EQUITY RESEARCH

Capital Markets

RBC Dominion Securities Inc.
Andrew D. Wong (Analyst)
(416) 842-7830,
andrew.d.wong@rbccm.com
Stephen Morton (Associate)
(416) 842-8520,
stephen.morton@rbccm.com

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RBC Elements™: Uranium Insights

Rising spot price and strong investor sentiment likely keep valuations elevated

Our view: We believe the combination of a rising spot price and a strong undercurrent of positive sentiment for the uranium sector may support elevated valuation multiples for uranium equities for the foreseeable future. Renewed financial interest to invest in physical uranium, aided by the Sprott uranium trust, has recently pushed spot prices higher and is an x factor in our price forecast. In this report, in collaboration with the RBC Elements team, we update our previous work on social media activity in the uranium sector which highlights that while activity slowed recently, it remains elevated relative to historical levels and is indicative of strong investor interest in uranium.

We are raising our valuation multiples on Cameco and NexGen. We revise our rating on Cameco to Sector Perform, from Underperform, and raise our PT to $26, from $17. As an incumbent producer with idled capacity, we think Cameco's valuation may remain elevated due to strong investor sentiment. We maintain our Sector Perform rating on NexGen and raise our PT to $7, from $6. As a developer of the best undeveloped uranium asset, we see NexGen as having significant leverage to the long-term uranium market recovery, although shares are nearly fairly valued.

Financial interest in physical uranium boosted by Sprott: The recent launch of the Sprott Physical Uranium Trust (SPUT) has magnified financial interest to invest in physical uranium. Since launching an ATM offering on August 17, SPUT has consistently raised funds to purchase uranium in a short period of time (~C$130M and 2.7Mlbs to September 1), quickly pushing up spot prices to ~$37/lb, from $31-32/lb in mid-August. A potential NYSE listing in 2022 may provide access to an even larger pool of capital given strong investor interest in uranium. While the depth of capital available and willingness to invest in SPUT is unknown, every pound sequestered in the trust accelerates a uranium market recovery and supports a rising spot price.

Strong investor sentiment, SPUT, and rising spot price combine to keep valuations elevated: We have updated our work on uranium social media activity, first published on June 22, 2021 — RBC Elements: Uranium Outlook – Improving trends, but equity values amplified by social media. Although social media activity slowed recently, it remains elevated relative to historical levels and is indicative of strong investor interest in uranium (see Exhibits 2-5). We think the combination of strong investor sentiment and a vehicle to express that interest through SPUT, could result in a positive feedback loop (i.e. strong sentiment drives capital into SPUT which pushes up spot prices which then drives more positive sentiment) that keeps uranium equity valuations elevated for the foreseeable future. However, we note downside risk if/when capital flows into SPUT slow, resulting in less upward pressure on uranium prices.

Rising spot prices are positive, but term contracts key: Rising spot prices are a positive factor for uranium equities and will be beneficial for current producers to varying degrees based on contract coverage. However, producers and developers would benefit most from increased term market activity and prices, which remains elusive as utilities continue to have solid contract and inventory coverage. There is a possibility that rising spot prices entice utilities to re-enter the market sooner than expected, but buyers remain on the sidelines for now.

Uranium market S&D balanced with a L-T deficit: Fundamentally, we continue to view the uranium market as balanced through mid-2025 before entering a more pronounced deficit later this decade. Additionally, utilities remain well-covered by contracts and inventory for the next several years. However, financial interest to invest in uranium is an x factor in our forecasts and could result in higher spot prices than anticipated.

RBC Elements™
Driving insights through data

See RBC Elements page at the end of this note.

Uranium market in balance to slight deficit through mid-2020's

We continue to view the uranium market as in balance or in a slight deficit through the mid-2020s, as idled supply comes online to meet steadily growing demand. In the late-2020s, we see a larger deficit forming as demand continues to rise with new reactors, primarily in China, and supply decreases due to potential mine closures and less secondary supply.

We see the potential for market backwardation in 2022, with spot prices reaching $40/lb while term prices only rise to $35/lb, and then settling at $40/lb through the mid-2020s to incentivize idled production re-starts. Longer-term we see prices rising to $50/lb to reflect incentive prices required for new mine production. However, financial interest to invest in uranium is an x factor in our forecasts and could result in higher spot prices than anticipated.

Exhibit 1 - RBC Uranium market outlook

S&D (Mlbs U3O8)	2015	2016	2017	2018	2019	2020	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	CAGR 20-30E	CAGR 20-35E
United States	100	100	100	100	99	97	95	94	95	96	95	94	94	94	94	94	0%	0%
West & Central Europe	120	120	120	118	118	115	113	110	102	104	101	97	100	101	103	103	-1%	-1%
Russia	25	26	27	29	29	29	30	29	30	31	30	29	28	28	27	29	0%	0%
Other East Europe	16	16	16	16	16	16	17	19	19	19	19	19	19	19	19	20	2%	2%
China	23	28	33	34	43	48	49	53	55	55	59	67	79	87	94	101	7%	7%
Japan	1	3	7	9	9	6	8	9	12	14	14	16	18	18	19	20	12%	8%
India	5	5	6	6	6	6	7	7	7	9	9	10	11	11	12	12	6%	5%
Other Asia	26	28	28	28	29	28	29	33	36	34	35	35	35	35	35	36	2%	1%
Other	22	21	21	21	21	22	21	21	20	22	23	23	28	28	29	31	3%	3%
Generating Capacity (GWe)	**338**	**346**	**358**	**362**	**371**	**367**	**370**	**374**	**376**	**383**	**386**	**390**	**410**	**421**	**431**	**445**	**2%**	**2%**
Demand (Mlbs U3O8)	**168**	**164**	**177**	**181**	**180**	**171**	**176**	**172**	**175**	**185**	**197**	**190**	**195**	**198**	**203**	**208**	**2%**	**1%**
Africa	20	19	20	23	22	22	20	21	22	22	23	26	26	26	26	21	0%	-2%
Australia	15	16	14	17	16	16	13	13	13	13	13	14	15	16	16	17	0%	-2%
Canada	34	36	34	18	18	10	7	18	27	36	36	36	36	36	36	18	5%	4%
Kazakhstan	61	64	61	56	59	51	59	59	59	64	64	62	62	62	62	62	2%	1%
Russia	8	8	8	8	8	7	7	7	8	9	9	9	9	9	9	9	2%	1%
Ukraine	3	3	3	2	2	2	2	3	3	3	3	3	3	3	3	3	2%	2%
Uzbekistan	8	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	0%	0%
United States	3	3	3	2	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA
Other	7	7	6	6	6	6	7	7	7	7	8	8	8	8	8	8	2%	1%
Mine Supply (Mlbs U3O8)	**159**	**164**	**157**	**139**	**140**	**123**	**124**	**137**	**147**	**162**	**164**	**167**	**167**	**168**	**169**	**146**	**2%**	**1%**
Russia	14	16	18	16	16	15	15	15	15	15	14	13	12	11	11	8	-6%	-5%
United States	8	6	5	4	3	3	1	1	2	1	2	1	2	2	3	1	-11%	-8%
Other	18	17	17	19	17	16	16	15	12	11	9	9	9	9	8	8	-6%	-5%
Secondary Supply (Mlbs U3O8)	**40**	**39**	**39**	**38**	**36**	**34**	**32**	**31**	**29**	**27**	**25**	**23**	**23**	**21**	**21**	**17**	**-6%**	**-5%**
Mine Supply	159	164	157	139	140	123	124	137	147	162	164	167	167	168	169	146	2%	1%
Secondary Supply	40	39	39	38	36	34	32	31	29	27	25	23	23	21	21	17	-6%	-5%
Total Supply (Mlbs U3O8)	**199**	**203**	**196**	**178**	**177**	**158**	**156**	**168**	**177**	**189**	**190**	**190**	**190**	**189**	**190**	**164**	**0%**	**0%**
Surplus/Deficit	**32**	**39**	**19**	**-3**	**-3**	**-14**	**-20**	**-5**	**2**	**4**	**-7**	**0**	**-5**	**-10**	**-13**	**-44**		
Supply as % of demand	119%	124%	111%	98%	98%	92%	89%	97%	101%	102%	96%	100%	97%	95%	93%	79%		
Spot Price (US$/lb)	**$37**	**$26**	**$22**	**$25**	**$26**	**$29**	**$33**	**$40**	**$40**	**$40**	**$40**	**$40**	**$40**	**$40**	**$40**	**$50**	**5%**	**3%**
Term Price (US$/lb)	**$47**	**$40**	**$31**	**$31**	**$32**	**$32**	**$34**	**$35**	**$40**	**$40**	**$40**	**$40**	**$50**	**$50**	**$50**	**$50**	**4%**	**3%**

Source: UxC, WNA, Company reports, RBC Capital Markets estimates

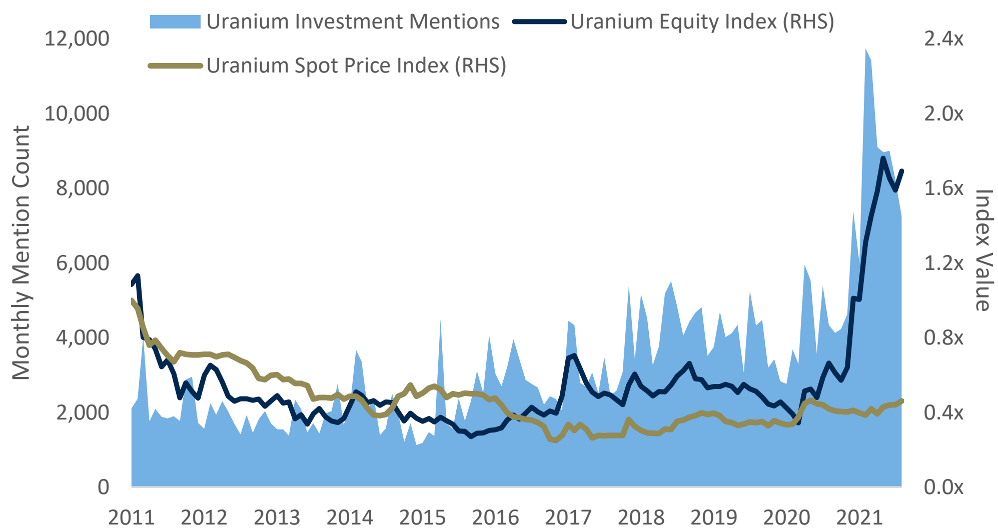
RBC Elements™ – The social media impact on uranium equities

We have updated our work on uranium social media activity, which was first published on June 22, 2021 - [RBC Elements™: Uranium Outlook – Improving trends, but equity values amplified by social media]. Although social media activity has slowed recently, it remains elevated relative to historical levels and may continue to support high uranium equity valuations.

We believe increased social media attention on uranium may be playing a part in this year's rise in uranium equity valuations and should be taken into consideration by investors evaluating the sector. With the help of our RBC Elements data analytics team, we have tracked social media activity for uranium over the past 10 years. Since December 2020, we have noted a sharp increase in social media activity related to uranium equities, which has coincided with this year's run-up in valuations.

We think there is the potential that ongoing social media activity may keep valuations elevated compared to actual fundamentals, but we caution investors that social media trends can change quickly, while contributors are unregulated and may present biased views that serve their own interests.

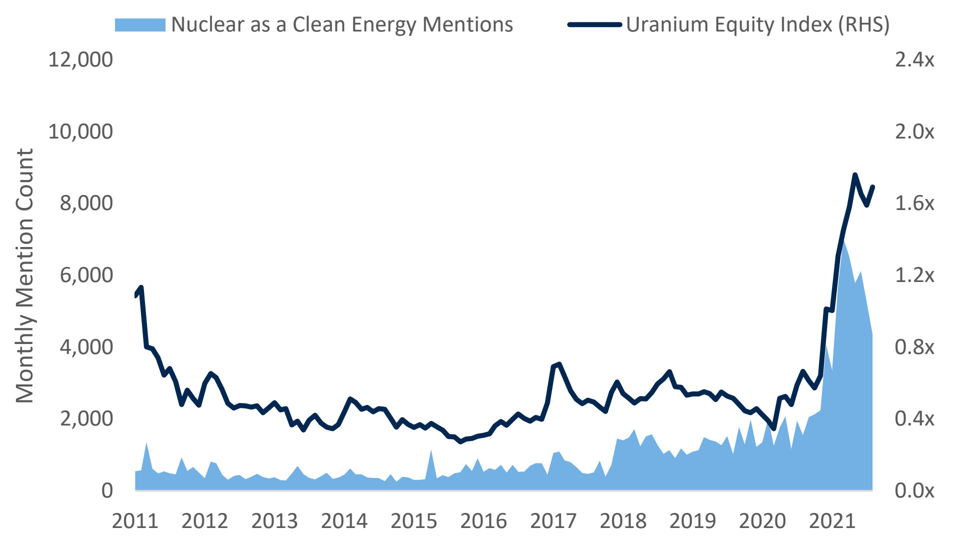
Exhibit 2 - Uranium social media activity has tempered, but remains elevated



Source: RBC Elements, RBC Capital Markets, Brandwatch

Although nuclear as a clean energy has also seen a decline in social media activity, the levels remain elevated relative to historical levels and may continue to support investor interest in uranium equities. Social media mentions for nuclear as a clean energy investment have also increased since December 2020, coinciding with the election of President Biden in the US and a broader global focus on de-carbonization in the past 6-months. The increased interest in nuclear as a clean energy may have raised interest in uranium as a derivative investment in nuclear energy.

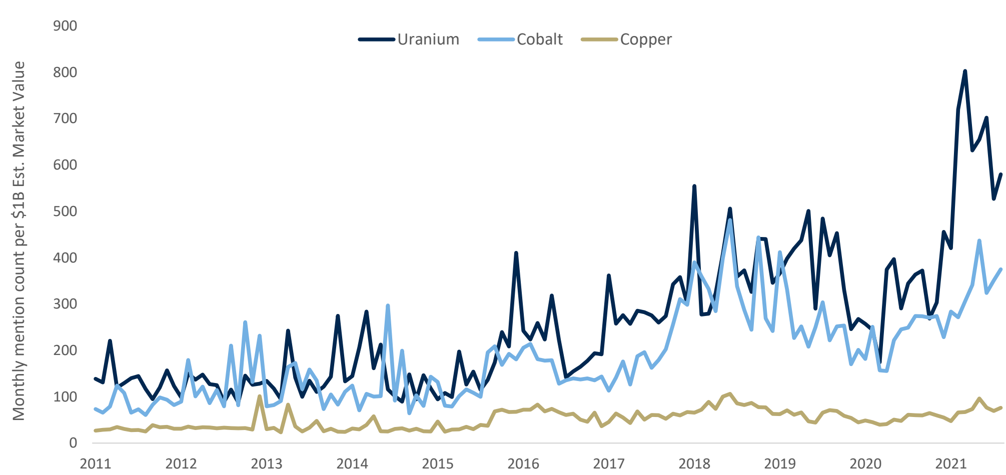
Exhibit 3 - Nuclear as a clean energy also maintains elevated activity on social media



Source: RBC Elements, RBC Capital Markets, Brandwatch

Relative to other commodities, we think it is especially important to consider the social media impact on uranium equities as we have seen more social media activity for uranium compared to other commodities that are also considered critical to the clean energy transition, such as cobalt and copper. On a relative basis, since the start of 2021, uranium social media activity is approximately 2-3x higher than cobalt and 10x higher than copper.

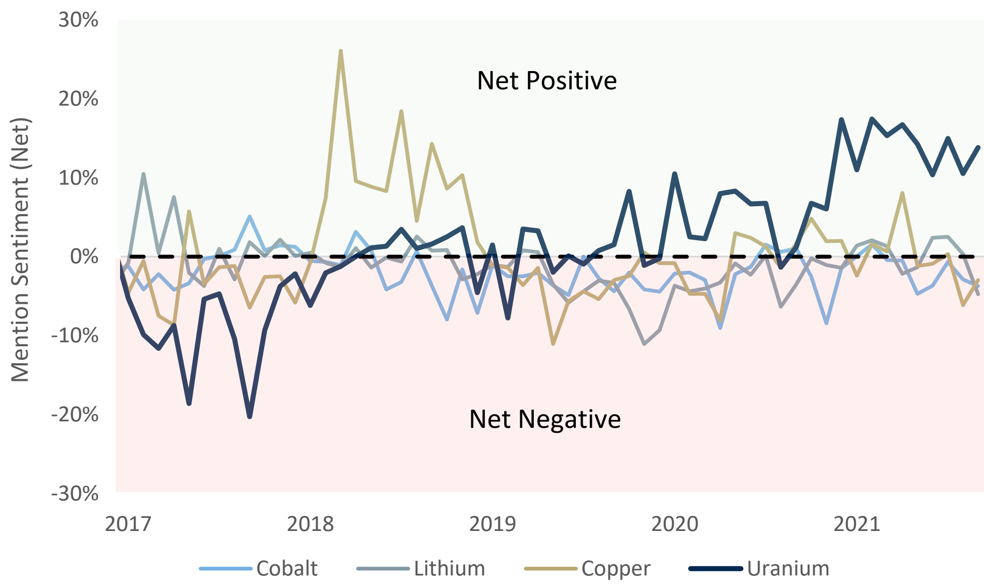
Exhibit 4 - Uranium social media activity is higher relative to other clean energy commodities



Source: RBC Elements, RBC Capital Markets, Brandwatch

Social media sentiment towards uranium has also improved significantly since December 2020, especially relative to other clean energy commodities. Sentiment turned neutral as uranium prices bottomed in 2018, gradually improved in 2020 as prices benefited from COVID-related shut-downs, and moved noticeably higher starting late-2020.

Exhibit 5 - Sentiment towards uranium remains positive



Source: RBC Elements, RBC Capital Markets, Brandwatch

RBC Elements™

Driving insights through data

Description

RBC Elements is a primary research and data science team embedded within RBC's Global Research division. The main focus of RBC Elements is to use scientific methods, algorithms and systems to analyze vast amounts of structured and unstructured data, to obtain insights that are inputs into RBC's Fundamental Global Research teams.

Objective

The team is involved in creating various machine learning and predictive modeling tools and processes, helping RBC Research discover the information hidden in big data, and allowing the Research division to make smarter decisions and deliver differentiated products to our clients. RBC Elements strives to augment the already available industry data with different alternative data sources, and enhance data collection procedures to include information that is relevant.

Methods

The team is implementing different machine learning and data mining algorithms using state-of-the-art methods. Examples include:

- Machine learning techniques and algorithms, such as k-NN, Naive Bayes, SVM, Decision Forests, Clustering, Artificial Neural Networks, and Natural Language Processing to find patterns in the past, and to predict the future.
- Feature selection techniques to find what matters most in the data.
- Statistical modeling and analysis, and statistical tests such as distributions, and regression/GLM.
- Developing hypotheses and making inferences using large amounts of data.

Companies mentioned

Cameco Corporation (TSX: CCO CN; C$26.01; Sector Perform)
NexGen Energy Ltd. (TSX: NXE CN; C$6.80; Sector Perform; Speculative Risk)

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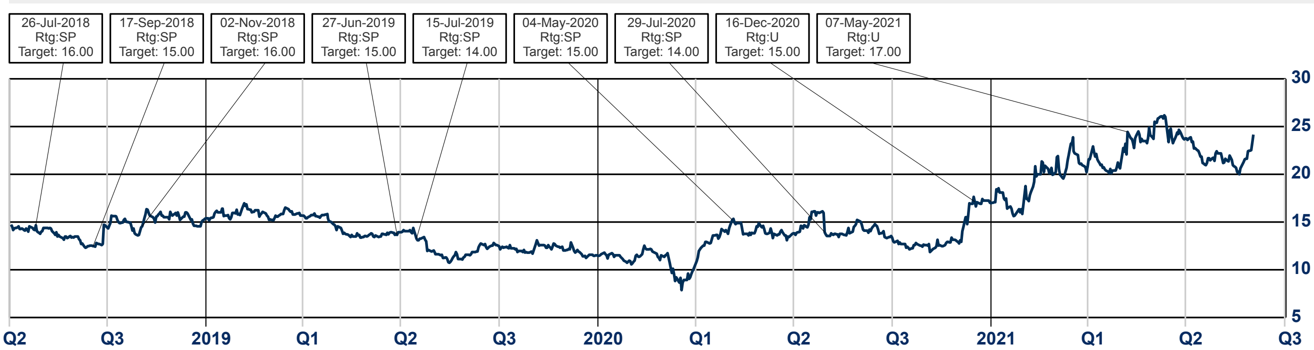
Distribution of ratings
RBC Capital Markets, Equity Research
As of 30-Jun-2021

			Investment Banking Serv./Past 12 Mos.	
Rating	**Count**	**Percent**	**Count**	**Percent**
BUY [Outperform]	**787**	**55.70**	**318**	**40.41**
HOLD [Sector Perform]	**575**	**40.69**	**173**	**30.09**
SELL [Underperform]	**51**	**3.61**	**4**	**7.84**

Rating and price target history for: Cameco Corporation, CCO CN as of 01-Sep-2021 (in CAD)



Legend:
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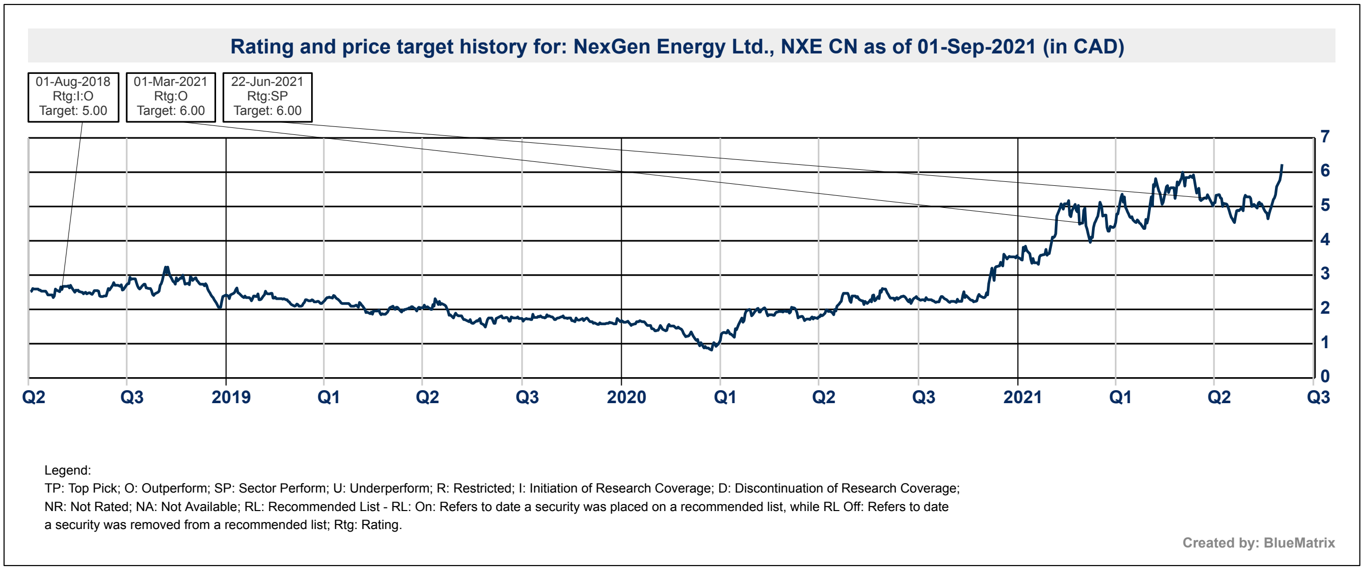

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Cameco Corporation

Valuation

We value the company by applying a 1.75x P/NAV multiple to our NAV estimate. Our P/NAV multiple is above the average historical multiple, but in line with multiples during periods of strong investor interest and rising uranium prices. Our DCF uses an 8% discount rate. Our $26 price target supports out Sector Perform rating.

Risks to rating and price target

We highlight several key risks and sensitivities that could be potentially material to our thesis on Cameco including: 1) a negative outcome in the ongoing CRA transfer pricing dispute; 2) contract cancellations; 3) potential production disruptions; 4) weaker-than-expected uranium prices; 5) currency volatility, primarily CAD/USD; and 6) a decline in uranium investor sentiment resulting in lower valuation multiples.

NexGen Energy Ltd.

Valuation

We value NexGen based on a NAV analysis using an 8% discount and 1.0x P/NAV multiple. The discount rate is in line with the rate used to evaluate other developing mine projects. The P/NAV multiple is above a historical multiple for a pre-construction developing mine project as it reflects higher valuation for uranium equities as a result of positive sentiment in the uranium space backed by upward movement in spot price. We assign a Speculative Risk qualifier as Nexgen is a development stage company that is not expected to start production until the mid-to-late 2020s. Our $7 price target supports a Sector Perform rating.

Risks to rating and price target

1) Permitting delays, especially with respect to uranium mine development due to heightened sensitivities and concerns regarding nuclear material and radiation. 2) Technical challenges and construction delays, given the limited uranium mine development in

the Western Athabasca region and lack of infrastructure. 3) Financing risk, as a pre-production company with debt and developing a uranium mine while market conditions remain challenging. 4) Uranium price, which has a significant impact on valuation. 5) CAD/USD exchange rate, as operations are located in Canada while uranium sales are primarily in USD.

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