	0.360	-31		0.250	254.3	64	49
A-Cap Resources	ASX	ACB	0.070	0.020	250		0.010	858.5	60	46
Boss Resources	ASX	BOE	0.050	0.050	0	0.070	0.020	902.7	45	35
Aura Energy 2)	ASX	AEE	0.040	0.020	100	0.040	0.010	711.3	29	22
Sub-total									890	685
Total market capitalizatio	n: US\$	6.120 mi	llion							
1) integrated nuclear/uranium co										
2) sold all US uranium mining as							_			
announced to sell African ass			anu ivambia to	GUVIEX,IUCU	sea on <u>ivige</u>	<u> </u>	risiderat	1011 01 23% 01 G	∪vi⊏x sna	res,
transaction completed on <u>June</u> 3) announced to buy <u>African ura</u>		_	nhia Mali and	Namihia fro	om Denison	Mines i	n consid	leration of 25%	of GoviEv'	shares.
o, announced to buy <u>Annoan ura</u>	iiiuiii ass	CO III <u>Zali</u>	<u>ıvıa, ıvıalı</u> allu	ivaniibia IIC	iii <u>Dellisoli</u>	IVIIIIES I	ii consta	Granori Oi 20% (	JI GOVILX	unai cu,

(in US\$ million)	ALUATION OF TI										
(111 03\$ 111111011)											
Country	Company		30 Sept	Year-end	Year-end	Change	Year-end	Year-end	Year-end	Year-end	Change %
focus	Name		2016	2015	2014	in %	2013	2012	2011	2010	2015 / 2010
						2016/2014					
United States	Uranium Energy	1)	115	105	160	-28	179	218	253	421	-75
	Energy Fuels	2)	105	134	121	-13	111	123	167		
	Peninsula Energy	3)	82	138	113	-27	60	122	122	158	-12
	Ur-Energy	4)	71	85	110	-35	170	101	96	303	-72
Canada	Cameco		3.372	4.865	6.477	-48	8.107	7.744	7.306	15.866	-69
Canada/Niger	Areva Mining	5)	650	566	1.738	-63	3.517	2.276	1.711	5.969	-91
Australia	ERA (68% Rio Tinto)		136	136	549	-75	574	676	663	2.165	-94
Namibia	Paladin Energy		198	300	489	-60	395	902	1.118	3.649	-92
	Total		4.729	6.329	9.757	-52	13.113	12.162	11.436	28.689	-78
U3O8 spot price			23.75	34.25	35.50	-33	34.50	43.50	51.75	62.50	-45
U3O8 long-term	price		38.00	44.00	49.00	-22	50.00	56.50	64.00	65.00	-32
· ·	commencement in Novemb										
2) Acquired in May	2012 all of Denison Mines' l	JS uraniu	ım assets in ex	change for 425.	44 million share	s valued at Cdr	n\$ 81 million; p	remium of 37%	6;		
	ver of <u>Uranerz</u> completed of										
3) First ISR produ	ıction commenced in Dece	mber 20	15								
4) ISR production	commenced on August 2013	3									

Country			30 Sept.	Year-end	Year-end	Change	Year-end	Year-end	Year-end	Year-end	Change
			2016	2015	2014	in %	2013	2012	2011	2010	in%
						2016/2014					2015/2010
Canada	Denison Mines		247	261	491	-50	540	428	464	1.248	-79
	UEX		48	27	58	-17	84	131	145	456	-94
Australia	Toro Energy		77	102	124	-38	101	119	98	151	-32
	Vimy Resources		49	60	73	-33	15	23	29	151	-60
Spain	Berkeley Energia		122	65	41	198	37	74	66	- )	<b>(</b> - )
Namibia	Extract Resources	1)	-	-	-		-	-	-	2.333	<b>c</b> -
	Bannerman Resources		21	9	19	11	14	29	62	- >	( - )
	Deep Yellow		10	14	22	-55	26	86	89	379	-96
Niger	GoviEx Uranium		28	5	39 *	-28	-	-	-	-	-
Botswana	A-Cap Resources		46	7	14	229	11	-	-	-	
	Total		648	550	881	-26	818	890	953	2.385	<b>c</b> -77

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

Traditional countries		(market capitalization in millio	on as at 30	September 2016)	
Canada (10)	Cdn\$	United States (9)	US\$	Australia (5)	A\$
NexGen Energy	608	Uranium Energy	115	Toro Energy x	100
Denison Mines	325	Energy Fuels	105	Vimy Resources	64
Fission Uranium	305	Peninsula Energy	82	Boss Resources	45
UEX	64	Ur-Energy	71	Cauldron Energy	17
Purepoint Uranium Group	19	Western Uranium	23	Energy Metals	15
Kivalliq Energy	18	Laramide Resources 1)	18		
CanAlaska Uranium	14	Anfield Resources	13		
Fission 3.0	13	Azarga Uranium 2)	13		
Uravan Minerals	12	Uranium Resources 1)	11		
Skyharbour Resources	12				
notes US:				notes Australia:	
1) also advanced-stage uranium	m project ii	n <u>Australia</u> ;entered into a bindir	ng	x bought Mega Uranium's Lake Mai	tland Project in
Letter of Intent with Uranium	Resources	s pursuant to which <u>Laramide</u> w	ill	August 2013 in exchange for 28% e	quity interest in
acquire an advanced stage p	ortfolio of	ISR projects in <u>New Mexico</u> , <u>US</u>	<u>s</u> ;	Toro Energy (currently 20.81%), als	so holds 8.69%
expected closing Q3, 2016				equity interest in NexGen Energy	
2) also uranium assets in Kirg	vz Republi	<u>c</u> and <u>Turkey</u>			

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

uranii	iiii expic	ration and de	velop	ment companies	
Emerging countries		(market capitalization in I	million as at	30 September 2016)	
AFRICA		SOUTH AMERICA	Cdn\$	EUROPE (2)	A\$
Namibia (3)	A\$	Peru (1)		Berkeley Energy (Spain)	159
Bannerman Resources	21	Plateau Uranium x	13	Greenland Minerals and Energy x	44
Deep Yellow	10				
	Cdn\$	Argentina (1)		x world's largest undeveloped multi-eler	nent
Forsys Metals	10	Blue Sky Uranium	27	occurrence of REE-uranium-zinc	
		U3O8 Corp. xx			
Niger (1)	Cdn\$				
GoviEx Uranium x	37	x formerly Macusani Ye	<u>Ilowcake</u>		
		🗶 also uranium assets ir	<u>Guinea</u> ar	nd	
		<u>Columbia</u>			
Botswana (1)	A\$				
A-Cap Resources	60				
<b>x</b> to buy <u>African uranium asse</u>	ets in Zambia,				
Mali and Namibia from Der	nison Mines_in				
consideration of 25% of Gov	iEx' shares;				
transaction closed on June	13, 2016				

30 September 2016	Trade syr	nbol	Shar	e price	Change	12 mo	nths	Shares	Marke
			current	year-end 2015	in %	Н	L	total million	cap millior
Location of Listing									
	Euronext	Paris	Euro	Euro		Euro	Euro		Euro
AREVA 1)	FR0011027	143	6.050	5.420	12	7.950	3.050	383.2	2.318.4
Producers:									
Canada			Cdn\$	Cdn\$		Cdn\$	Cdn\$		Cdn\$
Cameco	TSX	CCO	11.210	17.070	-34	19.110	11.050	395.8	4.436.9
Development / Exploration:									
NexGen Energy	TSX.V	NXE	2.000	0.720	178	2.860	0.560	303.9	607.8
Denison Mines 2)	TSX	DML	0.610	0.700	-13	0.850	0.475	533.4	325.4
Fission Uranium 3)	TSX	FCU	0.630	0.820	-23	0.820	0.530	483.9	304.9
JEX	TSX	UEX	0.215	0.150	43	0.290	0.110	296.5	63.7
Purepoint Uranium Group	TSX.V	PTU	0.105	0.035	200	0.150	0.020	183.6	19.3
Kivalliq Energy	TSX.V	KIV	0.080	0.100	-20	0.100	0.065	220.8	17.
CanAlaska Uranium	TSX	CVV	0.500	0.110	355	1.550	0.085	27.1	13.0
Fission 3.0	TSX.V	FUU	0.070	0.120	-42	0.120	0.055	178.1	12.
Jravan Minerals	TSX.V	UVN	0.285	0.100	185	0.420	0.045	41.2	11.7
Skyharbour Resources 4)	TSX.V	SYH	0.260	0.120	117	0.420	0.080	44.1	11.
Jracan Resources	TSX.V	URC	0.080	0.020	300	0.090	0.005	104.4	8.4
Zadar Ventures 5)	TSX.V	ZAD	0.110	0.035	214	0.255	0.005	73.9	8.
ALX Uranium 6)	TSX.V	AL	0.090	0.060	50	0.140	0.055	65.2	5.9
Forum Uranium	TSX.V	FDC	0.080	0.070	14	0.195	0.040	53.3	4.3
Aldrin Resource	TSX.V	ALN	0.100	0.110	-9	0.150	0.080	31.1	3.
Vakena Resources	TSX.V	MKN	0.020	0.015	33	0.045	0.010	141.9	2.8
Northern Uranium	TSX.V	UNO	0.015	0.020	-25	0.030	0.010	162.4	2.4
Hornby Bay Mineral Exploration	TSX.V	HBE	0.040	0.050	-20	0.075	0.025	58.2	2.3
Jet Metal	TSX	JET	0.085	0.085	0	0.150	0.065	26.6	2.3
Roughrider Exploration	TSX.V	REL	0.085	0.070	21	0.150	0.045	26.1	2.3
Rojo Resources 7)	TSX.V	RJ	0.110	0.040	175	0.150	0.035	19.5	2.
Unity Energy	TSX.V	UTY	0.120	0.175	-31	0.475	0.095	13.1	1.0
Canex Energy	TSX.V	CSC	0.125	0.105	19	0.150	0.030	10.9	1.4
Declan Resources	CNSX	LAN	0.005	0.005	0	0.015	0.005	177.1	0.9
Azincourt Uranium 8)	TSX.V	AAZ	0.075	0.045	67	0.080	0.040	10.0	0.8
Atom Energy	TSX.V	AGY.H	0.220	0.410	-46	0.750	0.160	0.9	0.2

<sup>3)</sup> merger arrangement agreement with <u>Denison Mines</u> terminated on October 13, 2015
4) 50% partner in <u>Western Athabasca Syndicate</u>; 1 for 4 sharecnsolidation as at July 20, 2016
5) on <u>March 3, 2016</u>, Zadar announced option agreement with <u>Geoxplor</u> to acquire a 100% interest in <u>two lithium projects</u> in <u>Nevada</u>, <u>US</u>
6) formerly <u>Lakeland Resources</u>

<sup>7)</sup> formerly <u>Lucky Strike Resources</u>; stock split 1 for 8
8) sold uranium properties in <u>Peru</u> to <u>Macusani Yellowcake</u> (now <u>Plateau Uranium</u>) for a 26.3% equity interest

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

30 September 2016	Trade s	ymbol	Share	price	Change	12 m	onths	Shares	Market
			Current	Year-end	in %	Н	L	total	сар.
			2016	2015				million	million
Producers (2)	Euronext	Paris	Euro	Euro		Euro	Euro		Euro
AREVA 1)	FR00110	27143	6.050	5.420	12	7.950	3.050	383.2	580
			Cdn\$	Cdn\$		Cdn\$	Cdn\$		Cdn\$
Cameco	CCO	TSX	11.210	17.070	-34	19.110	11.050	395.8	4.437
									5.616
Exploration / Development (22)			Cdn\$	Cdn\$		Cdn\$	Cdn\$		Cdn\$
NexGen Energy	TSX.V	NXE	2.000	0.720	178	2.860	0.560	303.9	607.8
Denison Mines 2)	TSX	DML	0.610	0.700	-13	0.850	0.475	533.4	325.4
Fission Uranium 3)	TSX	FCU	0.630	0.820	-23	0.820	0.530	483.9	304.9
UEX	TSX	UEX	0.215	0.150	43	0.290	0.110	296.5	63.7
Purepoint Uranium Group	TSX.V	PTU	0.105	0.035	200	0.150	0.020	183.6	19.3
CanAlaska Uranium	TSX	CVV	0.500	0.110	355	1.550	0.085	27.1	13.6
Fission 3.0	TSX.V	FUU	0.070	0.120	-42	0.120	0.055	178.1	12.5
Uravan Minerals	TSX.V	UVN	0.285	0.100	185	0.420	0.045	41.2	11.7
Skyharbour Resources 4)	TSX.V	SYH	0.260	0.120	117	0.420	0.080	44.1	11.5
ALX Uranium 5)	TSX.V	AL	0.090	0.060	50	0.140	0.055	65.2	5.9
Forum Uranium	TSX.V	FDC	0.080	0.070	14	0.195	0.040	53.3	4.3
Aldrin Resource	TSX.V	ALN	0.100	0.110	-9	0.150	0.080	31.1	3.1
Makena Resources	TSX.V	MKN	0.020	0.015	33	0.045	0.010	141.9	2.8
Northern Uranium	TSX.V	UNO	0.015	0.020	-25	0.030	0.010	162.4	2.4
Roughrider Exploration	TSX.V	REL	0.085	0.070	21	0.150	0.045	26.1	2.2
Rojo Resources 6)	TSX.V	RJ	0.110	0.040	175	0.150	0.035	19.5	2.1
Canex Energy	TSX.V	CSC	0.125	0.105	19	0.150	0.030	10.9	1.4
Declan Resources	CNSX	LAN	0.005	0.005	0	0.015	0.005	177.1	0.9
Azincourt Uranium 7)	TSX.V	AAZ	0.075	0.045	67	0.080	0.040	10.0	0.8

- 1) fully integrated uranium company (share of <u>Areva Resources</u> estimated at 25% equal to € 311million or US\$ 346 million
- 2) sold all U.S. uranium mining assets to <a href="Energy Fuels">Energy Fuels</a>; announced combination with <a href="Fission Uranium">Fission Uranium</a> on July 5, 2015; terminated on October 13, 2015; announced to sell African assets in Zambia, Mali and Namibia to GoviEx, focused in Niger for consideration of 25% of GoviEx' shares; transaction cpmpleted on June 13, 2016
- 3) acquired <u>Alpha Minerals</u>' 50% interest in PLS joint venture for a total 100% holding; completed in December 2013; acquired 12% interest in <u>Fission 3.0</u>; announced combination with <u>Denison Mines</u> on July 5, 2015; terminated on October 13, 2015
- 4) 50% partner in Western Athabasca Syndicate; 1 for 4 share consolidation as at July 20, 2016
- 5) formerly Lakeland Resources
- 6) formerly Lucky Strike Resources; stock split 1 for 8
- 7) sold uranium properties in  $\underline{\textit{Peru}}$  to  $\underline{\textit{Macusani Yellowcake}}$  (now  $\underline{\textit{Plateau Uranium}}$ ) for a 26.3% equity interest in Macusani;
  - 1 for 4 consolidation

30 September 2016	Trade symbol		Share price		Change	12 months		Shares	Market
			current	year-end	in %	Н	L	issued	сар.
U.S.				2015		Cdn\$	Cdn\$	million	million
Producers:			US\$	US\$		US\$	US\$		US\$
Uranium Energy	AMEX	UEC	0.987	1.060	-7	1.470	0.650	116.4	114.
Energy Fuels 1)	NYSE MKT	UUUU	1.590	2.950	-46	3.480	1.500	66.0	104.
Peninsula Energy 2)	NYSE	PENMF	0.460	0.780	-41	0.880	0.420	178.2	82.
Ur-Energy	NY SE MKT	URG	0.495	0.650	-24	0.730	0.441	143.6	71.
Development / Exploration:			US\$	US\$		US\$	US\$		US\$
Western Uranium 3)	OTC	WSTRF	1.270	2.510	-49	2.670	1.150	17.9	22.
Uranium Resources 4)	NASDAQ	URRE	1.280	6.240	-79 🔽	10.25	1.250	8.6	11.0
			Cdn\$	Cdn\$		Cdn\$	Cdn\$		Cdn
Laramide Resources 4) + 5)	TSX	LAM	0.255	0.285	-11	0.380	0.145	93.8	23.
Anfield Resources	TSX.V	ARY	0.220	0.095	132	0.310	0.050	80.6	17.
Azarga Uranium 6)	TSX	AZZ	0.235	0.290	-19	0.400	0.220	74.0	17.
EnCore Energy	TSX.V	EU	0.045	0.020	125	0.085	0.020	71.5	3.3
Virginia Energy 7)	TSX.V	VUI	0.035	0.050	-30	0.100	0.035	57.2	2.0
Bayswater Uranium	TSX.V	BYU	0.030	0.015	100	0.070	0.010	30.7	0.9
1) acquired <u>Denison Mines</u> ' Amer	ican uranium mi	ning assets	in consideratio	n of 425.44 mili	ion Energy Fu	els shares	s valued at C	Cdn\$ 81 million;	
takeover of Uranerz Energy con		19, 2015 (p	remium of 37%	<u>)</u>					
2) also uranium assets in South Af	frica								

<sup>5)</sup> also advanced-stage project in <u>Australia</u>
6) also uranium assets in <u>Kirgyz Republic</u> and <u>Turkey</u>
7) filed state lawsuit against Vrginia's ban on uranium mining

30 September 2016	Trade symbol		Share price		Change	12 moi	nths	Shares	Market
			current	year-end 2015	in %	н	L	issued million	cap. million
Australia									
Producer:			A\$	A\$		A\$	A\$		A\$
Energy Resources of Australia	ASX	ERA	0.340	0.360	-6	0.430	0.290	517.7	176.0
Development / Exploration:									
Toro Energy 1)	ASX	TOE	0.050	0.070	-29	0.080	0.040	2.006.0	100.3
Vimy Resources	ASX	VMY	0.250	0.360	-31	0.400	0.250	254.3	63.6
Boss Resources	ASX	BOE	0.050	0.050	0	0.070	0.020	902.7	45.1
Thundelarra Exploration 2)	ASX	THX	0.050	0.060	-17	0.090	0.040	423.5	21.2
Cauldron Energy 3)	ASX	CXU	0.060	0.120	-50	0.180	0.060	288.0	17.3
Energy Metals Ltd.	ASX	EME	0.070	0.070	0	0.100	0.070	209.7	14.7
Alligator Energy	ASX	AGE	0.010	0.020	-32	0.040	0.010	359.9	7.0
Pepinnini Minerals	ASX	PNN	0.020	0.010	100	0.050	0.010	309.7	6.2
Uranium Equities	ASX	UEQ	0.010	0.010	0	0.010	0.000	618.5	6.2
Manhattan Corp.	ASX	MHC	0.040	0.030	33	0.040	0.020	136.0	5.4
UraniumSA	ASX	USA	0.010	0.020	-50	0.020	0.010	265.5	2.7
			Cdn\$	Cdn\$		Cdn\$	Cdn\$		Cdn\$
Mega Uranium 4)	TSX	MGA	0.145	0.070	107	0.195	0.050	281.9	40.9
Laramide Resources 5)	TSX	LAM	0.255	0.285	-11	0.380	0.145	93.8	23.9

<sup>1)</sup> bought Mega Uranium's Lake Maitland Project in August 2013 in exchange for 28% equity interest (currently 20.81%)
2) major focus on copper and gold
3) also uranium assets in Argentina
4) also uranium assets in Console and Lake Maitland Console and

<sup>4)</sup> also uranium assets in <u>Augustina</u>
4) also uranium assets in Canada, sold Lake Maitland Project to <u>Toro Energy</u> in August 2013 in exchange for a 28% equity interest in <u>Toro Energy</u> (currently 20.81%), also 8.69% equity interest in <u>NexGen Energy</u> focused on <u>Athabasca Basin</u>, <u>Canada</u>

<sup>5)</sup> also advanced-stage uranium projects in the US; announced to buy substantial portfolio of IR projects in New Mexico, US from Uranium Resources; valued at US\$ 12.5 million, to be paid over a period of 3 years; expected closing 3Q 2016

30 September 2016	Trade s	ymbol	Shar	e price	Change	12 mo	onths Shares		Market
			current	year-end	in %	Н	L	issued	сар.
AFRICA				2015				million	million
Namibia									
Producers:			A\$	A\$		A\$	A\$		A\$
Paladin Energy	ASX	PDN	0.150	0.240	-38	0.290	0.150	1.713.0	257.0
Development / Exploration:			A\$	A\$		A\$	A\$		A\$
Bannerman Resources	ASX	BMN	0.030	0.030	0	0.050	0.030	712.0	21.4
Deep Yellow	ASX	DYL	0.0045	0.010	-55	0.010	0.010	2.144.0	9.6
Marenica Energy	ASX	MEY	0.140 <b>Cdn\$</b>	0.140 <b>Cdn\$</b>	0	0.250 <b>Cdn\$</b>	0.100 <b>Cdn\$</b>	24.3	3.4 <b>Cdn\$</b>
Forsys Metals	TSX	FSY	0.065	0.080	-19	0.200	0.050	145.9	9.5
Xemplar Energy	TSX.V	XE.H	0.015	0.015	0	0.015	0.015	41.9	0.6
Niger			Cdn\$	Cdn\$		Cdn\$	Cdn\$		Cdn\$
GoviEx Uranium 1)	TSX.V	GXU	0.140	0.045	211	0.190	0.120	264.9	37.1
Botswana			A\$	A\$		A\$	A\$		A\$
A-Cap Resources	ASX	ACB	0.070	0.020	250	0.110	0.010	858.5	60.1
Tanzania			pence	pence		pence	pence		£
Uranium Resources plc	LSE	URA	0.280	0.330	-15	0.53	0.180	757.6	2.1
Zambia			Cdn\$	Cdn\$		Cdn\$	Cdn\$		Cdn\$
Karoo Exploration	TSX.V	KE	0.015	0.015	0	0.015	0.015	20.7	0.3
Mauretania			A\$	A\$		A\$	A\$		A\$ mIn
Aura Energy 2)	ASX	AEE	0.040	0.020	100	0.040	0.010	711.3	28.5
1) announced to buy African uraniu	um assets in	Zambia. M	ali and Namihia	from Denison	Mines in cons	sideration	of 25% of G	oviEx' shares	
transaction closed on or about 5									
2) also uranium assets in Sweden									

30 September 2016	Trade symbol		Share price		Change	12 months		Shares	
			current	year-end 2015	in %	Н	L	issued million	Market cap.
CIS+MONGOLIA									million
Kazakhstan Producer:									
LATIN + CENTRAL AMERICA  Peru Plateau Uranium 2)	TSX.V	PLU	<b>Cdn\$</b> 0.250	<b>Cdn\$</b> 0.375	-33	<b>Cdn\$</b> 0.450	<b>Cdn\$</b> 0.235	52.1	<b>Cdn\$</b> 13.0
ratead Gramam 2)	10/1.1	1 20	Cdn\$	Cdn\$		Cdn\$	Cdn\$	02.1	Cdn\$
Argontina				Culio					
<b>Argentina</b> Blue Sky Uranium	TSX.V	BSK	0.590	0.045	1211	0.740	0.035	45.7	27.0

30 September 2016	Trade symbol		Share price		Change	12 months		Shares	Market
		•	current year-end	year-end	in %	H L		issued million	cap. million
Other countries: EUROPE									
Greenland			A\$	A\$		A\$	A\$		A\$ mIn
Greenland Minerals and Energy 1)	ASX	GGG	0.050	0.030	67	0.060	0.020	874.1	43.7
Spain			A\$	A\$		A\$	A\$		A\$ mIn
Berkeley Energia	ASX	BKY	0.790	0.490	61	0.890	0.400	200.7	158.6