Uraniumletterinternational

the international independent information and advice bulletin for uranium resource investments

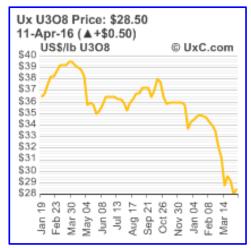
April 2016

Uranium Market Outlook



Marino G. Pieterse, publisher and editor

► U3O8 spot price stabilizing around May 2014 low of \$ 28.28/lb



With the current U3O8 spot price still far away from a recovery to the average trading level around \$ 36/lb in the second half of 2015, not honouring a supply-side deficit predicted from 2017, analysts are hardly recognizing the impact that the fall of oil and gas prices may have on the competitiveness of nuclear power.

While remaining positive myself on the potentially strong growth of uranium demand, based on the high number of <u>reactors under construction</u> (66) and <u>planned reactors</u> (158), as a result of which from a balanced demand and supply in 2010 (2 million deficit), in 2014 a surplus of 16 million pounds U3O8 was left.

Since the Fukushima disaster in March 2011, more than five years ago, due to tightened security and environmental regulations, the restart of the first two reactors in <u>Japan</u> has taken two years longer than originally anticipated. The Japanese government has approved plans to source 20-22% of its electrical needs from nuclear power to the benefit of its economy, but with Japan's National Regulation Authority having received 24 reactor restart applications; only five have been approved for restart and 2 reactors operating to date.

Due to the longer than anticipated balance in supply and demand and a growing demand surplus from 2017, the uranium equity markets collapsed since 2011, as demonstrated in **Uraniumletter International**'s monthly updated overviews on the valuation of the world's listed **uranium producers** and **new generation of uranium producers** (see page 3).

While the valuations at year-end 2010 amounted to US\$ 28.5 billion and US\$ 2.4 billion, respectively, these valuations as per the end of Q1, 2016 are US\$ 6.4 billion and US\$ 0.6 billion, respectively.

In this respect, it is striking to see that as a result of the fall of the U3O8 price from its pre-Fukushima high of \$67.75/lb (spot price) and \$73.00/lb (long-term price) the economic viability of most advanced-stage development projects is at stake, with from my present consideration only a handful of development companies in a position to emerge to commercial production by 2020.

In addition, despite challenging market conditions, four ISR advanced development companies focused on the **United States** emerged to production since 2013. These companies include **Energy Fuels** since the acquisition of Uranerz, completed in June 2015, **Uranium Energy**, **Ur-Energy**, and **Peninsula Energy** since December 2015.

Having entered into off-take agreements at a premium to the U3O8 price, these companies, with the exemption of <u>Uranium Energy</u> which had a stop on production in 2014, are in a position to offset at least part of their operational costs, but revenues still under strong pressure.

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	Spot	Long-term		Spot	Long-term
2016					
April 11	28.50	43.50	Year-end 2015	34.25	44.00
March 28	29.15	43.50	Year-end 2014	35.50	49.00
February 29	33.50	44.00	May 14, 2014 (low)	28.25	49.00
January 31	34.75	44.00	Year-end 2013	34.50	50.00
2015			Year-end 2012	43.50	56.50
December 31	34.25	44.00	Year-end 2011	61.75	64.00
November 30	36.00	44.00			
October 26	36.50	44.00	Pre-Fukushima accident		
September 28	36.50	45.00	March 11, 2011	67.75	73.00
August 31	36.00	45.00			
July 31	36.50	45.00			
June 30	36.50	45.00			
May 29	35.00	49.00			
April 30	38.25	49.00			
March 31	39.50	50.00			
February 28	38.75	49.00			
January 30	36.75	49.00			

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Country	Nuclear	in % total	Ope rable	Under	Planned	Proposed	Uranium
	generating 2014	consumption	reactors	construction			required 2015
	(billion kWh)						(in tonnes U)
January 1, 2016							
China	123.8	2.4	30	24	40	136	8.161
India	33.2	3.5	21	6	24	35	1.579
Russia	169.1	18.6	35	8	25	23	4.206
USA	798.6	19.5	99	5	5	17	18.692
European Union	807.4	NA	125	2	9	11	19.223
of which 71% applies to	:						
France	418.0	76.9	58	1	-	1	9.230
UK	57.9	17.2	15	-	4	9	1.738
Germany	91.8	15.8	8	-	-	-	1.889
Subtotal	1.932.1		310	45	103	222	51.861
World total	2.411.0	11.5e	439	66	158	330	66.883
Top-5 in % world total	: 80		70	68	68	67	78

(in US\$ million)											
Country	Company		March 31	Year-end	Year-end	Change	Year-end	Year-end	Year-end	Year-end	Change %
focus	Name		2016	2015	2014	%	2013	2012	2011	2010	2015 / 2010
United States	Peninsula Energy	1)	131	138	113	22	60	122	122	158	-12
	Energy Fuels	2)	125	134	121	11	111	123	167	158	-15
	Uranium Energy	3)	88	105	160	-34	179	218	253	421	-75
	Ur-Energy	4)	73	85	110	-23	170	101	96	303	-72
Canada	Cameco		5.080	4.865	6.477	-25	8.107	7.744	7.306	15.866	-69
Canada/Niger	Areva Mining	5)	423	566	1.738	-67	3.517	2.276	1.711	5.969	-91
Australia	ERA (68% Rio Tinto)		138	136	549	-75	574	676	663	2.165	-94
Namibia	Paladin Energy		312	300	489	-39	395	902	1.118	3.649	-92
	Total		6.370	6.329	10.015	-37	12.762	12.128	11.436	28.689	-78
U3O8 spot price			29.15	34. 25	35.50	-4	34.50	43.50	51.75	62.50	-45
U3O8 long-term	price		44.00	44.00	49.00	-10	50.00	56.50	64.00	65.00	-32
1) First commerci	al production commenced i	n Dece	mber 2015								
2) Acquired in May	2012 all of Denison Mines' U	Surani	ium assets in ex	change for 425.	44 million share	s valued at C	Cdn\$ 81 million	; premium of 3	7%;		
including takeov	er of <u>Uranerz</u> completed on	June 1	9, 2015								
3) ISR production (commencement in Novembe	r 2010;	no rduction in 2	014 and 2015							
4) ISR production (commenced on August 2013										

			March 31	Year-end	Year-end	Change	Year-end	Year-end	Year-end	Year-end	Change
Country			2016	2015	2014	in %	2013	2012	2011	2010	in%
						2015/2014					2015/2010
Canada	Denison Mines		291	261	491	-47	540	428	464	1.248	-79
	UEX		44	27	58	-53	84	131	145	456	-94
Australia	Toro Energy		91	102	124	-18	101	119	98	151	-32
	Vimy Resources		54	60	73	-18	15	23	29	151	-60
Spain	Berkeley Energy		65	65	41	59	37	74	66	-	х -
Namibia	Bannerman Resources		16	9	19	-53	14	29	62	-	x -
	Extract Resources	1)	-	-	-		-	-	-	2.333	x -
	Deep Yellow		15	14	22	-36	26	86	89	379	-96
Niger	GoviEx Uranium		10	5	39	-87	-	-	-	-	-
	Total		586	543	867	-37	817	890	953	2.385	x -77
x not included	l in year total										

▶ Pre Economic Assessments can be misleading to investors

To get insight in the <u>Net Present Value</u> of advanced exploration companies, investors can be easily misled by <u>Preliminary Economic Investment Studies</u> based on estimated long-term U3O8 prices above US\$ 60/lb by 2020.

In this respect, **Denison Mines** focused on the <u>Athabasca Basin</u> Saskatchewan, Canada, is the only advanced-stage uranium company that calculates two distinct pricing scenarios as a result of the long-term lead to production of its <u>Gryphon</u> and <u>Phoenix deposits</u> and the current uranium market 1) a base case scenario using the long-term contract price as quoted by UxConsulting Company (UxC) as of March 28, 2016, and 2) a Production case scenario using the mid-case projected long-term prices for the year 2026 per UxC's Uranium Outlook for Q1, 2016.

Denison's <u>Gryphon Deposit</u> is expected to produce <u>40.7 million pounds U3O8</u> over a 7-year mine life, at a cash operating cost if US\$ 14.28/lb U3O8.

The <u>Phoenix Deposit</u> is expected to produce <u>64.0 million pounds U3O8</u> over a 9-year mine life at a cash operating cost of US\$ 22.15/lb U3O8.

Summary of PEA assumptions and	l financial hi	ghlights	
	Base Case		Production Case
Uranium price per lb U3O8	US\$ 43.60		US\$ 62.60
Exchange rate (Cdn\$/US\$)	1.35		1.35
Net Saskatchewan royalties	7.25%		7.25%
Discount rate	8.00%		8.00%
Initial capital costs	Cdn\$ 560 mil	lion	
Sustaining capital costs	Cdn\$ 543 mil	lion	
Average operating costs per lb U3O8	Cdn\$ 25.67 /	US\$ 19.01	
Pre-tax IRR *	20.4%		34.1%
Pre Tax NPV * @ 100%	Cdn\$ 513 mil	lion	Cdn\$ 1.42 million
Payback period **	~ 3 years		~ 18 months
* IRR and NPV are calculated to the s	start of pre-pr	oduction a	ctivities in 2021
** Payback period is stated as numbe	r of years to p	ay-back fro	om the start of
commercial production			

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Com pany	Focus		nding mbol		Year-end	Change in %	Market Capitalization		Change in %
				2016	2015		31-Mar-16	year-end 2015	2016/2015
Producers (4)									
				Cdn\$	Cdn\$		US\$ mln.	US\$ mln.	
Cameco	Canada	ABX	TSX	16.670	17.070	-2	5080.0	4864.5	4
				US\$	US\$				
Ur-Energy	United States	URG	NYSE	0.510	0.650	-22	73.0	84.6	-14
				A\$	A\$				
Paladin Energy	Namibia	PDN	ASX	0.240	0.240	0	312.0	300.1	4
Energy Resources of Australia	Australia	ERA	ASX	0.350	0.360	-3	138.0	136.1	1
Advanced development	 								
Advanced developm ent compa	anies (4)			A\$	A\$				
Toro Energy	Australia	TOE	ASX	0.070	0.070	0	91.0	102.5	-11
Berkeley Resources	Spain	BKY	ASX	0.070	0.490	-4	65.0	65.0	-11
Vimv Resources	Australia	VMY	ASX	0.470	0.450	-14	54.0	60.0	-10
VIIIIy Resources	Australia	VIVII	ASA	Cdn\$	Cdn\$	-14	34.0	00.0	-10
UEX	Canada	UEX	TSX	0.215	0.150	43	44.0	26.6	65
OLA	Callaua	ULX	13/	0.213	0.130	43	44.0	20.0	0.5
Exploration/development com	nanies (7)								
Exploration/development com	pariies (r)			Cdn\$	Cdn\$	-			
Laramide Resources	Australia/US	LAM	TSX	0.240	0.285	-16	17.0	17.4	-2
GoviEx	Niger	GXU	CNSX	0.075	0.045	67	9.7	4.8	102
Forsys Metals	Namibia	FSY	TSX	0.085	0.080	6	8.8	7.8	13
. oreye metale				US\$	US\$		0.0		
Uranium Resources	US / Turkey	URRE	NASDAQ	2.560	6.240	-59	13.2	28.2	-53
				A\$	A\$				
Cauldron Energy	Australia/US	CXU	ASX	0.110	0.120	-8	24.1	23.7	2
Deep Yellow	Namibia	DYL	ASX	0.010	0.010	0	14.7	14.0	5
Bannerman Resources	Namibia	BMN	ASX	0.030	0.030	0	16.0	8.7	84
Others - special situations(2)									
				Cdn\$	Cdn\$				
Khan Resources		KRI	CNSX	0.810	0.440	84	54.3	26.7	103
Mega Uranium		MGA	TSX	0.130	0.070	86	28.0	14.2	97
Shortlist average performance	≥ 2016:		22.9%						
		2016	2015						
		31/3							
U3O8 spot price		29.15		-					
oood shot hince		43.50							

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