June 26, 2022 | 22:51 ET~

Uranium

Do U Dare to Dream?

Bottom Line:

A lot has happened since we wrote our "10 Things I Contemplate About ^{235}U" report this time last year, both in terms of sentiment but also upside surprise to physical demand driven by new financial entrants, which has been reflected in a significantly higher uranium price now. On top of this, recent events in Ukraine have brought security of supply to the fore, adding a boost to nuclear. Thus, we have updated our in-depth review of uranium mining and processing, equity thesis, and supply and demand, as well as provide an update to our top 10 key themes currently of most importance within the sector.

Key Points

In this report, we provide an in-depth review of uranium mining, processing, plus important supply and demand elements for the global market.

Playing Into a Number of Pertinent Thematics: The global push for energy independence following Russia's invasion of Ukraine has provided a tailwind for uranium expectations, as nuclear build-outs are back in vogue. The role of uranium, and wider nuclear technology, in a low-carbon global economy is becoming ever clearer and is driving significant research and development into the next generation of technologies, just as happened with solar power around 2010. Given this pathway, we believe the uranium price will ultimately have to rise to necessary levels to stimulate the increased production required to match growing demand needs; hence, we have increased out L/T price to US$58/lb, from US$50/lb. Furthermore, government strategy in the U.S., potential Chinese exports of the Hualong reactor technology and development of small modular reactors (SMRs) all have potential to see demand surprise on the upside relative to our base case.

Opportunity in the Equities: With a backdrop of improving sentiment in uranium, the mining equities under coverage all offer potential for upside, in our view, particularly as a derivative of the current energy trade as security of supply has come into sharp focus. However, at this juncture we prefer the producers and more advanced developers, including: **Cameco** (top pick, Outperform, C$42 target) which is well positioned to benefit from focus on security of supply given its Canadian exposure and EBITDA growth from the onset of McArthur River mine this year; **Kazatomprom** (Outperform, US$47.50 target) for long-term value given its peer-leading multiples (including dividend yields of 8-11% and large, low-cost production base with upside potential (note proximity to Russia makes near-term volatility more likely); and **NexGen** (Outperform(S), C$6.50 target) which trades at a discount to its developer peers (0.8x P/NPV), has the potential to be one of the largest uranium operations globally and is more advanced than its peers.

IN Depth

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Uranium

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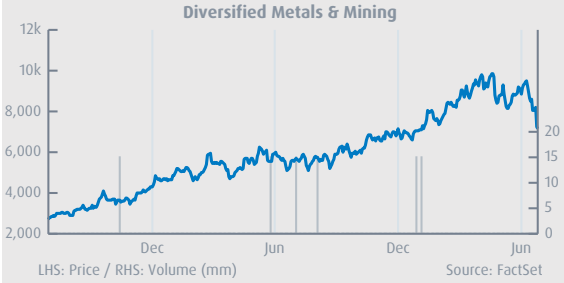


Industry Research

Glossary

Do ^{235}U Dare to Dream?

Sentiment continues to improve, as uranium becomes increasingly important in a low-carbon global economy.

A lot has happened since we wrote our "10 Things I Contemplate About ^{235}U" report this time last year, both in terms of sentiment but also upside surprise to physical demand driven by new financial entrants, which has been reflected in a significantly higher uranium price now. On top of this, recent events in Ukraine have brought security of supply to the fore, adding a boost to nuclear. Thus, we have updated our in-depth review of uranium mining and processing, equity thesis, and supply and demand, as well as provide an update to our top 10 key themes currently of most importance within the sector.

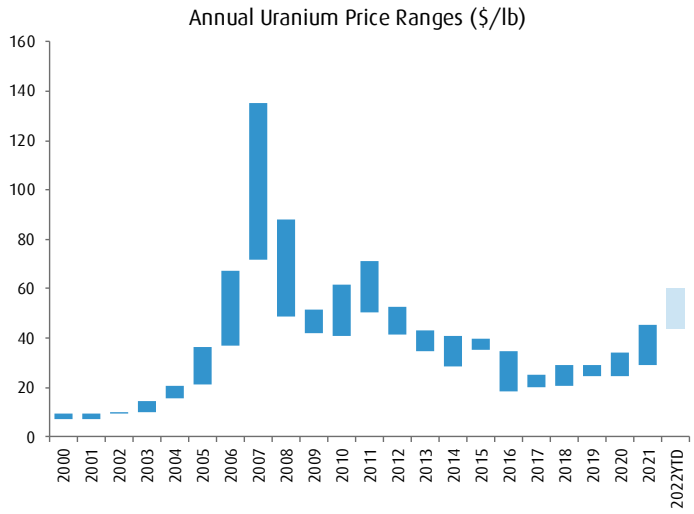
The global push for energy independence following Russia's invasion of Ukraine has provided a tailwind for uranium expectations, as nuclear build-outs are back in vogue. The role of uranium, and wider nuclear technology, in a low-carbon global economy is becoming ever clearer and is driving significant research and development into the next generation of technologies, just as happened with solar power around 2010. Given this pathway, we believe the uranium price will ultimately have to rise to necessary levels to stimulate the increased production required to match growing demand needs; hence, we have increased out L/T price to US$58/lb from US$50/lb. Furthermore, government strategy in the U.S., potential Chinese exports of the Hualong reactor technology and development of small modular reactors (SMRs) all have potential to see demand surprise on the upside relative to our base case. Uranium prices have underperformed peers, for good fundamental reasons, over the past decade and indeed the past 18 months. However, this leaves uranium as the only major commodity we cover trading below its long-run equilibrium price, and thus relative to peers has more upside on a five-year view. The pathway towards this higher price has a number of important waypoints as the industry works through the excess inventory built during a decade of constant oversupply.

Exhibit 1: We Have Increased Our L/T Uranium Price to US$58/lb, but Inventories Keep a Lid on Near-Term Expectations

			Q1 2022	Q2 2022	Q3 2022	Q4 2022	Q1 2023	Q2 2023	Q3 2023	Q4 2023	2022	2023	2024	2025	2026	LT
Uranium	$/lb	New	48	53	48	50	50	50	47	45	50	48	46	50	52	58
		Old	48	55	50	50	48	48	45	43	51	46	44	50	52	50
		% change	*0%*	*-5%*	*-4%*	*0%*	*4%*	*4%*	*4%*	*5%*	*-2%*	*4%*	*5%*	*0%*	*0%*	*16%*

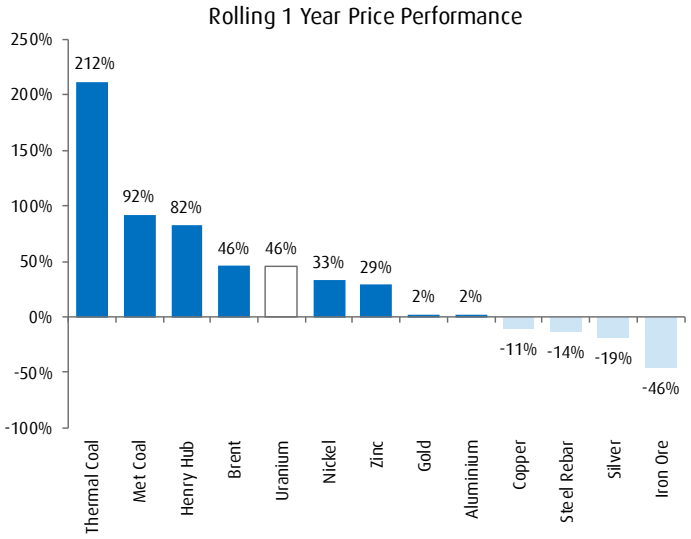
Source: UxC, BMO Capital Markets

Exhibit 2: 2022 Has Been the Best Year in Over a Decade for the Uranium Price…



Source: UxC, BMO Capital Markets

Exhibit 3: …Though It Has Still Underperformed Energy Peers



Source: Bloomberg, UxC, BMO Capital Markets

1. **How has the uranium price performed relative to peers?** The biggest change from our document last year, uranium is on a tear, with the price now up ~45% year on year to ~US$47/lb. It is not alone in being at recent highs versus other commodities, however, unlike other commodities the price is only just approaching the long-term incentive price for new production, and barely trading out the top end of the cost curve. Looking ahead, with 3% CAGR demand growth anticipated over the coming decade we continue to expect some demand tension to remain. We see uranium as a natural defensive in commodity markets, and one that often acts counter-cyclically to industrial metals. This could hold uranium in good stead on a relative basis over the coming quarter.

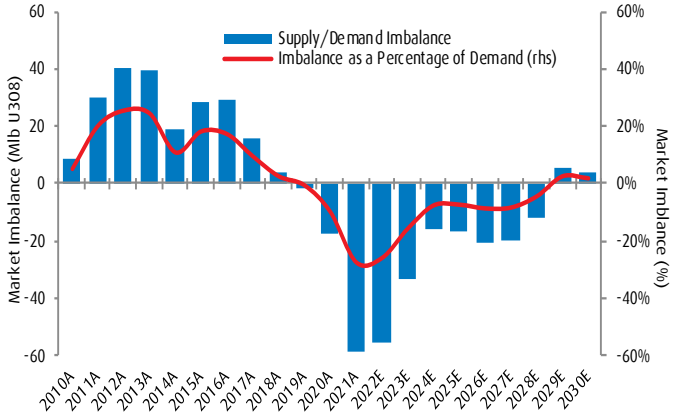
2. **How does the uranium market differ from other commodities?** We view uranium as an upside-down commodity market. Usually in commodity markets we get good visibility on the supply side from producer guidance, while demand has a greater degree of uncertainty. In uranium, the long lead time to build nuclear reactors gives a better handle on the demand side, while supply is more variable (particularly from the secondary market). Usually we view the developed world consumers as core buyers and Chinese participants as marginal, price-setting purchasers. In uranium things work a little differently, with consistent Chinese purchases over a number of years (most notably from Kazakhstan and Namibia) while U.S. utilities are the price-sensitive buyers in the spot market. Hence why the important thing in uranium is how concerned U.S. utilities are about the supply situation at any given time. Meanwhile, it is very rare for the largest producers in the market to purchase more from the spot market than consumers, but that is exactly what we have seen over recent times in order to reduce the inventory overhang. Finally, for U_3O_8 at least there is a single end market which consumes the vast majority of product, rather than the varied end uses seen for most commodities.

3. **What are the impacts from financial buyers?** Last year financial buyers turned the spot market on its head, with total spot volumes pushed to record highs of 102Mlb U_3O_8, up on the prior record of 95Mlb in 2020. A key part of this increase was led by Sprott, which burst onto the scene with 24Mlb of purchases in the second half of the year (worth~US$1B); this, combined with other strategic financial purchases saw ~31Mlb taken out of the market, or ~15% of total demand, quickening the inventory drawdown ahead of our prior forecasts. Looking ahead, with some US$1.7B left to spend of its facility (US$0.7B spent year to date, ~15Mlb) Sprott is likely to continue adding to its holding, thus we think strategic financial buyers are likely to add ~30Mlb of demand this year and keep tension in the spot market.

4. **How does the conflict in Ukraine impact the uranium market?** The conflict in Ukraine has brought the discussion on security of supply to the fore for uranium, particularly with elevated energy prices elsewhere. One of the key strengths for the sector is the ability to store many years' worth of uranium above ground unlike coal for example (we note about four years' worth of reactor requirements currently held as inventory). As a result, we could see utilities preferring to increase what they would consider their "minimum strategic" inventory versus excess inventory. The key impact, however, is likely to be felt in the enrichment market, where Russia currently accounts for ~40% of the world's capacity (only 6% mined uranium production, but also 12% U_3O_8e from "underfeeding" at its enrichment facilities). We estimate the rest of the world could do without Russian enrichment eventually, however, as: 1) it takes time to unpick for existing contracts whilst ensuring reactors get near-term fuel requirements (enrichment is one of the last stages before fuel); and 2) it would require the rest of the world's enrichment capacity switches to overfeeding, essentially putting more mined uranium into the system and dropping the recoveries to get more enriched uranium product out – this could increase demand by ~20Mlb on our estimates.

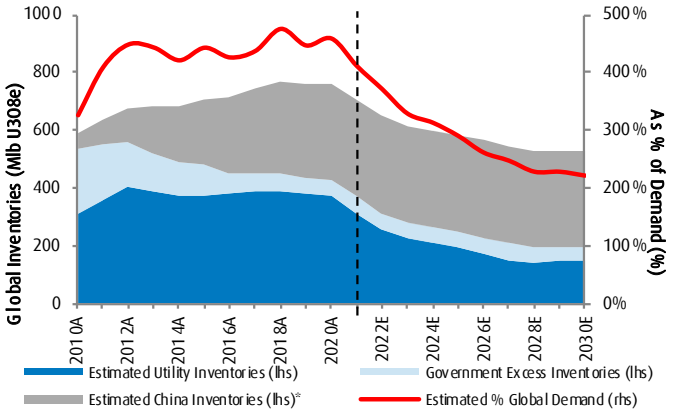
5. **If the uranium market is in a deficit, why isn't the price moving more aggressively?** In commodities, a deficit is a natural situation in a commodity market which is burdened by high stock levels, with the price encouraging supply to be taken offline. It is thus the first stage in bringing the market back to normality. Only when inventory cover gets back to or even below mid-cycle norms do consumers feel the need to aggressively seek additional units, hence for years in uranium we have asked the question, "when will utilities get scared about security of supply?". The inventory overhang built in the post-GFC period has been reduced dramatically, but there is no case to be made yet that uranium availability is scarce, with over three years of global consumption held in the chain.

Exhibit 4: A Combination of Financial Buying and Supply Cuts Has Pushed the Market Into a Record Deficit



Source: BMO Capital Markets

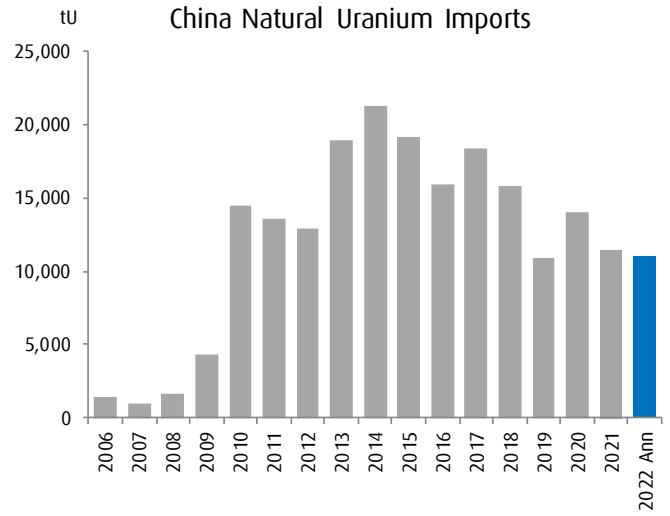
Exhibit 5: Inventories are High, but Reducing at a Rapid Pace



Source: BMO Capital Markets, WNA

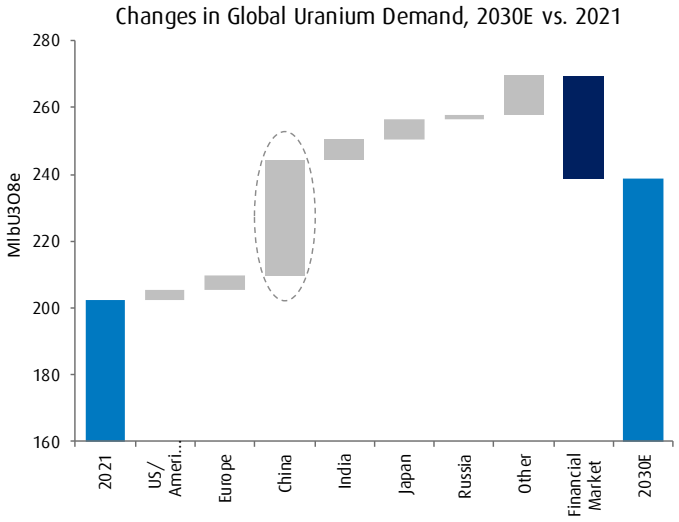
6. **How do we think China will influence the market?** Most other commodities have benefitted from surging Chinese demand over the past two decades. For uranium, much of this delta is still ahead. With the government target of peak carbon emissions by 2030 and carbon neutrality by 2060 now front and centre of policymaking, we expect further policy support for a nuclear build-out, particularly as the new Hualong One & Two reactor technology plays into China's self-sufficiency plans. We currently model 65GW of Chinese nuclear capacity by 2025 (versus its target of 70GW), rising to 120GW by 2030 (compared to 90GW currently installed in the U.S.). This remains China's core influence on the global uranium market, and with this we see Chinese consumption exceeding that of the U.S. by the end of the decade given new core loads required. Moreover, the additional kicker for uranium demand could come from China exporting nuclear technology to other emerging markets in the same way coal-fired technology has been pushed globally over the past 20 years. With China clearly looking to be a leader in low-carbon technology, and Hualong technology qualified for use in many overseas markets, we see this scenario as increasingly probable, offering upside to our base case demand.

Exhibit 6: China's Uranium Purchases Have Been Consistent Over Recent Years, but Will Need to Reaccelerate...



Source: China Customs, BMO Capital Markets

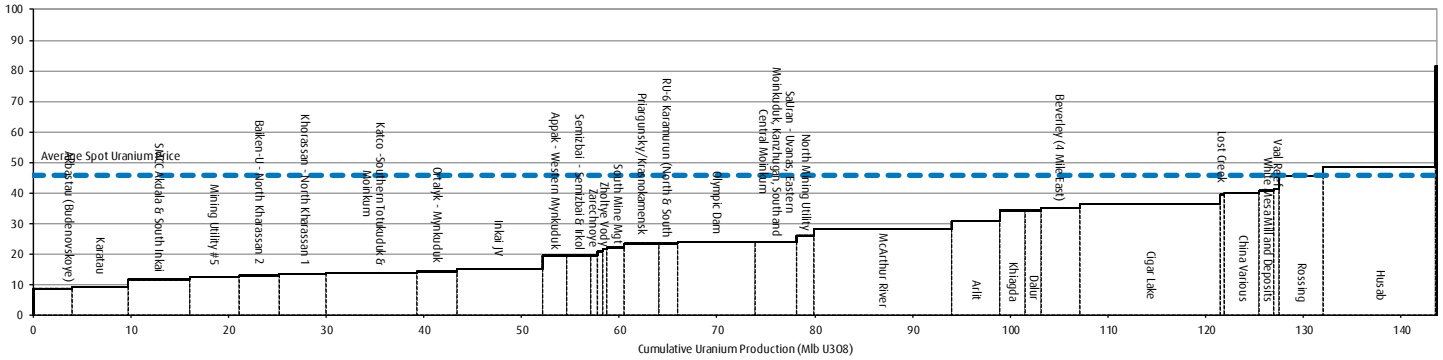
Exhibit 7: ...As Unlike Other Metals, for Uranium the Big China Demand Delta Is Yet to Come



Source: WNA, BMO Capital Markets

7. **At what price would brownfield supply return to market?** Brownfield capacity is naturally the quickest form of supply response in any market. However, it is particularly true in uranium given the elevated permitting risk associated with greenfield projects, notably around tailings management. And this has been confirmed over the past few months, with (as we suggested last year) a uranium price in excess of $40/lb seeing Cameco bringing back partial capacity at its McArthur River mine, which has been offline since 2017. Had it not been for the political uncertainty and logistics challenges, we might also have expected Kazatomprom to increase output from <60Mlbpa currently, towards licensed capacity of >70Mlbpa. We expect further brownfield additions only if end consumers have committed to the majority of any potential additional volume, which could see another round of announcements into 2023.

Exhibit 8: With Uranium Up Near $47/lb Some Idled Brownfield Mines Have Been Incentivised Back Into Production



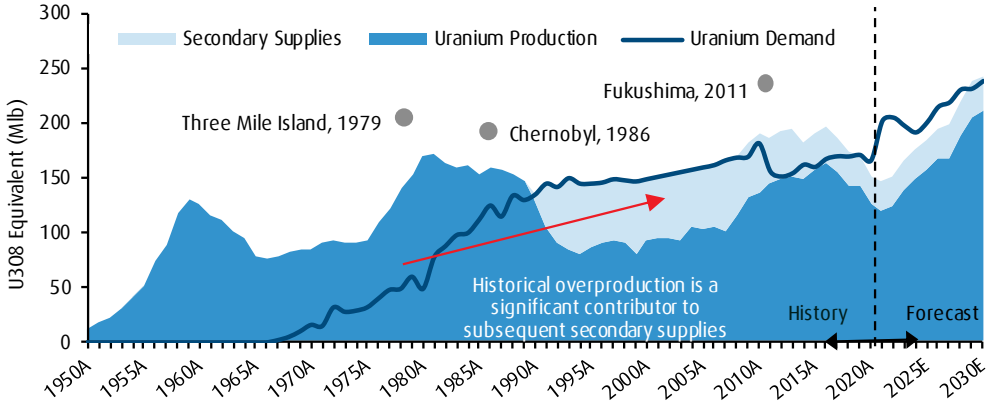
Source: BMO Capital Markets.

8. **When will we need incentive pricing for greenfield projects?** Given the potential brownfield capacity which could respond more rapidly to price prompts, on our model we do not see a need for incentive pricing for greenfield capacity until the second half of this decade. Thus, while uranium will need a higher through-cycle equilibrium price to bring suitable supply to market in the long term, given commodity markets are not forward looking this is unlikely to be required soon. Usually we model annual pricing five years out, then transition to a long-term price. For uranium, more than five years will be needed before we see a significant number of new development projects to balance the books. We discuss our calculations of incentive economics for uranium later in this report.

9. **Growing focus on SMRs – What could it mean for demand?** Focus on small modular reactor technology continues to grow, with <300MWe equivalent this is an area which promises lower upfront capital required in absolute terms, the contribution to a more flexible utility structure, reduced water consumption and the ability to meet bespoke end-user requirements. Indeed, we have seen government investment in a number of potential projects across the globe. As part of this transition to SMRs, there is likely to be a growing requirement for High Assay Low Enriched Uranium (HALEU), essentially uranium that has been enriched with higher grades of U235 (as much as ~20%, versus 3.5-5% normally) which provides more energy per volume of fuel and/or potentially increases the life of the core load used in the reactor. With investment increasing, there is cause to see this move to SMRs as a potentially meaningful future demand driver, however, given the extended qualification process we don't have any significant impact in our S/D out to 2030.

10. **Can hydrogen boost nuclear demand?** A near-term opportunity for the use of nuclear power to provide low-cost, low-carbon hydrogen (yellow or pink hydrogen) is conventional low temperature electrolysis utilising off-peak electricity from existing plants. Steam methane reforming is another potential near-term pathway, whereby a nuclear heat source is utilised to reduce natural gas consumption by up to 30%, while having the added advantage of eliminating flue gas CO2 emissions. Development of high-temperature steam electrolysis in solid oxide electrolysis cells is also under way, premised on the reverse reaction of a solid oxide fuel cell and requires ~33% less energy than low-temperature electrolysis, according to the WNA. Several conceptual high-temperature thermochemical processes are also being explored, ultimately utilising waste heat from nuclear reactors and offering potentially higher conversion efficiencies. Meanwhile, development of SMRs also pose an interesting opportunity with companies such as NuScale estimating that one 250MW module has the capacity to produce 2,053 kg/hour of hydrogen, or nearly 50 metric tons per day.

Exhibit 9: Uranium Demand Is Now Ahead of Pre-Fukishima Levels, Driven by Financial Buyers



Source: BMO Capital Markets, UxC, Company Reports

Exhibit 10: Supply/Demand Summary Table (Mlb U_3O_8)

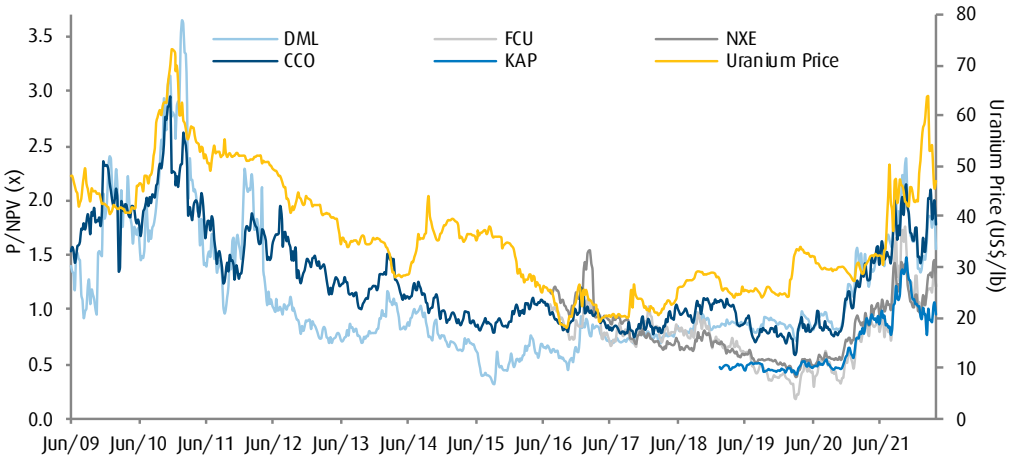
Primary Supply Forecast		2009A	2010A	2011A	2012A	2013A	2014A	2015A	2016A	2017A	2018A	2019A	2020A	2021A	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
Primary Supply Forecast																							
Australia	Mlb U3O8	22.7	16.6	21.5	16.5	16.4	16.0	14.6	16.2	14.0	16.7	16.9	16.1	9.0	11.7	12.0	12.0	12.0	12.0	12.0	12.0	12.0	11.5
Canada	Mlb U3O8	26.5	25.4	23.7	23.8	24.1	23.6	34.4	36.3	34.2	18.1	18.0	10.3	12.2	18.6	28.3	28.5	28.6	36.2	36.4	56.1	73.5	80.5
Kazakhstan	Mlb U3O8	36.9	44.0	48.6	55.7	58.5	59.4	61.9	63.9	60.6	56.4	59.3	50.6	56.7	55.7	59.0	64.4	68.9	71.4	72.6	72.5	72.0	71.2
Namibia	Mlb U3O8	11.4	12.9	10.6	12.0	11.1	10.9	7.5	9.1	11.2	15.2	14.2	14.1	17.9	17.1	16.1	16.5	18.3	17.4	17.3	17.3	17.3	17.3
Niger	Mlb U3O8	7.7	10.9	11.3	12.1	11.3	10.7	11.3	9.0	9.0	7.6	7.8	7.8	5.2	5.0	5.0	5.0	5.0	5.0	5.0	4.0	3.2	2.6
Russia	Mlb U3O8	8.2	6.8	7.8	7.5	8.2	7.8	7.9	7.8	7.7	7.6	7.6	7.4	7.7	7.7	7.7	10.2	11.2	12.0	12.0	12.0	12.0	12.0
Other	Mlb U3O8	17.7	19.4	20.7	20.7	21.1	20.2	19.1	20.9	18.8	19.5	17.9	17.7	8.9	7.5	9.8	12.1	13.3	13.0	13.0	13.3	15.0	15.5
PRIMARY SUPPLY TOTAL	Mlb U3O8	131.1	136.2	144.1	148.2	150.5	148.6	156.7	163.3	155.4	141.1	141.6	124.0	117.7	123.2	137.8	148.6	157.1	166.9	168.3	187.2	205.0	210.6
Uranium From Inventories and Secondary Supply																							
Russian HEU Deal	Mlb U3O8e	23.4	23.4	23.4	23.4	20.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Western Tails Re-Enrichment and Underfeeding	Mlb U3O8e	7.8	5.2	5.2	5.8	5.8	6.6	5.8	5.3	4.8	5.3	4.3	3.3	2.8	2.4	2.0	1.6	1.2	1.2	1.2	1.2	1.2	1.2
DOE Surplus Uranium Sales	Mlb U3O8e	1.6	6.2	6.4	7.3	8.0	7.7	7.2	6.2	4.4	3.1	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0	3.0
Reprocessed Uranium/MOX	Mlb U3O8e	7.8	8.7	8.5	8.4	8.0	8.0	8.1	7.7	5.0	5.2	6.1	6.3	6.6	6.8	7.1	7.4	7.7	8.2	8.8	9.3	9.8	10.4
Russian Underfeeding, Tails Re-Enrichment and Other	Mlb U3O8e	9.2	10.6	12.3	10.7	11.7	20.5	18.7	17.9	17.3	17.6	15.6	15.6	15.2	14.7	14.3	13.9	13.4	13.0	12.4	11.8	11.2	10.4
Japan Inventory Adjustments	Mlb U3O8e	0.0	0.0	-13.9	-11.8	-10.4	-9.9	-7.4	-3.7	-1.0	1.1	1.0	0.1	1.5	2.6	3.0	4.2	5.2	5.1	5.5	6.7	6.8	6.8
INVENTORY AND SECONDARY SUPPLY TOTAL	Mlb U3O8e	49.8	54.1	41.9	43.7	43.3	32.9	32.4	33.4	30.5	32.4	27.8	25.2	26.1	26.6	26.5	27.1	27.5	27.6	30.8	31.9	32.0	31.7
TOTAL SUPPLY	Mlb U3O8e	**180.8**	**190.3**	**186.0**	**191.9**	**193.8**	**181.6**	**189.1**	**196.7**	**185.9**	**173.5**	**169.4**	**149.2**	**143.8**	**149.8**	**164.3**	**175.8**	**184.6**	**194.5**	**199.1**	**219.2**	**237.0**	**242.3**
Demand Forecast Ex Buffer Inventories																							
USA and the Americas	Mlb U3O8e	57.5	57.6	54.2	55.0	52.4	51.7	48.7	54.9	54.9	53.4	52.8	49.9	51.5	52.1	52.2	51.5	54.0	52.4	52.4	52.8	52.8	54.5
Europe	Mlb U3O8e	63.4	66.5	57.4	58.6	58.0	54.5	57.4	54.0	55.4	51.0	53.2	52.7	49.8	49.0	47.9	50.2	48.7	47.6	51.6	51.0	53.4	54.0
China	Mlb U3O8e	5.5	9.5	5.8	7.0	12.7	22.5	22.1	26.8	25.1	23.0	25.5	23.6	24.2	25.5	37.6	42.3	48.0	56.2	58.3	61.6	56.9	58.8
India	Mlb U3O8e	2.7	2.4	1.8	1.8	3.2	4.3	2.6	2.6	2.6	2.6	3.6	4.5	5.1	5.8	5.8	4.6	4.6	7.9	8.7	10.6	9.5	11.4
Japan	Mlb U3O8e	22.2	20.8	8.1	4.7	0.6	0.0	0.3	0.7	1.2	2.2	3.2	2.3	3.7	4.8	5.2	6.4	7.4	8.0	8.3	9.6	9.7	9.7
Russia	Mlb U3O8e	9.7	10.2	12.1	12.0	14.0	13.2	13.8	14.3	16.5	14.0	14.0	14.2	15.8	14.4	14.4	14.1	16.7	21.1	19.2	20.6	18.1	17.3
Rest of Asia	Mlb U3O8e	7.3	12.8	13.9	9.9	11.9	14.3	13.5	11.8	12.2	12.7	11.8	11.5	14.1	15.3	16.5	14.4	12.9	12.9	12.9	12.9	15.2	15.8
Other Countries	Mlb U3O8e	1.1	2.0	2.7	2.4	1.8	1.8	1.8	2.5	2.1	2.4	5.8	8.0	7.3	8.2	7.9	8.4	8.9	9.0	7.9	11.7	16.1	17.2
REACTOR DEMAND SUBTOTAL	Mlb U3O8e	169.4	181.8	155.9	151.5	154.6	162.3	160.2	167.6	169.9	161.3	169.9	166.7	171.7	175.2	187.5	191.8	201.1	215.1	219.2	230.8	231.6	238.6
Financials	Mlb U3O8e										8.4	1.2	-0.3	30.7	30.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BMO Demand Forecast Excluding Buffer Inventories	Mlb U3O8e	**169.4**	**181.8**	**155.9**	**151.5**	**154.6**	**162.3**	**160.2**	**167.6**	**169.9**	**169.7**	**171.1**	**166.4**	**202.4**	**205.2**	**197.5**	**191.8**	**201.1**	**215.1**	**219.2**	**230.8**	**231.6**	**238.6**
Supply/Demand Imbalance	Mlb U3O8e	**11.4**	**8.5**	**30.1**	**40.4**	**39.3**	**19.2**	**28.9**	**29.1**	**15.9**	**3.8**	**-1.7**	**-17.2**	**-58.6**	**-55.3**	**-33.2**	**-16.0**	**-16.4**	**-20.7**	**-20.1**	**-11.6**	**5.3**	**3.6**
Global Inventory (Yrs of Demand)	Mlb U3O8e	**3.5**	**3.3**	**4.1**	**4.5**	**4.4**	**4.2**	**4.4**	**4.3**	**4.4**	**4.7**	**4.5**	**4.6**	**4.1**	**3.7**	**3.3**	**3.1**	**2.9**	**2.6**	**2.5**	**2.3**	**2.3**	**2.2**

Source: BMO Capital Markets, WNA.

Uranium Equity Round-Up

As the uranium market continues to transition, we have seen increased momentum behind all of the uranium-exposed names under coverage (and not under coverage), with the sector multiples expanding considerably alongside an improving uranium price. Multiples are now significantly higher than 12 months ago, even with the recent price weakness, but are well below the peak more than a decade ago. Unsurprisingly, the individual uranium stocks have followed the uranium price relatively closely. Cameco trades at a premium to the group at 1.2x its NPV, with Kazatomprom particularly underperforming the group on perceived Russia risk, despite having no production outside of Kazakhstan and is now trading at the largest discount to its NPV at 0.7x. NexGen trades at the largest discount to its exploration/development peers at 0.8x of its NPV.

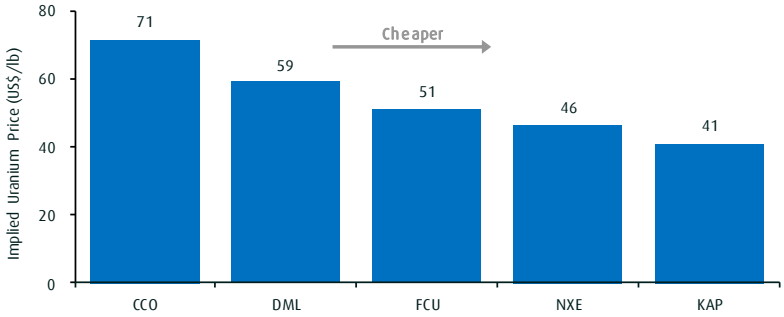
Exhibit 11: Cameco Continues to Trade at a Premium, but Should; Kazatomprom Offers the Best Longer-Term Value



Source: BMO Capital Markets. UxC.

Another way to look at this is implied price, which shows the flat uranium price at which the company's $NPV_{10\%}$ to equal its share price. Only two of the stocks are trading at implied prices lower than spot, Kazatomprom and NexGen. Cameco implies a significantly higher uranium price, reflecting its advantageous location for the majority of its production base, as well as size, and liquidity.

Exhibit 12: Cameco Consistently Implies the Highest Uranium Price, Kazatomprom the Lowest



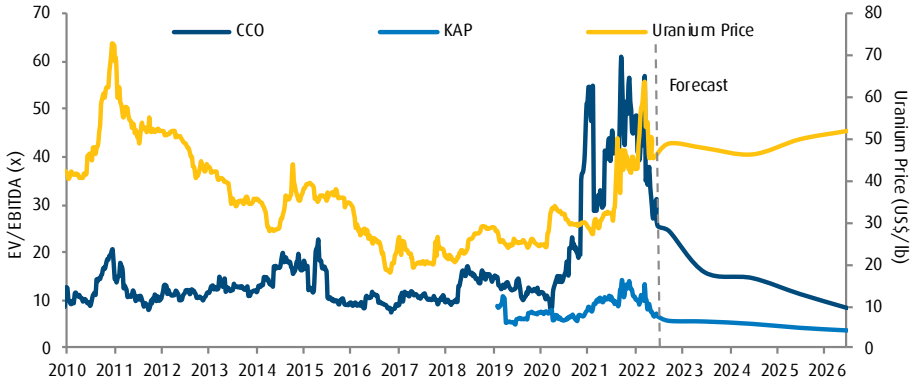
Source: BMO Capital Markets.

The following chart plots a combination of historical current-year EV/EBITDA multiples and forecast average annual EV/EBITDA and uranium price for Cameco and Kazatomprom. This excludes the exploration companies with little or no positive cash flow. This shows the discount at which Kazatomprom trades versus Cameco on an EV/EBITDA basis, reflecting perceived jurisdictional risk, as

well as lower liquidity. However, through 2021 Cameco's premium increased well beyond its historical level, through a combination of low EBITDA as well as improving sentiment for the company on higher uranium prices. Note its lower EBITDA was driven by lower production (both McArthur River on care and maintenance, as well as reduced Cigar Lake production) and the effect of uranium purchases (essentially at spot) to fulfil contracting volumes thus partially offsetting higher uranium prices.

Looking ahead both companies are expected to show significant improvement in EV/EBITDA multiples. Cameco is currently trading on a 2022E EV/EBITDA of 24x, reducing to 16/15x in 2023/24E, driven by the onset of McArthur River and a significant uplift in EBITDA. Kazatomprom currently trades on ~5x and is expected to show continued improvement to <5x by 2024E as EBITDA continues to grow.

Exhibit 13: Cameco Continues to Trade at a Premium to Kazatomprom and Its Historical Trading Range, but Is Expected to Improve as Quickly as EBITDA



Source: BMO Capital Markets, UxC. Historical data based on current year EV/EBTIDA, forecasts 1/2/3/4

We remain positive on the sector as a whole and, given our uranium price forecast is one of the few that we have higher in the long term than current spot, we think all of the companies under coverage should do well in the longer term – note company-specific write-ups later in this report. However, our preferred stocks are the following:

1. **Cameco - Outperform:** Top pick near term. Well positioned to benefit from focus on security of supply by utilities given Canadian exposure, growing EBITDA base on McArthur River restart, largest and most liquid listed uranium stock. Higher trading multiples count against it, but worth it in our view.

2. **Kazatomprom - Outperform** :Best long-term value stock. The largest and one of the lowest cost producers in the world. Offers the best dividend yield by far and potential for significantly more via specials. Strong production upside potential. Perceived higher risk from Russian JV partners and proximity to Russia makes near-term volatility more likely, however, we think the risk is overdone. The world cannot do without Kazatomprom uranium.

3. **NexGen - Outperform (S):** The best of the explorers/developers in our view, trading at a discount to the others (0.8x NPV) and is more advanced in its permitting process. Further, its flagship Arrow deposit could be one of the largest uranium operations globally, likely in the second half of this decade.

Exhibit 14: BMO Research Uranium Universe Summary Table

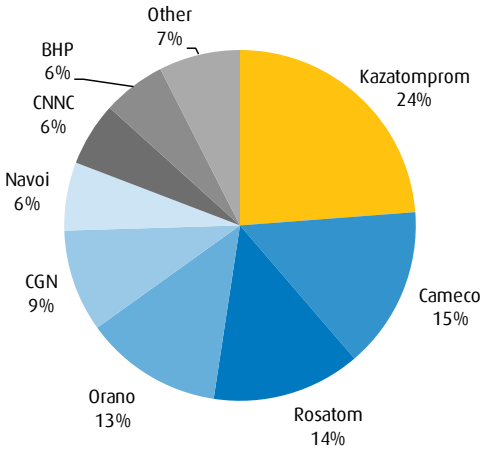
Company	Rating	Share Price	Market Cap.	Net Present Value	Share Price/ NPV	2022E EV/EBITDA	2022E Div Yield	2022E Net Debt/Equity	2023E EV/EBITDA	2023E Div Yield	EV/lb Resource	Target Price	Total Return	Target Multiple
		22-Jun-22	*US$M*		*%*	*x*	*%*	*%*	*x*	*%*	*US$/lb*		*%*	
Cameco	OP	C$27.43	8,675	C$22.41	122%	24.4	0.4%	-3%	15.8	0.4%	$8.06	C$42.00	54%	1.9x NPV
Denison	Mkt(S)	C$1.30	837	C$1.40	93%	n/a	0.0%	-4%	n/a	0.0%	$3.90	C$1.40	8%	1.0x NPV
Fission	Mkt(S)	C$0.63	336	C$0.73	87%	n/a	0.0%	-19%	n/a	0.0%	$2.30	C$0.75	19%	1.0x NPV
Kazatomprom	OP	$24.76	6,422	$37.64	66%	5.0	8.4%	-14%	4.9	11.5%	$5.69	$47.50	100%	1.3x NPV/9x EV/EBITDA
NexGen	OP(S)	C$4.72	1,715	C$6.00	79%	n/a	0.0%	-22%	n/a	0.0%	$5.00	C$6.50	38%	1.1x NPV
Total/Average			**17,985**		**96%**	**13.5**	**3%**	**-9%**	**9.3**	**4%**	**4.75***		**66%**	

Source: BMO Capital Markets. Priced as of June 22, 2022. *global simple average for EV/lb.

Mining Comps

We cover approximately 70% of total uranium production expected in 2023, largely due to the two main listed uranium producers Kazatomprom and Cameco, as well as BHP via its Olympic Dam copper mine. On an attributable basis, this is only 44%. Kazatomprom is the largest, with a 24% share. A significant part of world production is unlisted/state owned.

Exhibit 15: Companies that we cover control ~70% of total uranium production, albeit only 44% on an attributable basis.



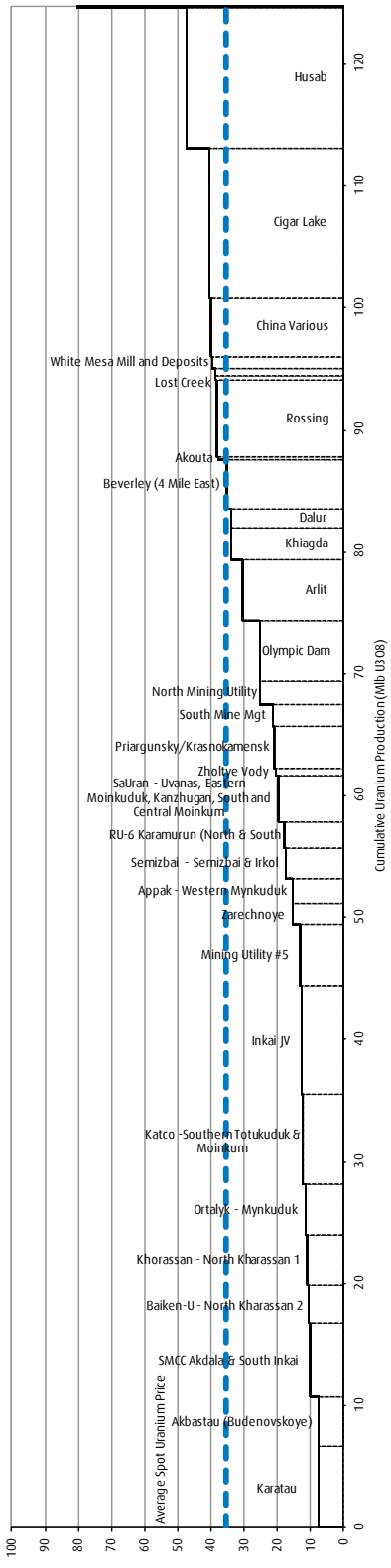
Source: BMO Capital Markets, WNA.

Total Production Costs

In the following charts, we show total costs, i.e., cash cost plus depreciation (as a measure of capex), SG&A and royalties. This normalises the differential that in situ leach (ISL, also known as in situ recovery or ISR) operations appear to have over conventional mined production, given ISL operations typically have lower operating costs but capitalize well field development costs. Costs also include Kazakhstan's Mineral Extraction Tax (MET) which is payable as a percentage of certain cash costs. At the current spot price of ~US$47/lb U_3O_8, most of the cost curve should be making a margin, however, many of the higher cost operations that used to plot on these cost curves have closed either through low prices or reserve depletion.

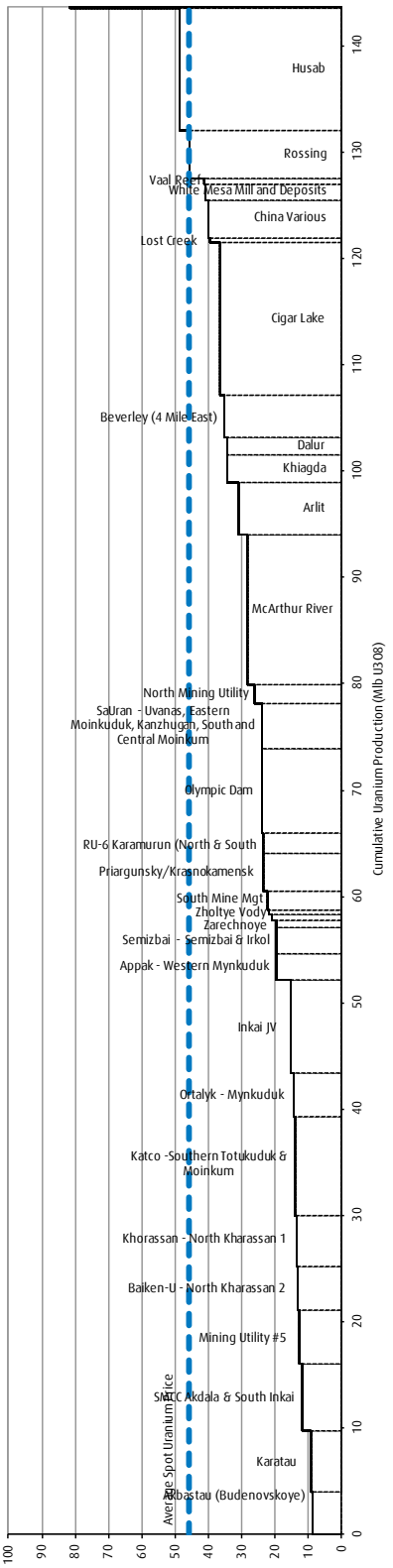
It is worth noting that higher-priced and legally binding offtake agreements/delivery commitments make for an inefficient market whereby nominally sub-economic mines continue to produce into an apparently low uranium price environment (from a spot price at least). This leads to uranium supply being relatively spot price inelastic compared to other commodities in the short term.

Exhibit 16: 2021 Total Costs (US$/lb)



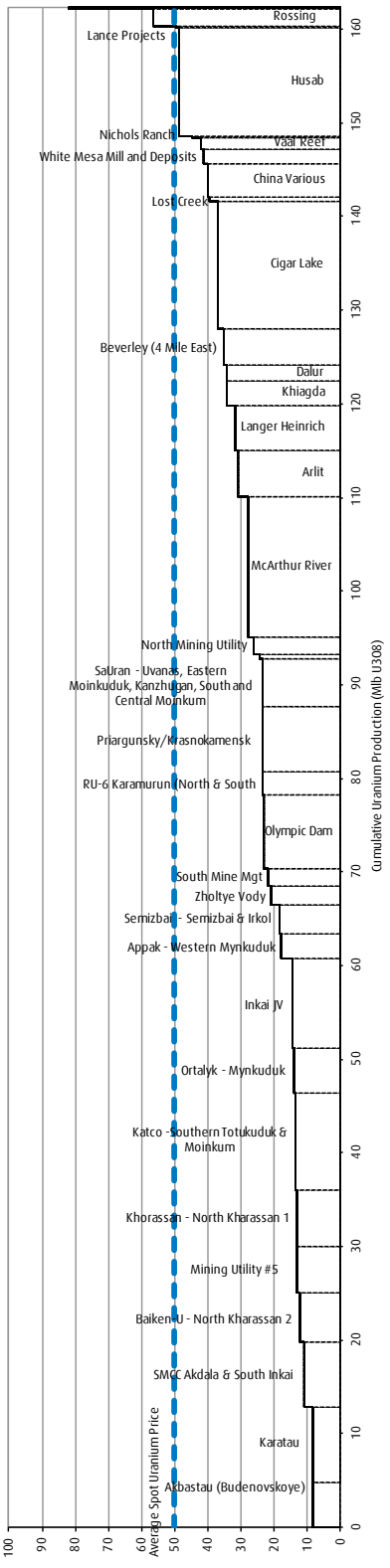
Source: BMO Capital Markets

Exhibit 17: 2023E Total Costs (US$/lb)



Source: BMO Capital Markets

Exhibit 18: 2025E Total Costs (US$/lb)



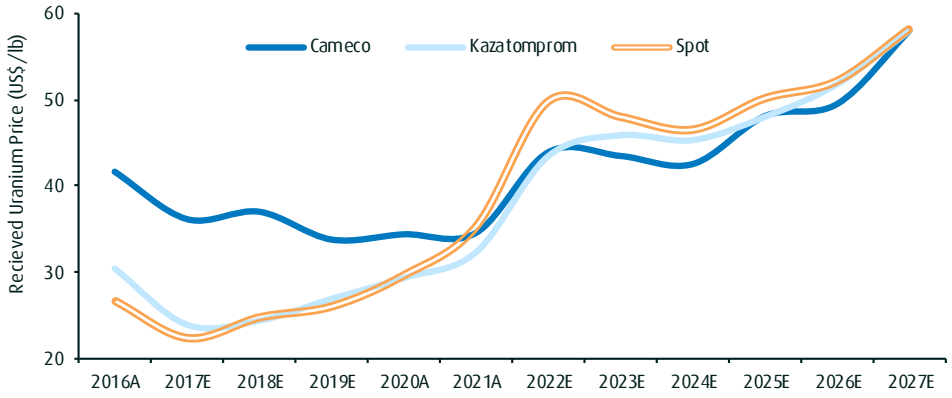
Source BMO Capital Markets

Realised Prices

Cameco's contract book has been a key asset for the company, supporting realised prices that were an average of ~32% more than spot over the past five years. In contrast Kazatomprom's realised prices more closely track spot, however, going forward (and somewhat surprisingly) Cameco's leverage is only a little bit lower than Kazatomprom on our price of around US$45-50/lb. For Cameco this also reflects a rolling off of legacy fixed price contracts and lower recent contracting rates, however, we also note that Cameco is actively targeting more market (spot) related contracts in the current market, to avoid locking in lower fixed price terms (Cameco typically targets 40/60 fixed/market related terms). Note, if prices go significantly higher, Cameco's lower leverage to spot becomes more apparent.

Over the next five years we forecast Cameco's average realised prices at an 8% discount to spot, versus Kazatomprom at a 5% discount. Essentially getting reasonable realised price leverage with both producers going forward, although both lagging spot, particularly this year.

Exhibit 19: Cameco's Contract Book Helped Support Higher Realised Uranium Prices in the Past, Although Kazatomprom Is Expected to Have Slightly Higher Prices Going Forward (but not by Much)



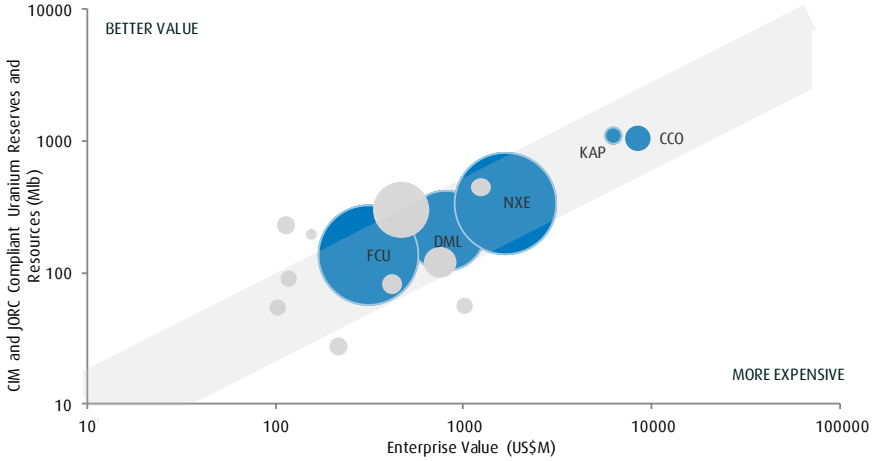
Source: BMO Capital Markets. Company Reports. Based on BMO's Uranium Price Forecast

EV/lb of Reserves and Resources

Examining the companies on EV/lb of total resources is a fairly crude metric as it makes no allowance for project economics, but it does incorporate companies with emerging projects of interest. We have limited our analysis to listed uranium companies with enterprise values greater than US$100M.

The size of the bubble represents the average grade of the resource, which for ISR miners like Kazatomprom, is generally lower. The average EV/lb for the group is ~US$4.75/lb. Companies plotting above the shaded area could be considered better value per pound of contained resource than those below, albeit this ignores a number of key metrics, including locations, mineralogy, and any resource upside. But more importantly, those closer to production or indeed in production, would generally trade on a higher multiple as shown by Cameco (US$8.06/lb) and Kazatomprom (US$5.69/lb). From the explorers/developers Fission appears to offer the best value (US$2.30/lb), then Denison (US$3.90/lb), followed by NexGen (US$5.00/lb).

Exhibit 20: EV/lb Global Uranium Resources (Mlb, US$M, Uranium Grade)



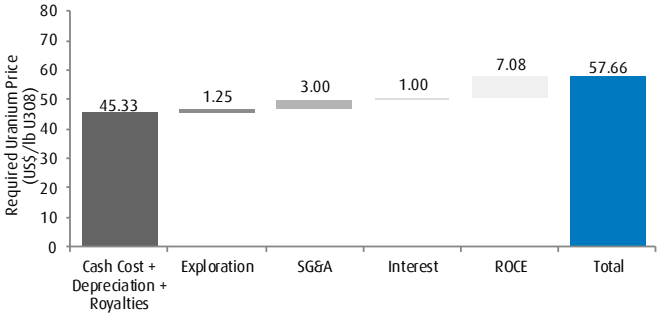
Source: BMO Capital Markets. Bloomberg. Bubble size indicates average uranium grade. Dark blue bubbles BMO coverage. Grey bubbles other uranium companies >100MCAP

Incentive Pricing

We have revised our uranium price forecasts following an update to our supply/demand outlook, which now assumes slightly higher demand later in the decade, largely on a lessening decline in some of the more mature nuclear markets (U.S., France, etc.) but ongoing strong demand growth from China. We estimate a marginal cost of ~US$45/lb (including cash costs, royalties, and depreciation as a proxy for capex), however, incorporating exploration, corporate costs, interest and an assumed minimum 14% IRR our calculated incentive price in today's money, as detailed in Exhibit 21, is US$58/lb based on marginal U.S. projects. As with any incentive price, rather than a 'target' this can be viewed as a through-the-cycle equilibrium to incentivise just enough supply to meet demand on a 10-year view.

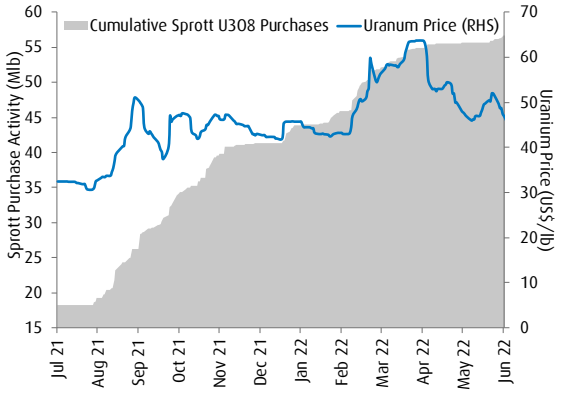
We would note that, for uranium, two different incentive prices can be considered depending on the timeframe. While global inventories remain elevated, this should act as a cap to the spot price, while ongoing financial buying has created a soft floor. During this period, the through-cycle price should be at levels which brings back idled brownfield capacity at the major producers. Given the quasi-functional oligopoly between Cameco and Kazatomprom, we see both as happy with spot prices in the $40-50/lb range. This is a level where incumbents earn good returns, but new entrants would struggle to justify the economics needed for capex-heavy development. Then, later in the decade as SMRs start to factor into the outlook, there will be a need for the $58/lb for greenfield as discussed above.

Exhibit 21: We have Increased Our L/T Uranium Price to US$58/lb, With Higher Demand Expectations Later in the Decade



Source: BMO Capital Markets

Exhibit 22: Near-Term Uranium Prices Have Greater Leverage to Financial Buying Activities



Source: BMO Capital Markets, Company Reports, UxC.

Company Tear Sheets:

Cameco (CCO)

Rating: Outperform

Target Price: C$42

MCAP US$8.4B

Cameco - Our #1 Top Pick in Uranium

Cameco is the world's second largest producer of uranium and is listed on the TSX and domiciled in Canada. The company has two key mines in Canada and a JV in Kazakhstan with a reserve base of more than 464Mlb U_3O_8. A key near-term catalyst is restarting the McArthur River mine later this year which is expected to reach 15Mlbpa by 2024. Cameco owns uranium refining and conversion facilities which are likely to benefit from tightness in the market due to potential Russian sanctions.

Cameco is a key standout stock in the uranium sector that is best positioned to benefit from positive momentum for nuclear builds generation and with the security of supply increasingly important for utilities/governments, in our view. Further, Cameco offers investors exposure to an advantageous geographical production base and its position as the largest and most liquid uranium stock, differentiating it from many of its peers.

Positives and Negatives:

+ Largest by market capitalisation and the most liquid listed uranium company globally, with 60% of production coming from Canada which is considered a safe jurisdiction, particularly important following the Russian invasion of Ukraine.
+ Near-term production growth via the restart of McArthur River later this year, which adds 15Mlbpa by 2024 (100% basis), or 10.5Mlb attributable (+90% growth on 2021). Potential for ~18Mlbpa at full capacity. Fuel services division should benefit from tightening conversion market.
+ Positive momentum in the contracting market, with geographic location likely to be a key positive for Cameco. Potential for sanctions on Russian enrichment has temporarily slowed this, however, we expect a pick-up in contracting through H2/22. Potential for Cameco's Global Laser Enrichment project to benefit from US$4.3B US fund for domestic EUP.
+ Successful defence of CRA tax dispute over years 2003/05/06 sets a strong positive precedent for remaining years under reassessment (2007-13), which should see eventual reimbursement of C$295M in cash and release of C$483M in letters of credit. However, timing is uncertain.
– Multiples are less attractive versus peers, with high 22/23E EV/EBITDA of 24/16x, and P/NPV of 1.2x, but we think it is worth it.
– EBITDA generation hinges on restart of McArthur River. A slower-than-expected restart could see the company reliant on substantial third-party purchase of uranium to fulfil existing, largely lower price contracts relative to spot.

Valuation:

We estimate Cameco has an $NPV_{10\%}$ of C$22.41/share. Our target price of C$42.00 is based on ~1.9x P/NPV multiple but still well below its historical peak of ~3x. We think investors will look past near-term multiples (2022/2023E EV/EBITDA 24/16x) as the strategic nature of the investment builds momentum, particularly with security of supply at the fore, and global uranium inventory levels expected to decline.

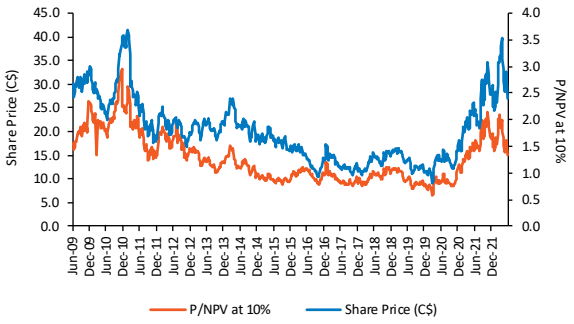
Near-Term Catalysts/Key Risks:

- **Delivery of the McArthur River Restart:** We estimate first production from McArthur River in Q3 this year, with Cameco's guidance for 5Mlb of sales. This operation drives significant cash flow for the company, with expectations of 84% attributable EBITDA growth year on year. Given the operation has been on care and maintenance since 2017, there is some risk of delay to the restart.
- **Adding to Long-Term Contracts:** Cameco signed 40Mlb of new long-term contracts in the first month of 2022, with only 30Mlb previously signed in all of 2021. Whilst no further contracts were signed in Q1, this was largely due to the conflict in Ukraine forcing utilities to focus on EUP delivery.

- **CRA Cash:** The CRA currently holds ~C$295M in cash related to Cameco's long-running tax case. Whilst the company has successfully defended its 2003, 2005, and 2006 years, the CRA continues to hold the cash whilst investigations for the years 2007-2013 are ongoing. Given the strength of judgement for the initial years by the Court of Appeal, Cameco could receive the cash back, worth ~C$0.77/share. Note the CRA announced it is intending to apply an alternate methodology for calculating tax owed, which could add to the delays.

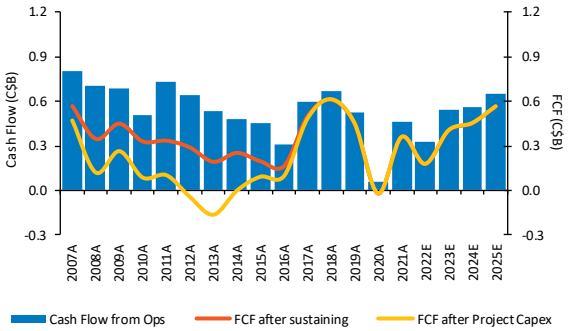
- **Slower-Than-Expected Expansion of Nuclear Power/Removal of Financial Tension:** Current spot prices assume some continued tension from financial buyers in the spot market, outcompeting utilities. A reduction in buying could see spot prices come under pressure which would likely weigh on Cameco's earnings. Long term, a slower-than-expected buildout of new nuclear capacity could cause momentum wain and Cameco's share price could underperform expectations.

Exhibit 23: Share Price vs. P/NPV$_{10\%}$



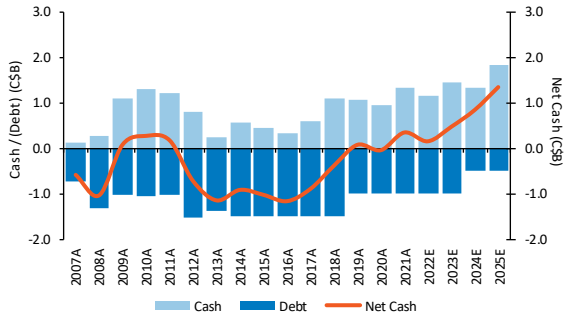
Source: BMO Capital Markets, FactSet

Exhibit 24: FCF (C$B)



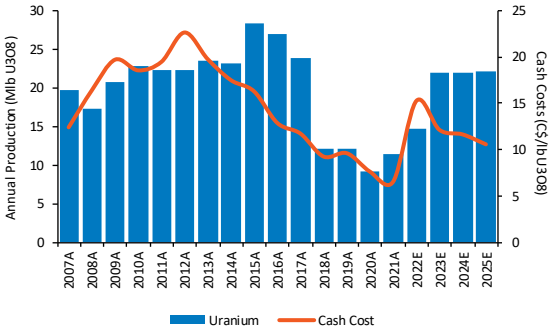
Source: BMO Capital Markets, Company Reports

Exhibit 25: Net Cash/Debt (C$B)



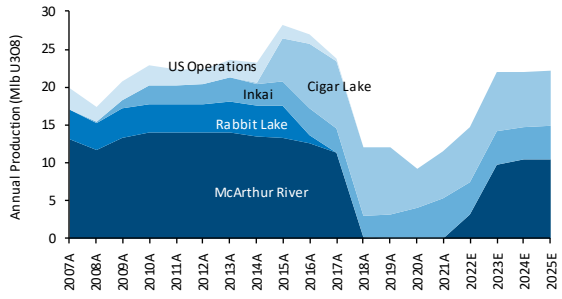
Source: BMO Capital Markets, Company Reports

Exhibit 26: Uranium Production and Cash Costs (Mlb, C$/lb)



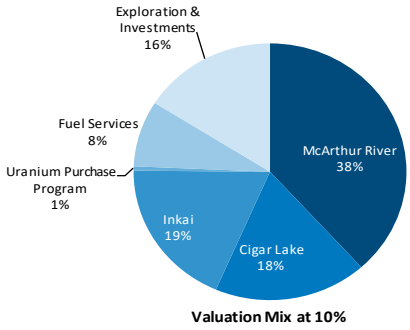
Source: BMO Capital Markets, Company Reports

Exhibit 27: Uranium Production by Asset (Mlb)



Source: BMO Capital Markets, Company Reports

Exhibit 28: NPV by Asset (%, 10% Discount)



Source: BMO Capital Markets, Company Reports

Kazatomprom – Our #2 Pick for Longer-Term Value

Kazatomprom (KAP)

Rating: Outperform

Target Price: US$47.50

MCAP US$6.3B

Kazatomprom is the world's largest producer of uranium, controlling 13 ISR mines in Kazakhstan which produce approximately 45% of global mine supply (57Mlb in 2022), or 24% on an attributable basis. The company is listed on the Astana stock exchange with GDRs trading on the LSE in USD. Samruk-Kazyna, the sovereign wealth fund of Kazakhstan, holds a ~75% interest in the company.

Kazatomprom offers investors exposure to the largest and one of the lowest-cost producers of uranium globally, with attributable production of ~30Mlb at an average AISC of US$18/lb in 2022. The company manages production rates for all JV partners within Kazakhstan; the largest and lowest-cost jurisdiction for uranium production in the world. The company has gone through a sea change in strategy in recent years and is now following a profit-over-volume strategy that is expected to deliver substantial cash flow and potential for further dividend growth.

Positives and Negatives:

+ Largest by production and one of the lowest-cost uranium miners in the world, with 24% global primary production (30Mlb in 2022, first-quartile cost with AISC of US$18/lb).
+ Best dividend policy of the group, with up to 75% of free cash flow as a dividend, and potential for more via a special in our view. We estimate 8/12% dividend yields in 2022/23.
+ Highest leverage to spot prices of the group (+13% EBITDA for every 10% increase in uranium).
+ Flexibility to produce to market conditions, should allow significant near-term production growth as conditions improve – we expect 24% attributable production growth to 38Mlbpa in 2025. The company has continued to follow its profit-over-volume strategy.
+ Strong EBITDA growth near term (+60% 2022 versus 2021), underpinning the best trading multiples of its peers ~5x 2022/23E and P/NPV of 0.7x.
– Limited free float with 75% state interest which could put off some investors.
– Potential sanctions on moving uranium through Russia could impact Kazatomprom's ability to move uranium through Russia, however, we note alternatives via Azerbaijan and China are tried and tested.
– Potential U.S. sanctions on Russian entities, including Rosatom and Uranium One could have a negative impact on some of Kazatomprom's JVs which account for ~25% of our NPV estimate.

Valuation:

We estimate Kazatomprom to have an NPV10% of US$37.64/share based on our long-term uranium price of US$58/lb. Our target price of US$47.50 reflects a 50/50 weighting of 1.4x NPV (long term) and 2022E and 2023E EV/EBITDA of 9.0x (short term). The company continues to trade on attractive multiples exacerbated by recent share price weakness, with EV/EBITDA at ~5.0/4.9x in 2022E and 2023E and a P/NPV of 0.7x. We rate the company as Outperform and think this stock offers the best long-term value of the uranium companies under coverage, with a dividend yield that pays investors to wait.

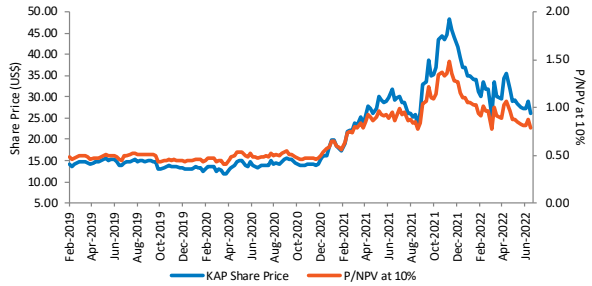
Near-Term Catalysts/Key Risks:

- **Production Uplift:** Kazatomprom continues to pursue a profit-over-volume strategy, with its mines running at 20% below licensed capacity levels through at least the end of 2023. However, we expect its 2024 production plans to be announced in Q3/22, which are expected to show a return to growth to 36Mlb by 2024 and on to its long-term rate of 41Mlb by 2026 (~71Mlba 100% basis).
- **Potential for Dividend Upside:** Kazatomprom continues to build cash on its balance sheet and, with an improving uranium market, we could see additional returns to shareholders in excess of its dividend policy.

- **Supply Lines Under Pressure:** Whilst no impact has been reported to date, its key uranium export route is via St Petersburg in Russia. The company has highlighted that alternative routes for export of uranium exist, although are likely to cost more. However, given the company's extremely low cost base, this should have a limited impact to EBITDA margins.

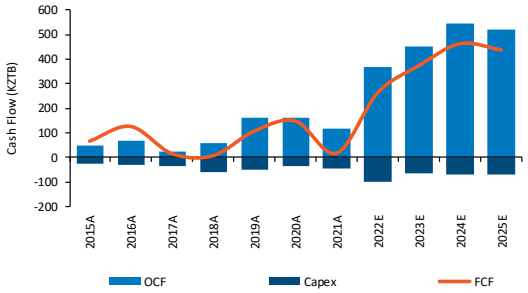
- **Slower-Than-Expected Expansion of Nuclear Power/Removal of Financial Tension:** Current spot prices assume some continued tension from financial buyers in the spot market, outcompeting utilities. A reduction in buying could see spot prices come under pressure which would likely weigh on Kazatomprom's earnings. Long term, a slower-than-expected buildout of new nuclear capacity could cause momentum to wain and the company's share price could underperform expectations.

Exhibit 29: Share Price Vs P/NPV$_{10\%}$



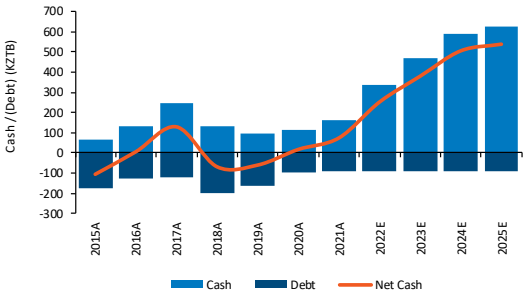
Source: BMO Capital Markets, FactSet

Exhibit 30: FCF (KZTB)



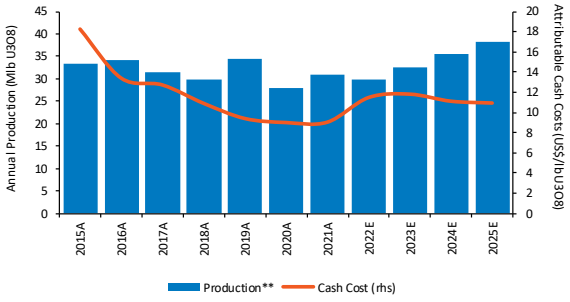
Source: BMO Capital Markets, Company Reports

Exhibit 31: Net Cash/Debt (KZTB)



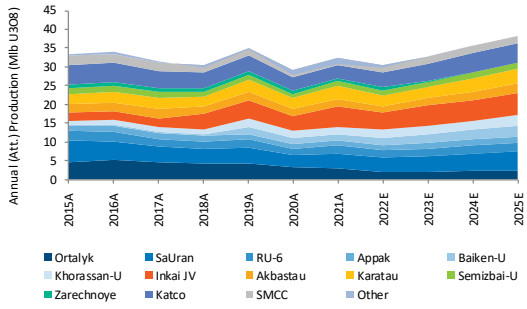
Source: BMO Capital Markets, Company Reports

Exhibit 32: Uranium Production and Cash Costs (Mlb, US$/lb)



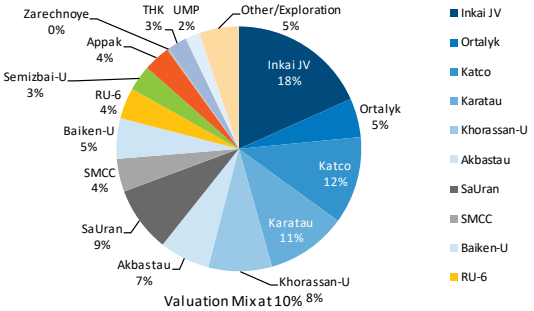
Source: BMO Capital Markets, Company Reports

Exhibit 33: Uranium Production by Asset (Mlb)



Source: BMO Capital Markets, Company Reports

Exhibit 34: NPV by Asset (%, 10% Discount)



Source: BMO Capital Markets, Company Reports

Denison Mines

Denison Mines (DML)

Rating: Market Perform (Speculative)

Target Price: C$1.40 (previously NA)

MCAP C$1.1B

Denison is a uranium explorer listed on both the TSX and NYSE, with a primary focus in the Athabasca Basin, Canada. Its key assets include the Wheeler River Project (95% owned) and a 22.5% interest in the McClean Lake Mill which processes Cigar Lake ore under a toll agreement. Its flagship asset Wheeler River has the potential to be extremely low cost, utilising ISR mining, the first of its kind in the Athabasca Basin. The company also undertakes mine decommissioning activities.

Denison offers investors exposure to a sizable and potentially low-cost uranium project in a safe jurisdiction. The company is currently progressing with an environmental assessment and a feasibility study for the Wheeler River project, which envisages an in-situ recovery (ISR) operation at the high-grade Phoenix deposit. We currently forecast Phoenix production of ~6Mlb U_3O_8 annually at an average AISC of ~US$22/lb by the end of the decade. While its PFS indicates that ISR has the potential for an extremely low-cost operation, hurdles remain until the FS and environmental assessment are completed and a development decision is made.

Positives and Negatives:

+ Use of ISL at Phoenix provides significant capex and operating cost advantage. If implemented, Phoenix would be the first ISL operation in the Athabasca Basin, which could deliver production of ~6Mlba (initial average) at an all-in sustaining cost of ~US$22/lb with capex of <C$400M on our estimates, which compares very favourably versus peers.
+ The company holds 2.5Mlb of strategic U_3O_8 inventory (valued ~US$125M), providing strong flexibility for future funding of Wheeler River development and avoiding excessive equity dilution. Further, with C$65M in cash, Denison has sufficient funding to continue near-term exploration/development activities over the next two years.
+ 22.5% stake in existing mill is a significant positive, lowering future permitting risk of future projects, with less mill infrastructure required.
+ Pre-feasibility study estimates 109Mlb of reserves support average production of ~8Mlbpa over a ~14-year mine life, incorporating the higher-grade Gryphon project (conventional mining likely, requires additional capex ~C$600M) after Phoenix. Upside potential from use of ISR at its Waterbury Lake project. Total attributable company resources of 164Mlb (ex "historical resources").
– Trading at a P/NPV multiple of 0.9x, a premium to its exploration peers. Some of this is likely warranted due to potential for its low-cost ISR operation at Wheeler River and strategic physical U_3O_8 investment which could cover one-third of the Phoenix capex.
– Untested use of ISR in the Athabasca Basin brings additional uncertainty and potential for permitting and technical delays beyond the norm (albeit we note that the company has done a good job at steadily de-risking the project so far, having achieved positive commercial-scale flow rates at its ISR test patterns in 2021).

Valuation:

We estimate Denison to have an $NPV_{10\%}$ of C$1.40/share, using our long-term uranium price of US$58/lb. We now ascribe a maiden target price of C$1.40 based on 1x its NPV, reflecting the technical and permitting risks associated with delivering its Wheeler River project. As a result we rate Denison Market Perform (Speculative), however, note that successful delivery of de-risking milestone at Wheeler River could see significant upside for the stock.

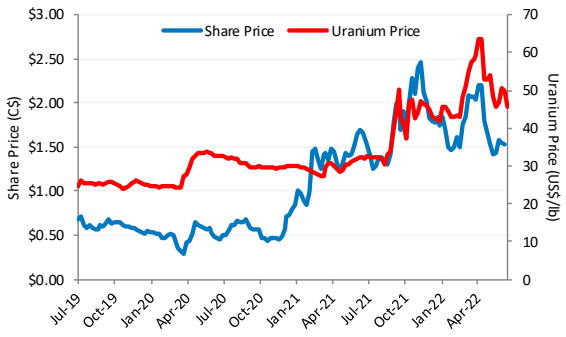
Near-Term Catalysts/Key Risks:

- **De-Risking ISR and Further Progress on Feasibility Study:** The company continues to deliver de-risking milestones for its ISR project. We expect this to continue, including further field programs to assess

the ISR mining conditions at additional areas of the Phoenix deposit to support the design of the feasibility field test. As part of this, the company is also working on delivering a draft environmental impact statement to the regulators.

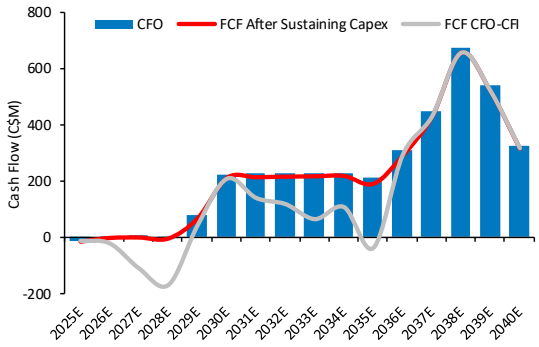
- **Delays due to COVID-19 and Supply Chain Constraints:** Ongoing impact of the COVID-19 delays and associated supply chain disruptions including availability of contractors could delay the ongoing feasibility study and environmental assessment process.
- **Slower-Than-Expected Expansion of Nuclear Power:** The long-term market fundamentals rely on improving sentiment for new reactor builds, which, if slower than expected, could cause a slowing of momentum and reduce the requirement for new, greenfield projects, potentially delaying construction of Wheeler River.

Exhibit 35: Share Price vs. Uranium Price (C$/share, US/lb)



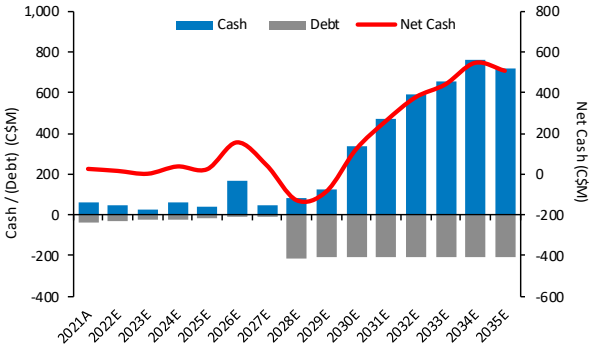
Source: BMO Capital Markets, FactSet

Exhibit 36: CFO and FCFs (C$M)



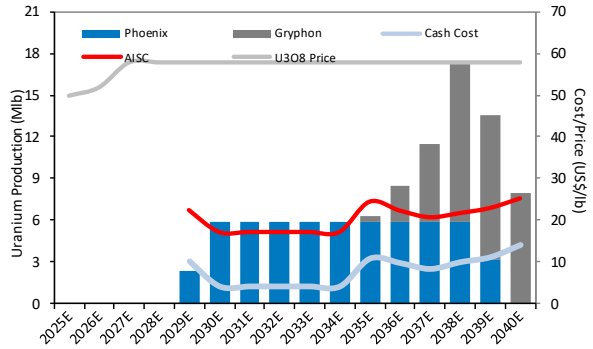
Source: BMO Capital Markets, Company Reports

Exhibit 37: Cash, Debt and Net Cash (C$M)



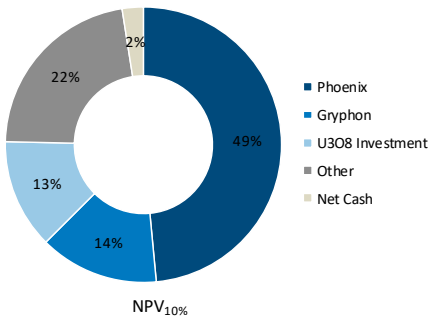
Source: BMO Capital Markets, Company Reports

Exhibit 38: Uranium Production, Cash Costs and Prices (Mlb, US$/lb)



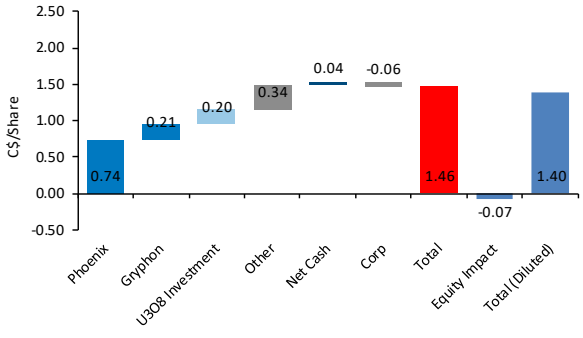
Source: BMO Capital Markets, Company Reports

Exhibit 39: NPV by Asset (%, 10% Discount)



Source: BMO Capital Markets, Company Reports

Exhibit 40: NPV by Asset (C$/share, 10% Discount)



Source: BMO Capital Markets, Company Reports

Fission Uranium

Fission Uranium (FCU)

Rating: Market Perform (Speculative)

Target Price: C$0.75

MCAP C$0.4B

Fission Uranium is a uranium explorer listed on the Toronto Stock Exchange; its primary asset is the Patterson Lake South (PLS) project, which has the potential to be a large, low-cost underground uranium operation in the Athabasca Basin.

Fission offers investors exposure to a high-grade and advanced uranium project in a safe jurisdiction. The company is currently progressing with an environmental assessment and a feasibility study for its PLS Project. The project PFS envisages a long hole stoping underground operation at the Triple R deposit. We currently forecast the PLS Project to commence production in 2029, producing ~10Mlb annually at Triple R at an average AISC of ~US$20/lb. While its PFS indicates that PLS has the potential for an extremely low-cost and flexible operation, risk remains until a feasibility study is completed and a development decision is made.

Positives and Negatives:

+ Basement rock hosted mineralisation allows use of conventional underground mining methods and near surface reducing overall risk.
+ 2019 PFS highlights reserves of 2.3Mt at a high grade of 1.61%, with contained uranium of 81.4Mlb, supporting ~7-year mine life at a rate of ~11Mlbpa. Total resources of 3.4Mt and 135Mlb and potential for upside through ongoing exploration.
+ Trades on the best EV/lb resources of the companies under coverage at US$2.30/lb versus the peer average of ~US$4.70/lb.
+ Strategic partner CGN (Chinese utility) holds 14% of Fission equity, a vote of confidence in the project and provides some potential M&A tension.
– Higher capex (BMOe ~C$1.2B) relative to its market capitalisation, increases funding risk.
– P/NPV multiple of 0.9x in line with peer average.
– Located on the western periphery of the Athabasca Basin, away from well-established existing uranium infrastructure in the east of the basin increases potential permitting headwinds, although given its location on the same trend as NexGen there could be potential for some synergies (not modelled by either at this stage).
– Significant potential production run-rate, represents ~8% of the current primary supply, likely to require securing contracting with utilities for the project development.

Valuation:

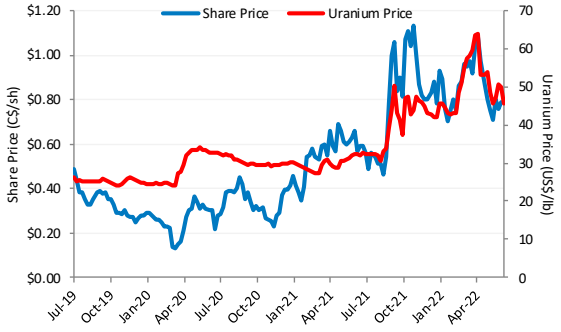
We estimate Fission to have an NPV10% of C$0.73/share, using our long-term uranium price of US$58/lb. Whilst we see potential for ongoing resource upside and we think the company has developed a solid project, it trades on average multiples versus its peers despite recent share price weakness with a P/NPV of 0.9x. We ascribe a new target price of C$0.75, based on 1x its NPV and rate Fission Market Perform (Speculative).

Near-Term Catalysts/Key Risks:

- **Completion of Feasibility Study:** Fission is currently progressing with a feasibility study for the PLS Project, targeting completion by the end of 2022.
- **Conclusion of EIA:** The company is currently progressing with environmental assessment and stakeholder engagement processes. Fission expects to conclude the EIA processes in 2023.
- **Potential Exploration Upside:** Fission continues to target exploration alongside its technical study work. Thus, the company has the potential to increase and upgrade its mineral resource base with the upcoming feasibility study which could see upside to the existing estimates.

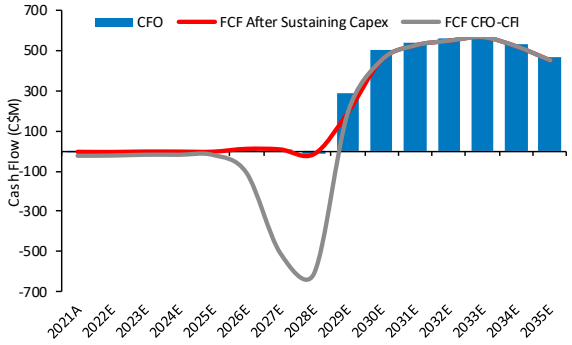
- **Slower-Than-Expected Expansion of Nuclear Power:** The long-term market fundamentals rely on improving sentiment for new reactor builds, which, if slower than expected, could cause a slowing of momentum and reduce the requirement for new, greenfield projects, potentially delaying construction of Wheeler River.

Exhibit 41: Share Price vs. Uranium Price (C$/share, US/lb)



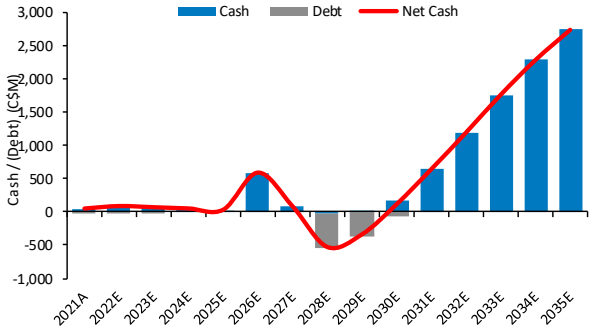
Source: BMO Capital Markets, FaceSet

Exhibit 42: CFO and FCFs (C$M)



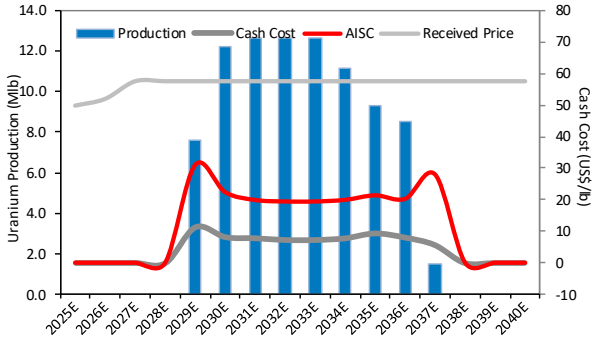
Source: BMO Capital Markets, Company Reports

Exhibit 43: Cash, Debt and Net Cash (C$M)



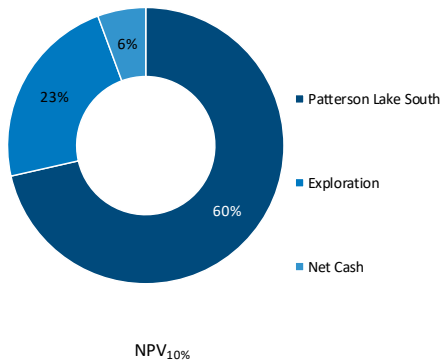
Source: BMO Capital Markets, Company Reports

Exhibit 44: Uranium Production, Cash Costs and Prices (Mlb, US$/lb)



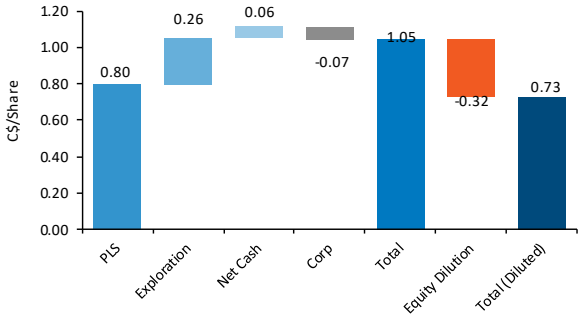
Source: BMO Capital Markets, Company Reports

Exhibit 45: NPV by Asset (%, 10% Discount)



Source: BMO Capital Markets, Company Reports

Exhibit 46: NPV by Asset (C$/share, 10% Discount)



Source: BMO Capital Markets, Company Reports

NexGen Energy – Preferred Uranium Exploration Stock

NexGen Energy (NXE)

Rating: Outperform (Speculative)

Target Price: C$6.50 (previously NA)

MCAP C$2.2B

NexGen is a uranium explorer listed on TSX and NYSE. Its primary asset is the advanced Arrow Project, which is a high-grade basement-hosted uranium project in the western Athabasca Basin, Canada, with potential to be one of the largest uranium mines globally.

NexGen offers investors exposure to a world-class, advanced uranium project in a safe jurisdiction. The company has recently submitted the environmental impact statement and is focused on completing the front-end engineering for the project. The project envisages a long hole stoping underground operation, which we forecast to commence production in 2028, producing 21.0Mlb annually. While its FS indicates that Arrow has the potential for an extremely low-cost operation, the company continues to confirm details through detailed engineering and a geotechnical confirmation program.

Positives and Negatives:

+ With the feasibility study completed and engineering studies ongoing, Arrow project is the most advanced relative to Denison's Wheeler River and Fission's PLS projects, located in a favourable "safe jurisdiction".
+ Conventional underground mining method, with mineralisation all basement rock hosted, with mining conditions likely to be relatively favourable versus other Athabasca Basin projects. We estimate AISC of ~US$18/lb, which would make it one of the lowest cost conventional mines globally. Plans to minimise project footprint due to the use of an underground tailings management facility that minimises surface disposal of tailings.
+ Large and high-grade reserves of 4.6Mt at 2.37%, totalling 240Mlb U_3O_8, the FS suggests this supports average production of 22Mlbpa over a mine life of 11 years. Resources total 8.2Mt containing 337Mlb, with significant potential for upside. We model a slightly lower peak rate and average production of 21Mlb and longer mine life of 13 years.
+ Peer-leading P/NPV multiple of 0.8x. Could be attractive for M&A by a company looking for a foothold in the basin.
± Potential peak production of ~27Mlbpa and an average run rate of ~21Mlba would make it the largest uranium operation ever. Further is ~17% of current primary supply, so the company needs to manage its contract portfolio as part of project development.
– Located on the west periphery of the Athabasca Basin, away from well-established existing uranium infrastructure in the east of the basin. Will require permitting for a mill, although high grade reserves mean mill size is relatively modest (1.3ktpd throughput).
– Relatively high capex (BMOe ~C$1.4B) increases financial risk, however, NexGen's balance sheet is solid with C$183M in cash and solid institutional following.

Valuation:

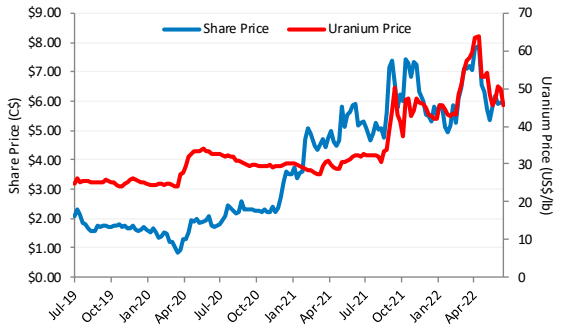
We estimate NexGen to have an NPV10% of C$6.00/share, using our long-term uranium price of US$58/lb. NexGen offers peer-leading multiples, with a P/NPV of 0.7x, higher potential M&A tension because of the size and scale of its Arrow project, as well as being more advanced, in our view, versus its peers. As a result we ascribe a new target price of C$6.50, based on 1.1x its NPV and rate NexGen Outperform (Speculative).

Near-Term Catalysts/Key Risks:

- **Completion of Front-End Engineering:** The company expects to complete the front-end engineering studies in Q4/22, and plans to start detailed engineering design and geotechnical confirmation program in 2022. Recently submitted its Draft Environmental Impact Assessment.

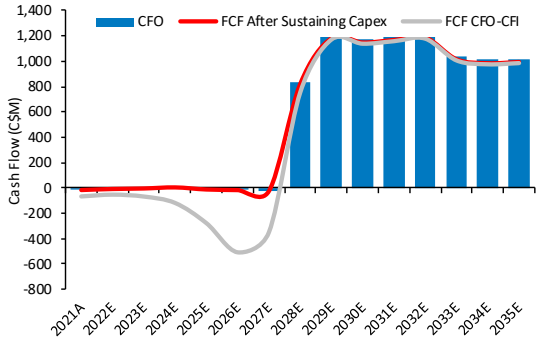
- **Potential Offtakes and Project Financing:** Both engineering studies and permitting are well advanced, the next key steps will be project approval and financing. Success of the financing is dependent on risk mitigation strategies such as potential offtake with utilities.
- **Slower-Than-Expected Expansion of Nuclear Power:** The long-term market fundamentals rely on improving sentiment for new reactor builds, which, if slower than expected, could cause a slowing of momentum and reduce the requirement for new, greenfield projects, potentially delaying construction of Wheeler River.

Exhibit 47: Share Price vs. Uranium Price (C$/share, US/lb)



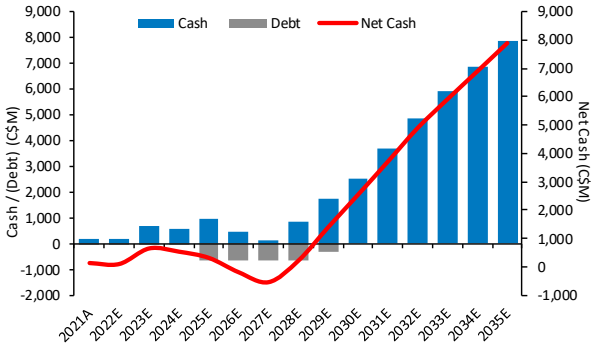
Source: BMO Capital Markets, Company Reports

Exhibit 48: CFO and FCFs (C$M)



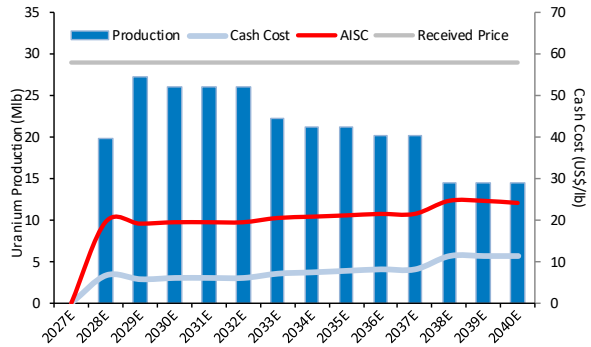
Source: BMO Capital Markets, Company Reports

Exhibit 49: Cash, Debt and Net Cash (C$M)



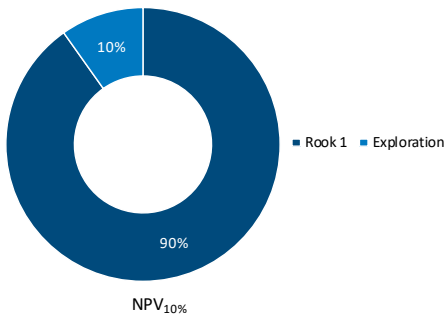
Source: BMO Capital Markets, Company Reports

Exhibit 50: Uranium Production, Cash Costs and Prices (Mlb, US$/lb)



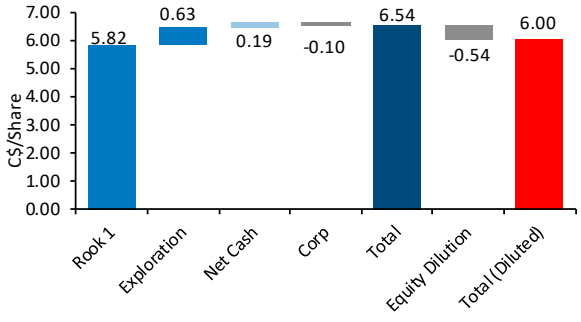
Source: BMO Capital Markets, Company Reports

Exhibit 51: NPV by Asset (%, 10% Discount)



Source: BMO Capital Markets, Company Reports

Exhibit 52: NPV by Asset (C$/share, 10% Discount)

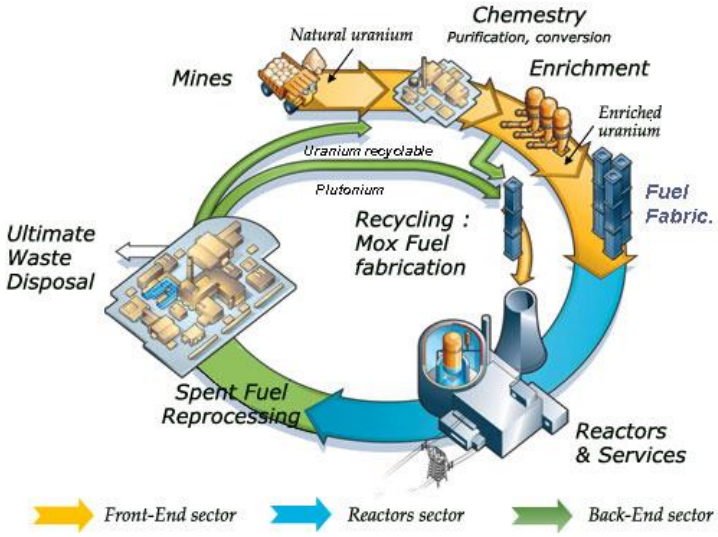


Source: BMO Capital Markets, Company Reports

In Depth - The Nuclear Supply Chain

The nuclear supply chain is a complex beast, with variables such as enrichment levels, tails assays and refuelling cycles having significant impacts on the end demand for uranium. Therefore, being able to visualise the processes needed to take uranium out of the ground and make it fuel ready to be loaded into a nuclear reactor helps with understanding the long timelines involved and some of the driving factors behind fuel procurement strategies, offtake agreements, etc.

Exhibit 53: Nuclear Supply Chain Schematic



Source: Orano

Mining:

Uranium is currently mined using three principal methods, which vary by deposit style:

- Conventional **open pit mining** of large, low-grade deposits, which can consist of both primary and/or secondary mineralisation. Examples include CNNC's Rössing mine in Namibia (primary mineralisation) and Paladin's Langer Heinrich mine, also in Namibia (secondary mineralisation).

- **Underground mining** of higher-grade deposits. In Canada these are associated with unconformity style mineralisation and often require innovative mining methods such as freezing the orebody and remote jet boring. Examples of underground mines include Cameco's Cigar Lake operation and BHP's Olympic Dam.

- **In situ leach (ISL, also known as in situ recovery)** mining of sandstone hosted roll-front mining. Also known as in situ recovery (ISR), this involves pumping a recovery solution into the orebody via injection wells, dissolving the uranium in situ, and recovering the loaded solution through a field of extraction wells. All uranium mining in Kazakhstan and the bulk of the U.S. is by ISL.

The final product produced at the mine is a blend of uranium oxide concentrates in a powder form, typically 70-90% U_3O_8 with the balance consisting of other uranium oxides, colloquially known as 'yellowcake,' although more often calcined at the mine site to a black powder. This is packaged in oil drums and shipped to various facilities around the world as per the buyer's instructions. Transfer of ownership usually occurs upon delivery but can be at the mine gate.

Exhibit 54: Uranium Oxide (Yellow Cake) at Inkai

Source: BMO Capital Markets.

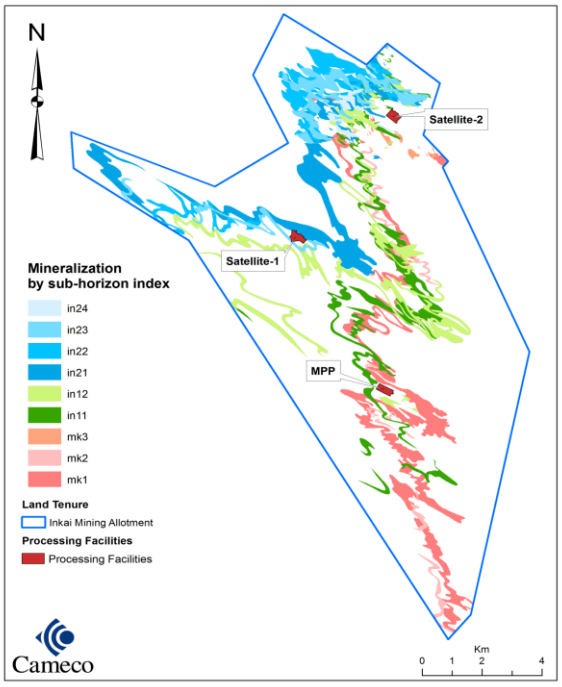
Exhibit 55: Calcined Uranium Oxide

Source: BMO Capital Markets.

ISL Mining Explained

More than 50% of the world's uranium is mined by in situ leaching (ISL), otherwise known as in situ recovery (ISR) of the orebody, dominated by production from Kazakhstan. The ore bodies in Central Kazakhstan consist of roll-front type deposits hosted in fine to medium grained sands, inter-bedded with dark grey clays and lignites in packages 40-75m thick. The mineralisation is in the form of pitchblende and coffinite in 'roll fronts,' which average 7m in thickness but can be as thick as 20m, and can occur over multiple stacked horizons as illustrated in the plan view of the Inkai orebodies below.

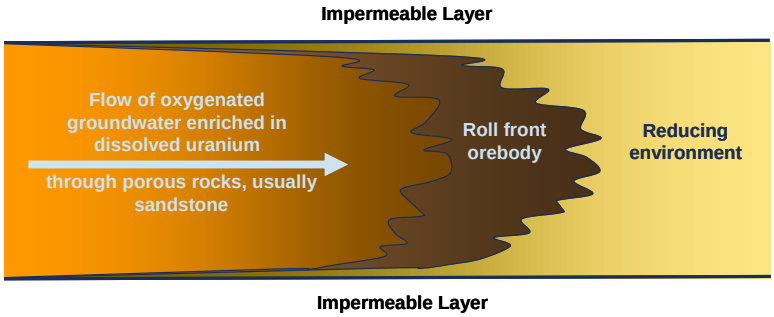
Exhibit 56: Schematic Plan View of Roll-Front Mineralisation at Inkai



Source: Cameco

Roll-front mineralisation forms in porous sediments where oxygenated ground water enriched in uranium from primary sources (usually igneous rocks such as granite) encounter a reducing environment causing the uranium to precipitate out. The redox front of the orebody gradually 'rolls' downstream with the direction of the flow of ground water, forming long sinusoidal mineralised trends. In cross section the orebody forms a crescent shape.

Exhibit 57: Schematic Horizontal View of Roll-Front Mineralisation



Source: BMO Capital Markets

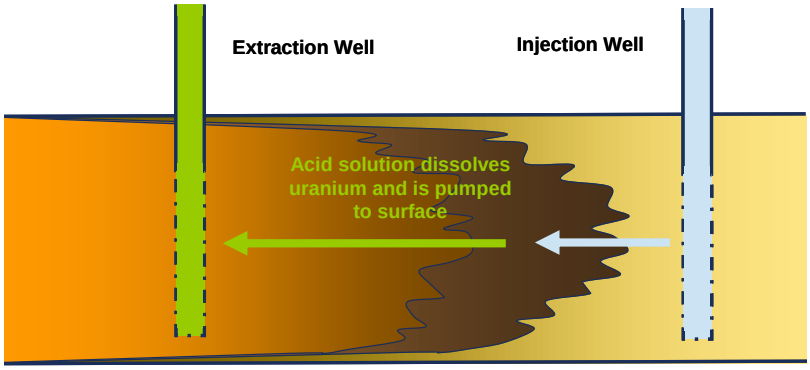
Mining and Processing

ISL mining essentially follows the same processing route as conventional operations, but rather than extracting and crushing the ore prior to leaching, the porous nature of the orebody allows acid, alkali or oxygenated water to be pumped through leaching uranium from the ore in situ. This in essence reverses the process nature followed to emplace the uranium.

Introducing and removing fluid from the ore body requires the development of a well field consisting of a hexagonal 'grid' of injection and extraction wells. A weak acid solution is pumped down the injection wells, leaching uranium from the ore body creating a pregnant solution which returns to the surface via the extraction wells.

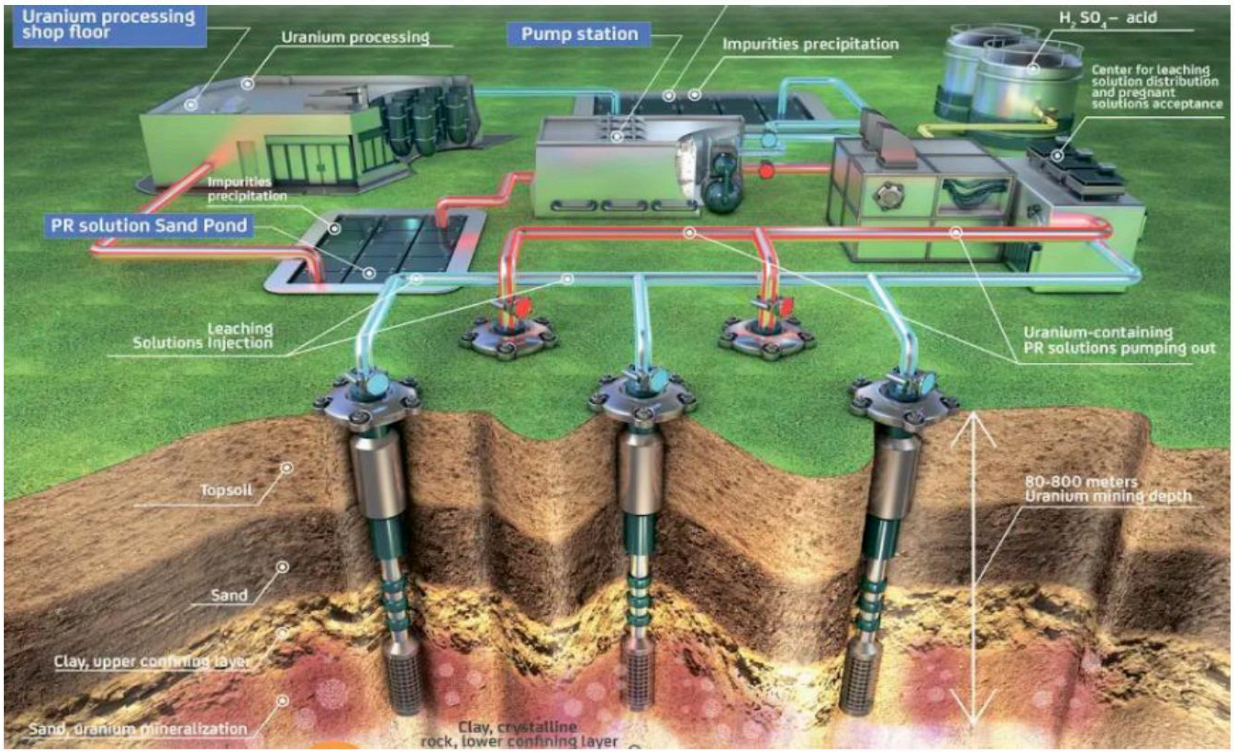
Key to the success of the process is having at least one impermeable layer below the orebody in order to retain the solution, with the solution naturally migrating downwards. Further important factors include the permeability of the host sandstone matrix, as well as the level of carbonates into the ore body. A high level of carbonates can neutralise the acidic solution, increasing costs. Furthermore, carbonate mobilisation and reprecipitation can reduce permeability in time, reducing the overall amount of recoverable uranium.

Exhibit 58: Simplified Diagram ISL Principles



Source: BMO Capital Markets

Exhibit 59: In Situ Leach – A Broader Schematic



Source: UxC, Kazatomprom

The pregnant solution is then brought to surface and passed through an ion exchange column where the uranium is trapped in resin beads within the "IX" columns. Ammonium nitrate is used to strip uranium from the resin, producing a concentrated uranium solution to which hydrogen sodium hydroxide is added, causing uranium to precipitate as sodium urinate. This is filter pressed and dried to produce yellowcake, which is a saleable product, with total recoveries being in the region of 90%. Yellowcake can then be calcined to produce a powdered black blend of uranium oxides, which is the customer's preferred form of delivered material.

Exhibit 60: Akdala, U-shaped Ion Exchange Column

Source: BMO Capital Markets

Exhibit 61: Akdala, Filter Press

Source: BMO Capital Markets

Refining and Conversion:

At facilities such as Cameco's Blind River complex, uranium concentrate is refined to produce high purity uranium trioxide (UO_3). This is then shipped to a conversion facility (sometimes co-sited) such as Cameco's Port Hope operation, where it is converted to either uranium hexafluoride (UF_6), for use in the production of fuel for light water reactors, or uranium dioxide (UO_2), for use in the production of fuel for heavy water reactors.

Enrichment:

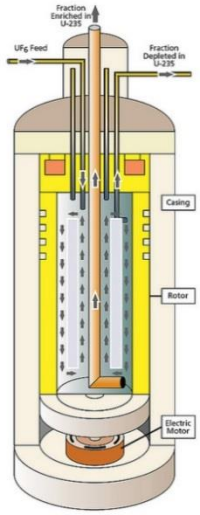
The bulk of the world's reactors are of the light water type, which require enriched uranium fuel. However, there are a large variety of different reactor designs and fuel types tried and/or commercialized since the advent of civilian nuclear power, which have highly varied fuel requirements. Therefore, the following description should be considered a generalisation.

Natural uranium consists primarily of two isotopes, ^{238}U (99.28%) and ^{235}U (0.72%). ^{235}U is fissile and can sustain a fission chain reaction, whilst ^{238}U is only fissionable by fast neutrons and cannot sustain a nuclear chain reaction on its own. Light water reactors require the level of ^{235}U to be enriched from the natural level of 0.72%, up to 5% ^{235}U depending upon the reactor design and refuelling strategy, but typically between 3% and 4.5%. High Assay Low Enriched Uranium (HALEU) generally for use in advanced reactors/SMRs uses uranium that has been enriched to as much as ~20% which provides more energy per volume of fuel and/or potentially increases the life of the core load used in the reactor.

To enrich uranium, gaseous UF_6 is passed through cascades of gas centrifuges that spin at extremely high velocities (>50,000/min) and utilise the centripetal acceleration combined with a thermal gradient to gradually separate ^{235}U and ^{238}U based upon their isotopic mass. The process produces two streams, a product stream enriched in ^{235}U and a waste stream depleted in ^{235}U, also known as tails.

The 'tails assay' refers to the amount of ^{235}U left in the waste stream, which is typically around 0.2% in Western enrichment facilities and 0.15% in Russian facilities. The tails assay is important as it indicates the amount of effort ('separative work units' or SWU) that has been employed in creating the enriched uranium product (EUP) stream, which in turn has implications in terms of the amount of natural uranium that has been employed to generate a given amount of EUP.

Exhibit 62: Simplified Gas Centrifuge Schematic



Source: U.S.NRC.

Exhibit 63: Centrifuge Cascade

Source: Cameco

The relationship between the amount of natural uranium utilised and the amount of SWU required to generate a given quantity of enriched uranium is elastic. I.e., it is possible to use more natural uranium and less SWU to reach a required level of enrichment, or to use less natural uranium and more SWU.

A good analogy of this is to think about making orange juice. To make a litre of orange juice one might squeeze 10 oranges, but squeezing nine oranges harder (using more energy) could produce the same amount of juice, or squeezing 11 oranges more gently (using less energy) could also produce the same amount of juice.

Thus, a higher tails assay implies that less SWU has been utilised and that more natural uranium has been used and vice versa. At any given time there is an optimal tails assay which is driven by the relative cost of enrichment (SWU) and natural uranium. In practice the ability of utilities and enrichment companies to modulate the tails assay is believed to be relatively limited in the short term but somewhat flexible in the longer term.

Once a centrifuge is started up it is intended to run without stopping until the end of its design life (perhaps 20-30 years), with the equipment very finely balanced and spinning at extremely high velocities, the machines run the risk of damage if brought offline. The result is that any excess enrichment capacity must be utilised rather than suspended. This is discussed in more detail in the section on secondary supplies later, as tails re-enrichment and underfeeding, both linked to excess enrichment capacity, are important contributors to secondary supplies.

Fuel Fabrication:

After enrichment, enriched UF_6 is converted to UO_2 and fabricated into fuel pellets, typically <10mm in diameter and 10mm long, through sintering at 1,400°C. This usually occurs in different facilities to enrichment and conversion. Fuel pellets are loaded into fuel rods, which are then arranged into assemblies ready to be loaded into reactors during a refuelling outage.

The dimensions of fuel pellets and the arrangement of fuel rods into assemblies vary widely by reactor design. It is also worth noting that there are other less common fuel types aside from the oxide fuels described above. These include ceramic, metal and liquid fuels such as molten salt.

Refuelling Cycles:

Refuelling cycles can have a significant bearing on natural uranium, with reactors typically operating on 12-24 month cycles, with longer cycles generally requiring higher levels of enrichment and replacing a greater amount of fuel at each outage. A typical rule of thumb is that one-third of the core is replaced for every 12 months of operation. During refuelling outages, remaining fuel assemblies are shuffled to optimise efficient use of the fuel in terms of both burn-up and the build-up of neutron poisons.

Longer refuelling cycles equal a longer 'burn' time, which can mean lower efficiencies later in the cycle and more fuel needing to be replaced during a refuelling outage. However, these factors can be offset economically by the need for fewer refuelling outages, which are expensive. The balance is a function of the cost of fuel (additional, and/or higher enrichment), the cost of refuelling, the loss of generating efficiency with time, and the risk of fuel damage with more time in the reactor.

Supply Chain Timeframes and Security of Supply Explain Inventory Strategies

Engineers typically start planning for a refuelling outage at least 18 months in advance. This reflects the amount of work that needs to be conducted in calculating how much fuel will be needed, the refuelling pattern and the time it takes to regulatory approval for the refuelling plan. It also reflects the lead time required to source new fuel.

Suppliers typically maintain inventories at each stage of the fuel supply chain, which means that processing times are not usually a constraint. However, with suppliers scattered across the globe, transportation often is. Given the five stages of the fuel cycle, mining → conversion → enrichment → fuel fabrication → reactor, there are at least four shipping stages, which given that facilities are scattered around the globe means that up to a year can be consumed just in shipping times alone. Utilities will also typically want to have fuel at site for final planning and checks some time in advance of the refuelling outage.

It is also worth noting that the most expensive operating cost for a nuclear reactor is the overnight cost of capital; to minimise this on a unit of output basis a reactor needs to be operating for as much time as possible. Capacity utilisation rates can be in excess of 90% and are typically more than 80%, which compares favourably to thermal power stations (40-60%) and highly favourably to renewables of <40%.

Given that nuclear fuel is typically only a small percentage of the operating cost of a nuclear reactor, only around 10-15% including conversion, enrichment and fabrication, and that continued operations are a priority, security of supply is a major concern for utilities. As such, they tend to operate with a considerable amount of uranium in inventory.

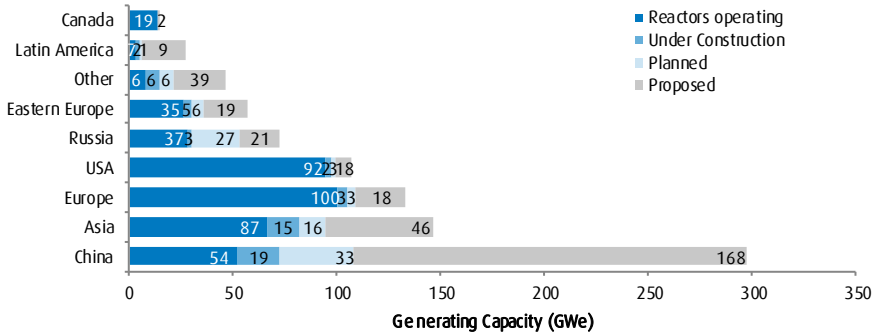
Strategic inventories at the utility level can vary from country to country and is also generally proportional to the spot uranium price (i.e., as the price goes up, more inventory is likely to be considered strategic). In the past, in general these were: one to two years of requirements for North American utilities, through two to four years for European utilities, and four to five years for Asian utilities. Utilities may carry inventory above these levels, which are often subjectively classified as excess inventories.

Installed and Future Nuclear Capacity

We model every nuclear power station in the world to drive our uranium demand forecast. There are 440 reactors currently in operation (WNA June 2022), with a combined generating capacity of ~394GWe. There are also 55 under construction and 95 planned, for a total of 150 reactors that have a reasonable likelihood of reaching completion. Meanwhile, a further 340 reactors have been proposed.

Due to protracted permitting, planning and construction times, as well as the political sensitivity associated with nuclear power, there are inevitably delays to reactor schedules. Reviewing the WNA's forecast from 2009, shows that there were 436 reactors in operation, suggesting that the total reactor count has only increased by 4 net of closures in this time, although it is worth noting that capacity upgrades have expanded total generating capacity and do result in greater fuel consumption.

Exhibit 64: Nuclear Generating Capacity and Number of Reactors (GWe)

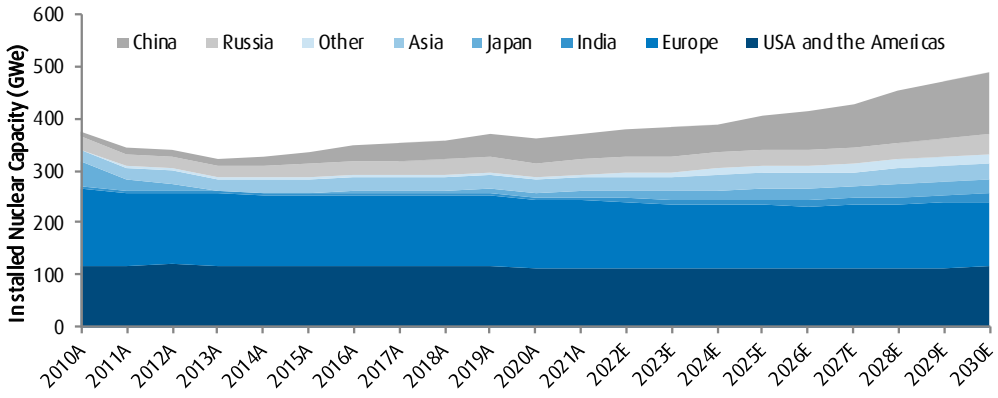


Source: WNA, Figures indicate number of reactors: (Existing, Under Construction, Planned, Proposed).

In terms of our forecasts, we model an additional 117GWe of electricity net including closures by 2030, which is a 32% increase on current levels, for a CAGR of 3%. The trend in reactor size has in general been increasing; the average power output in 2017 was ~890MW in size, versus the average for new reactors well over 1GW.

China remains the core market for growth with 19 reactors under construction, a further 33 planned and another 168 proposed. China is targeting 70GWe capacity by 2025 (we model 65GWe), with a longer-term target of 120-150GWe by 2030. We model an additional 69GWe to be commissioned over the next nine years, which would make it larger than U.S. on total nuclear generating capacity.

Exhibit 65: Nuclear Generating Capacity by Country/Region (GWe)



Source: WNA. BMO Capital Markets

Risking the Outlook for Nuclear Power

For the first time in a number of years we believe the skew of risk is now more balanced. Politics have played a key part, with growing support for non-carbon emitting base load power generation in general, and we have even seen some reversals of phase-out decisions (e.g. Belgium). Indeed COP26 last year saw a leg up in positive support, with a number of supportive announcements following the event, including US$6B earmarked to preserve the U.S. fleet, more recently potential for a further US$4.3B for domestic enriched uranium product (EUP), as well as France looking to add six new reactors to Europe's largest fleet. Whilst further upside surprises to installed nuclear capacity are unlikely, there is the potential for upside surprises to uranium demand, either from shifts in inventory strategies, or from changes to tails assays in response to enrichment or reduced access to enrichment infrastructure, particularly if Russian enrichment is sanctioned as a direct result of its invasion of Ukraine.

In general, however, near-term upside surprises to installed nuclear capacity are considered unlikely due to the long planning and construction timeframe for building nuclear power stations. Conversely, downside surprises are much more likely given the risks of construction delays and early closures of existing plants. Early closures are still a feature of recent years, particularly in the U.S. and in Europe where until recently low natural gas prices and subsidised renewables made for depressed wholesale electricity prices that have challenged the economics of older and single unit nuclear power stations, however, pricing increases for alternative fuels have brought more balance to this recently.

Uranium Demand

In converting estimated future generating capacity into demand for natural uranium, we have considered factors such as the lead time for enrichment and fuel fabrication, the impact of initial core loads for new reactors, tails assays and buffer inventory building.

- Our demand forecasts look 12 months ahead, which we estimate is the absolute minimum time required to take material through the supply chain (in reality it is probably longer).
- The initial core load for a new reactor typically requires around three times the amount of natural uranium as required during each refuelling cycle and this is captured in our forecasts for new reactors.
- Our demand estimates work off a tails assay of 0.15% for Russian and Russian-supplied reactors and 0.20% for the rest of world, however, as noted below flexing the tails assays can have a relatively large impact to uranium demand if Russian enrichment sanctions are enacted.

All of this translates into steady utility demand growth to 2030, on our estimates, at an average compound average growth rate of 4% per annum from 172Mlb U_3O_8 in 2021, reaching peak demand of 239Mlb U_3O_8 in 2030.

Secondary Supplies

Since 1990, the annual supply of newly mined uranium has been substantially less than the amount of uranium required for use in nuclear reactors.

The balance of material has been, and continues to be met, from inventories and secondary supplies with >30Mlb of uranium requirements estimated to have been met from secondary supplies in 2020.

Inventories and secondary supplies include:

- uranium from inventories and stockpiles;
- tails re-enrichment;

- reprocessed nuclear fuel;
- mixed oxide fuels (containing plutonium);
- down-blending of high enriched uranium (HEU) from weapons; and
- 1950-70s oversupply.

Looking Forward

When examining supply and demand in the uranium market, consideration must be given to inventories and future secondary supplies of uranium.

The likelihood is that the use of reprocessed nuclear and mixed oxide fuels will likely increase, albeit slowly due to capacity constraints, whilst non-commercial stockpiles of natural uranium are likely to diminish with time. Tails re-enrichment is likely to be dependent upon the amount of spare enrichment capacity and the trade-off between the cost of natural uranium and the cost of enrichment.

The main near-term uncertainty is the availability to the market of tails re-enrichment via underfeeding from Russian excess enrichment capacity.

Russian HEU

One of the principle sources of secondary supply in the recent past has been low enriched uranium (LEU) sourced from the decommissioning and down-blending of HEU contained within Russian nuclear weapons (taking >90% ^{235}U to below 5% ^{235}U) through the Megatons to Megawatts deal.

The Megatons to Megawatts programme spanned 20 years and was drawn up between Russia and the U.S. to down-blend 500 metric tonnes of HEU. The first shipments were made in 1995, and it finished in 2013, having supplied the equivalent of ~23Mlb U_3O_8e of natural uranium demand per annum, the majority of which was used by U.S. utilities.

Although Russia has emphasised that no HEU will be down-blended to LEU post the end of the deal, we note that Russia does continue to hold HEU inventories and could make the material available to domestic reactors if required. However, in our view, this is more likely to continue to be held in inventory as contingency against price or supply issues.

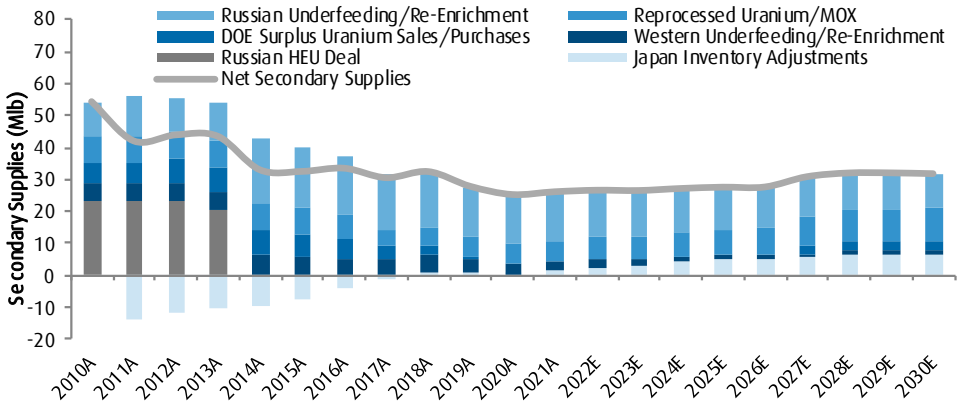
U.S. DOE Surplus Uranium Inventories

In the past, the U.S. Department of Energy sold from its inventory of material into the market and as payment in kind for clean-up services, such as at the Portsmouth Gaseous Division Plant, as well as agreements with the Tennessee Valley Authority (TVA) for down-blended off spec LEU (used in the Brown's Ferry Nuclear plant), and transfer of depleted uranium hexafluoride to Energy Northwest. In order to be transparent and minimise market disruption, the DOE issues a Secretarial Determination every two years that provides inventory disposition limits based on "market factors". In recent years, these surplus sales amounted to between 4-8Mlbpa, however, since March 2018 all sales of uranium have been suspended.

Sanctions on Russian Enrichment Could Reduce Secondary Supplies and Add to Demand

Our secondary supply forecast also includes the effects of Japanese inventories. In our forecasts, we include the drawdown of these inventories as an additional source of secondary supply, given Japanese utilities are likely to draw down on these inventories ahead of buying on the open market. The net result of our estimates is that total secondary supply is expected to increase from an estimated ~26Mlb U_3O_8 in 2021, to ~32Mlb U_3O_8 by 2030.

Exhibit 66: Secondary Supply Estimates (Mlb U_3O_8)



Source: BMO Capital Markets

However, this assumes Russian-sourced enrichment continues to be exported into international markets. With ~40% of global capacity, Russian enrichment forms a significant part of the supply chain, but potential sanctions related to its invasion of Ukraine could see this removed from the system.

If Russian enrichment is removed from the international market it would have to rely on indigenous enrichment capacity alone. On our forecast, we believe this would be possible, however, would require significant changes to tails assays and a switch to "overfeeding" by enrichers, i.e., adding more natural uranium to the system and effectively reducing recovery of the uranium to get more output from the same capacity. Assuming China and India (plus some smaller nuclear states like Belarus) continue to buy enrichment from Russia, and China exports its enrichment capacity to the highest bidder, we estimate increased total uranium demand by ~20Mlbpa U_3O_8e, but at the same time also reduce secondary supplies of underfed enrichment (western underfeeding currently <3Mlbpa).

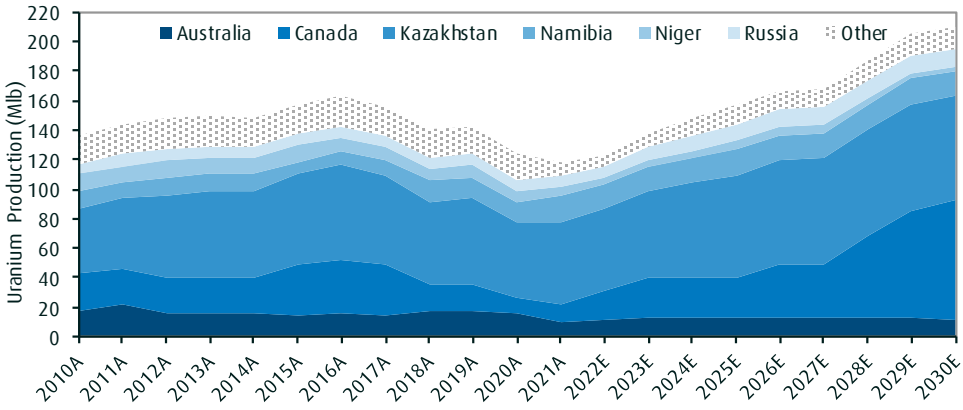
Primary Supply Forecasts & Costs

Our primary supply model incorporates more than 50 uranium operations globally, albeit given the challenging uranium price environment only ~35 are currently producing. The companies under coverage control ~70% of total production, however, the remainder of primary supply is controlled, or partially owned by non-listed state-controlled enterprises. As a result, we have compiled "best estimates" for what we believe are reasonable production levels for these mines outside of our coverage.

For new projects we consider the likelihood of development based on economic considerations, including costs and funding levels, as well as permitting hurdles which can be onerous for uranium projects.

Given the low uranium price, even companies with "tier 1" assets are likely to find funding difficult in the current market, with the cost of equity likely to be high for most. This, combined with long lead times for uranium projects of anywhere between 5-10 years from resource to production, only increases the uncertainty over timing of future new supply.

Exhibit 67: BMO Research's Primary Supply Forecast (Mlb U_3O_8)



Source: BMO Capital Markets

Following a period of high growth in the early/mid 2000s, primary supply had been growing steadily since the late 2000s at a rate of 2-3% per annum. However, supply discipline from major producers, including Cameco's suspension of McArthur River in 2018 (18Mlb) and Kazatomprom (-7Mlb), the closure or cut back of higher-cost production as well as temporary suspensions due to COVID-19 through 2020 and into 2021, saw production decline from a peak of 160Mlb in 2016, to 118Mlb in 2021.

Forecasting supply has been made more difficult by uranium prices that have been well into the cost curve, although we have seen some brownfield restart announcements, including McArthur River in H2/22. However, a continuation of supply discipline from Kazatomprom, a partial ramping down of production at Cigar Lake means we expect production to remain below 2019 levels (142Mlb) out through 2023 (1138Mlb). We currently have a peak of 211Mlb by 2030 (8% CAGR on 2021).

Over the last few years, we have seen the exhaustion of a number of key mines, Ranger (Rio Tinto, ~5Mlbpa) and Akouta (Orano, ~4Mlbpa) with Rössing potentially by the end of the decade. Most of the mines that have come online over the last few years were in, or close to, construction before Fukishima in 2011.

In our supply model we have incorporated only those projects that we estimate to have a relatively high degree of certainty of coming into production and any likely expansion projects from existing operations. There are few mines in our view that can realistically come online within the next decade with the price forecast we have. These include Paladin's Langer Heinrich project in Namibia (brownfield) and NexGen's Rook1 project in Canada (greenfield). However, as with any new mining project, permitting risks mean the timeframe to production for greenfield projects particularly is uncertain.

Supply Is Concentrated, With Kazakhstan Providing Almost Half

We estimate Kazakhstan to produce 45% of 2022E total primary supply at 56Mlb, although this is below its licenced capacity levels. At present we expect Kazakhstan to ramp up to >70Mlbpa by 2026, although it could be ahead or behind this if uranium prices are higher or lower than we forecast, respectively. Indeed, Kazatomprom has extended the 20% cut to capacity levels through 2023.

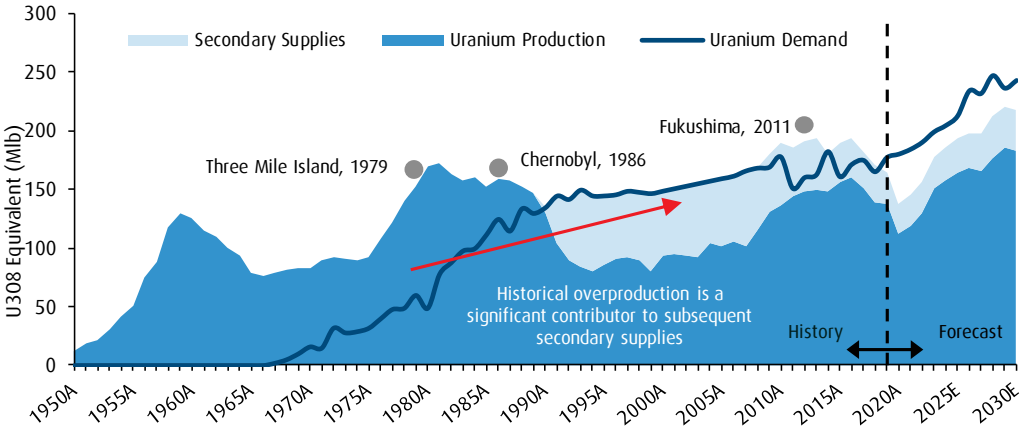
With McArthur River coming back from care and maintenance and Cigar Lake running well, Canada has regained its position as the second-largest producer with 19Mlb of uranium this year, or 15%. We expect this to increase to 28Mlb in 2023. Namibia is the third-largest producer this year, with 17Mlb, or 14% of the total. Australia is the fourth-largest producer.

The Role of Inventories

As noted in the previous sections, inventories can influence demand and pricing. However, as we will elaborate on, inventory classification is very subjective. If supply outstrips demand, excess uranium supplies are likely to increase inventories. If demand outstrips supply, inventories can be drawn down to meet the requirement. Looking back through time, inventories have played a major part in the supply demand balance as shown below.

Production of uranium from the 1950s through to 1990 was well in excess of civilian demand requirements, creating large inventories. As demand exceeded primary supply from the 1990s, these inventories began to be drawn down and have remained a key source of supply since.

Exhibit 68: Historical and Future Supply/Demand Imbalance (Mlb U_3O_8)



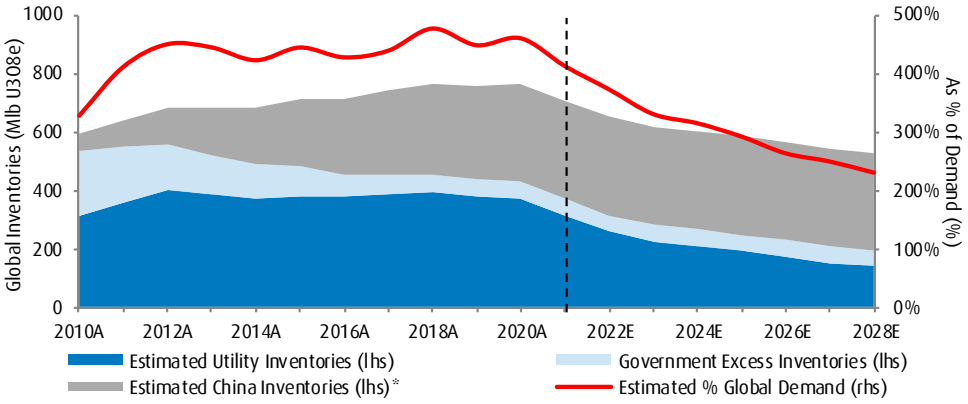
Source: BMO Capital Markets, UxC, WNA

However, not all inventories are equal, with different forms affecting end use and likelihood of liquidation. Our estimates include utility declared inventories (ex-China and Russia), U.S. and Russian government excess inventories (i.e., inventories that are non-strategic to the governments), and the WNA's estimate of Chinese utility inventories.

We don't include Russian utility inventories (which are synonymous with government inventories), civilian plutonium stockpiles from reprocessing spent fuel, such as the U.K.'s, or uranium held for investment, such as Yellow Cake, or UPC, which is considered unlikely to be liquidated and consumed. We have also not included civilian-held depleted uranium or other forms requiring reprocessing before use, or uranium held as inventory by producers given most large holdings have been reduced to lower-than-normal levels (e.g. Cameco or Kazatomprom).

Using this definition, we estimate global inventories to have increased from 592Mlb U_3O_8 in 2010, to ~765Mlb by the end of 2018, however, have steadily reduced since then to 705Mlb by the end of 2021. In terms of consumption we estimate inventories have been relatively consistently above four years since ~2010, reaching a high of 4.7 years of consumption in 2018. At the end of 2021, we estimate the liquid inventories have reduced to ~4.0 years and are expected to reduce to 3.7 years by the end of 2022, the first time below four years in a decade. We estimate ~3 years is the "normal" level of inventories, which occurs in 2024/2025, however, this "normal" level may increase on security of supply concerns, with utilities preferring to hold more liquid inventories.

Exhibit 69: Global Inventories by Holder and Percentage of Global Annual Demand (Mlb U_3O_8, %)



Source: BMO Capital Markets

Glossary

The following is taken from the 2001 study "Analysis of Uranium Supply to 2050" by the IAEA, with modifications by BMO Research and additions from the WNA.

burnup. Measure of total energy released by a nuclear fuel compared to its mass, typically measured in gigawatt days per tonne.

by- and co-products. Uranium is frequently associated with other minerals in nature, particularly occurring with copper, gold, phosphates and vanadium. Uranium may be recovered as a by- or co-product of the minerals with which it occurs.

conventional resources. Resources that have a history of production where uranium is either a primary product, co-product or an important by-product (e.g. gold and copper).

conversion. The process by which the product from a uranium processing plant is transformed into another chemical form suitable for subsequent processing. Conversion most frequently refers to natural uranium conversion, whereby uranium concentrates are purified and converted into uranium hexafluoride, prior to enrichment. Conversion also sometimes refers to the transformation of natural or enriched uranium hexafluoride to uranium dioxide or to uranium metal as a preliminary step in fuel fabrication.

depleted uranium. Uranium where the U-235 isotope concentration is less than 0.711% (by weight), the concentration for naturally occurring uranium. Depleted uranium is a residual product from the enrichment process. Can be blended with highly enriched uranium (e.g. from weapons) to make reactor fuel.

enrichment. Process by which the U-235 isotope concentration in uranium is increased from the naturally occurring 0.711%.

enrichment tails (tails reprocessing). The relatively depleted fissile uranium (U-235) remaining from the uranium enrichment process. The natural uranium 'feed' that enters the enrichment process generally contains 0.711% by weight U-235. The 'product stream' contains enriched uranium (greater than 0.711% U-235) and the 'waste' or 'tails' contains depleted uranium (less than 0.711% U-235). At an enrichment tails assay of 0.3%, the tails would contain 0.3% U-235. A higher enrichment tails assay requires more uranium feed (thus permitting natural uranium stockpiles to be decreased), while increasing the output of enriched material for the same energy expenditure.

fast breeder reactor (FBR). A fast reactor with fertile material loaded around the core, to be converted into fissile material through neutron capture, which generates more fissile material than is consumed.

fissile/fission. Fissile (of an isotope): Capable of capturing a slow (thermal) neutron and undergoing nuclear fission, e.g. U-235, U-233, and Pu-239.

gaseous centrifuge enrichment. Enrichment process utilising centrifugal force by passing gaseous uranium hexafluoride through a series of gas centrifuges arranged in a cascade pattern. The lighter U-235 isotope is retained by centrifugal force nearer to the centre of the centrifuge and the process is repeated until the desired U-235 assay is reached. Gaseous centrifuge plants are currently operational in Russia, the United Kingdom, Germany, the Netherlands, China and Japan.

gaseous diffusion enrichment. Enrichment process in which gaseous uranium hexafluoride is pumped through a series of diffusion membranes arranged in cells in a cascade pattern. The lighter U-235 isotope diffuses more rapidly through the membranes and the process is repeated hundreds of times until the desired U-235 assay are reached. Gaseous diffusion plants are currently operational in the United States and France. Several have already been shut down - United States (Oak Ridge), France (Pierrelatte), United Kingdom (Capenhurst) and also in Argentina, China and Russia.

grade conversions. 0.1% U_3O_8 = 1000ppm = 1000g/t

HALEU. High Assay Low Enriched Uranium, a core requirement for modern advanced reactors/SMRs which has a U-235 concentration of between 5-20%. HALEU has a higher density of energy/power thus could extend the refuelling cycle and efficiency of smaller reactors.

high enriched uranium (HEU). Any form of uranium having a U-235 concentration of 20% or higher. HEU is used principally for producing nuclear weapons and fuel for reactors to propel submarines and other vessels. Weapons grade HEU contains at least 90% U-235.

IAEA International Atomic Energy Agency. The IAEA was set up in 1957 to act as a centre of co-operation for the world's civilian nuclear energy sector. The body reports to the UN and is responsible for a variety of work including monitoring the Treaty on the Non-Proliferation of Nuclear Weapons.

IEA International Energy Agency. The IEA is an intergovernmental agency that promotes the security of energy sources. It was formed in the First Oil Shock of 1973-74. It has 26 member nations, essentially the OECD.

in situ leach (ISL) mining. The recovery by chemical leaching of valuable components of an ore body without the physical extraction of the ore above ground. Also sometimes known as solution mining.

isotope. An atomic form of an element having a particular number of neutrons. Different isotopes of an element have the same number of protons but different numbers of neutrons and hence different atomic mass, e.g. U-235, U-238. Some isotopes are unstable and decay to form isotopes of other elements.

known resources. Total of reasonably assured resources and estimated additional resources category I.

lb. An imperial pound.

low enriched uranium (LEU). Any form of uranium having a U-235 concentration greater than 0.711% but below 20%. Typical concentrations used in light water reactors range from 3 to 5%.

Megawatt (MW). A unit of power, = 10^6 watts. MWe refers to electric output from a generator, MWt to thermal output from a reactor or heat source (e.g. the gross heat output of a reactor itself, typically three times the MWe figure).

mixed oxide fuel (MOX). A fuel fabricated from plutonium and depleted or natural uranium oxide which can be used in standard light water reactors. MOX fuel assemblies are typically loaded in light water reactors with uranium fuel assemblies in the ratio of one to two.

Mlb: Millions of pounds.

natural uranium. Uranium whose natural isotopic composition (approximately 0.711% U-235 by weight) has not been altered.

plutonium. A heavy, fissionable, radioactive metallic element with atomic number 94. Plutonium is not naturally occurring, but is produced as a by-product of the fission reaction in a uranium fuelled nuclear reactor and is recovered from irradiated fuel. It is used in preparing commercial nuclear fuel and in manufacturing nuclear weapons.

reprocessed uranium. Uranium extracted from spent fuel which may return to the fuel cycle to be fabricated as new fuel.

reprocessing. The chemical separation of uranium and plutonium from spent fuel. It allows the recycling of valuable fuel material and minimizes the volume of high level waste material.

separative work unit (SWU). The standard measure of enrichment services, measuring the effort expended in increasing the U-235 content of uranium above the naturally occurring 0.711%. It typically measures the amount of enrichment capacity required to produce a given amount of enriched uranium from a particular feed material. The unit is strictly: Kilogram Separative Work Unit, and it measures the quantity of separative work (indicative of energy used in enrichment) when feed and product quantities are expressed in kilograms. To produce one kilogram of uranium enriched to 3.5% U-235 requires 4.3 SWU if the plant is operated at a tails assay 0.30% or 4.8 SWU if the tails assay is 0.25% (thereby requiring only 7.0 kg instead of 7.8 kg of natural U feed).

tU. Tonnes of uranium in terms of contained uranium metal. To convert into U_3O_8e, there are 2204.6lbs in a metric tonne and a conversion factor of 1.179 is used to convert U to U_3O_8e. The straight conversion from tU to U_3O_8e is thus 2.599x.

U_3O_8. Triuranium octoxide, more normally used us a proxy term for a blend of uranium oxides. A yellow to dark grey or black powder. The mining industry usually considers uranium production in terms of pounds of U_3O_8.

U_3O_8e. U_3O_8 equivalent. Used when converting other forms of uranium, i.e. UF6 into U_3O_8 terms for ease of comparison.

unconventional resources. Very low grade resources which are not now economic or from which uranium is only recoverable as a minor by-product (e.g. phosphates, monazite, coal, lignite and black shale).

uranium. A heavy, naturally occurring radioactive element, with atomic number 92.

uranium hexafluoride (UF6). A white solid obtained by chemical treatment of uranium oxide, which forms a vapour at temperatures above 56°C. UF6 is the form of uranium required for the enrichment process.

uranium spot market. The buying and selling of uranium for immediate or very near term delivery.

UXC Ux Consulting. A US based leading consulting and research group operating in the uranium sector. Amongst other services it provides a weekly update on uranium prices.

WNA World Nuclear Association. Formerly the Uranium Institute, the objective of the WNA is to promote the use of commercial nuclear power, by providing research to its members and the wider community and to act as a lobby group. It is funded by companies involved in the nuclear fuel cycle.

yellowcake. Ammonium diuranate, the penultimate uranium compound in U_3O_8 production, but the form in which mine product was sold until about 1970.

Cameco – Summary Model

Cameco			CCO:CCJ TSX:NYSE
As at 22-Jun-22			
Recommendation:	Outperform	**Alexander Pearce BMO Capital Markets**	
Share Price	C$27.43	Share Price (US$)	$21.91
Target Value	C$42.00	Target Value (US$)	$33.56
NPV	C$22.41	NPV (US$)	$17.57
Shares OS (M)	395.8		
Market Cap (M)	C$10,858	Market Cap (US$M)	$8,675

PRICE ASSUMPTIONS

(Dec Year End)		2020A	2021A	2022E	2023E	2024E
Exchange Rate	CAD/USD	0.746	0.798	0.802	0.804	0.792
Uranium - Spot	US$/lb	29.50	35.16	49.65	47.88	46.38
Realised Uranium Pri	US$/lb	33.48	34.40	43.70	47.88	46.38
Realised Uranium Pri	C$/lb	46.13	43.36	55.26	54.06	53.66

FINANCIAL SUMMARY

(Dec Year End)		2020A	2021A	2022E	2023E	2024E
Adjusted Profit	**(C$M)**	**-87**	**-98**	**70**	**147**	**169**
EPS (Adj)	(C$ps)	-0.22	-0.25	0.18	0.37	0.43
PER	(x)	-124.9	-111.2	156.0	74.0	64.2
EPS Growth	(%)	1154%	12%	-171%	111%	15%
EBITDA	**(C$M)**	**276**	**238**	**439**	**659**	**687**
EBITDA per Share	(C$ps)	0.70	0.60	1.11	1.66	1.73
EV/EBITDA	(x)	39.6	44.2	24.4	15.8	14.6
CFPS	(C$ps)	0.14	1.16	0.82	1.37	1.42
Dividend	**(C$ps)**	**0.08**	**0.08**	**0.12**	**0.12**	**0.12**
Yield	(%)	0.3%	0.3%	0.4%	0.4%	0.4%
Net Debt/EBITDA	(x)	0.2	-1.4	-0.3	-0.7	-1.2

PROFIT AND LOSS STATEMENT - C$M

(Dec Year End)	2020A	2021A	2022E	2023E	2024E
Group Revenue	1800	1475	1697	1633	1622
Operating Costs	1489	1292	1329	1061	1009
Depreciation	209	190	230	319	328
Gross Profit	**102**	**-8**	**138**	**254**	**284**
Exploration & R&D	15	16	17	17	17
Corporate/Other	142	128	130	100	100
EBIT	**-55**	**-151**	**-9**	**137**	**167**
Other Finance Cost	-59	-122	-128	-86	-77
Net Interest Expense	85	70	45	39	32
Pre-Tax Profits	**-81**	**-99**	**74**	**183**	**211**
Tax	6	-1	4	37	42
Profit After Tax	**-87**	**-98**	**70**	**147**	**169**
Minorities	0	0	0	0	0
Adjusted Profit	**-87**	**-98**	**70**	**147**	**169**
Net Abnormals	34	-5	23	0	0
Reported Profit	**-53**	**-103**	**93**	**147**	**169**

DIVISIONAL VALUATION

NPV C$M	
McArthur River	3475
Cigar Lake	1645
Inkai	1690
Fuel Services	754
Purchase Program	49
Exploration & Investı	1450
Corporate	-568
Net Cash/(Debt)	376
TOTAL NPV (C$M)	**8,870**
NPV per Share (C$)	22.41

RESERVES AND RESOURCES

Attributable	Contained U3O8 (Mlb)
Reserves	456
Resources	691
BMO Estimate	621

CASH FLOW ANALYSIS - C$M

(Dec Year End)	2020A	2021A	2022E	2023E	2024E
Cash Flows From Operating Activities					
Profit Before Tax	(81)	(99)	74	183	211
Depreciation & Amortisation	209	190	230	319	328
Changes in Working Capital	(193)	287	15	(8)	(11)
Taxes Paid	(4)	10	(14)	(37)	(42)
Other	127	70	21	83	76
Cash Flows From Investing Activities					
Capital Expenditure	(77)	(99)	(148)	(136)	(110)
Investments/Acquisitions	1	73	(107)	0	0
Other	0	6	(104)	0	0
Cash Flows From Financing Activities					
Net Change in Borrowings	(2)	0	0	0	(500)
Interest Paid	(66)	(39)	(28)	(37)	(35)
Dividends Paid and Share Buy-Back	(26)	(5)	(39)	(47)	(47)
Other	(4)	(3)	(1)	0	0
Net Increase In Cash Held	(117)	391	(101)	319	(130)

BALANCE SHEET ANALYSIS - C$M

(Dec Year End)	2020A	2021A	2022E	2023E	2024E
Current Assets					
Cash and Liquids	943	1332	1143	1462	1332
Other Current Assets	1002	809	872	804	815
Non-Current Assets					
Fixed Assets	3772	3577	3385	3202	2984
Investments	872	811	846	846	846
Other	993	989	990	990	990
Current Liabilities					
Borrowings	0	0	0	500	0
Creditors	234	340	331	256	256
Other	70	73	138	138	138
Non-Current Liabilities					
Borrowings	996	996	1000	500	500
Other	1323	1262	1168	1168	1168
Minority Interest	0	0	0	0	0
SHAREHOLDERS FUNDS	4958	4846	4598	4743	4906
Net Debt/Equity %	1%	-7%	-3%	-10%	-17%

DIVISIONAL EARNINGS (EBIT) - C$M

(Dec Year End)	2020A	2021A	2022E	2023E	2024E
Uranium	2	-120	37	176	202
Fuel Services	96	118	103	82	82
NUKEM	0	0	0	0	0
Corporate & Other	-153	-149	-150	-121	-117
Group EBIT	**-55**	**-151**	**-9**	**137**	**167**

ATTRIBUTABLE URANIUM PRODUCTION

Project	Ownership		2020A	2021A	2022E	2023E	2024E
McArthur River	70%	Mlb	0.0	0.0	3.1	9.8	10.5
Cigar Lake	50%	Mlb	5.1	6.1	7.4	7.8	7.3
Inkai	Varies	Mlb	4.0	5.3	4.2	4.4	4.1
Rabbit Lake	100%	Mlb	0.0	0.0	0.0	0.0	0.0
US ISL	100%	Mlb	0.0	0.0	0.0	0.0	0.0
Uranium Purchase		Mlb	29.6	5.8	8.6	1.5	1.0
Uranium- Prod. & Purchased		**Mlb**	**38.7**	**17.2**	**23.3**	**23.4**	**22.9**
Uranium Sales		Mlb	30.5	24.2	24.0	23.0	22.9
Cash Cost - Mines		US$/lb	7.57	6.49	15.24	12.10	11.61
Total Cost - Mines		US$/lb	13.85	13.82	24.94	19.19	21.11
Total Cost - Prod. & Purchased		US$/lb	29.24	30.95	39.85	29.00	29.72

Source: BMO Capital Markets, Company Data

Denison Mines – Summary Model

Denison Mines — **DML** (TSX)

As at	22-Jun-22		
Recommendation:	Market Perform (S)	**Alexander Pearce, BMO Capital Markets**	
Share Price (C$)	$1.30	Share Price (US$)	$1.02
Target Value (C$)	$1.40	Target Value (US$)	$1.10
NPV (C$)	$1.40	NPV (US$)	$1.10
Ordinary Shares (M)	817.8		
Dilution (M)	64.8		
Market Cap (C$M)	$1,063	Market Cap (US$M)	$837

PRICE ASSUMPTIONS

(Dec Year End)		2020A	2021A	2022E	2023E	2024E	2025E
C$/US$ Exchange Rate		0.75	0.80	0.80	0.80	0.79	0.78
Spot Price (U3O8)	US$/lb	29.50	35.16	49.65	47.88	46.38	50.00
Realised Price (U3C	US$/lb	29.50	35.16	49.65	47.88	46.38	50.00

FINANCIAL SUMMARY

(Dec Year End)		2020A	2021A	2022E	2023E	2024E	2025E
NPAT (Adj)	**(C$M)**	**-16.3**	**19.4**	**29.1**	**-13.2**	**-14.3**	**-14.0**
EPS	(C$/sh)	-0.03	0.02	0.03	-0.02	-0.02	-0.02
PER	(x)	n/a	50.0	41.0	n/a	n/a	n/a
EPS Growth	(%)	14.9	+>100%	51.2	->100%	-6.1	4.7
EBITDA	**(C$M)**	**-11.2**	**-14.1**	**25.8**	**-15.5**	**-16.0**	**-16.1**
EBITDA per Share	(C$/sh)	-0.02	-0.02	0.03	-0.02	-0.02	-0.02
EV/EBITDA	(x)	n/a	n/a	43.8	n/a	n/a	n/a
Dividend	**(C$/sh)**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Yield	(%)	0.0	0.0	0.0	0.0	0.0	0.0

PROFIT AND LOSS STATEMENT - C$M

(Dec Year End)	2020A	2021A	2022E	2023E	2024E	2025E
Total Revenue	14.4	20.0	14.9	14.6	14.3	14.4
Other	0.0	0.0	0.0	0.0	0.0	0.0
Cash Operating Costs	8.9	12.4	11.8	12.5	12.5	12.5
Gross Operating Profit	**5.6**	**7.6**	**3.2**	**2.1**	**1.8**	**1.9**
Depreciation	1.7	0.5	1.5	2.0	3.2	3.3
Exploration and Royalties	9.0	20.0	22.0	12.4	12.6	12.8
Corporate and Other	7.7	-34.5	-44.7	5.2	5.2	5.2
Share of Associate Profit	0.0	0.0	0.0	0.0	0.0	0.0
EBIT	**-12.9**	**21.6**	**24.3**	**-17.5**	**-19.2**	**-19.4**
Less Net Interest Expense	4.2	4.1	0.9	0.5	0.4	-0.2
Pre-Tax Profits	**-17.1**	**17.4**	**23.4**	**-18.0**	**-19.6**	**-19.2**
Less Tax	-0.9	-2.0	-5.7	-4.9	-5.3	-5.2
Less Minorities	0.0	0.0	0.0	0.0	0.0	0.0
NPAT (pre-Abs)	**-16.3**	**19.4**	**29.1**	**-13.2**	**-14.3**	**-14.0**
Net Abnormals	0.0	0.5	0.5	0.0	0.0	0.0
Reported Profit	**-16.3**	**19.0**	**28.6**	**-13.2**	**-14.3**	**-14.0**

DIVISIONAL VALUATION

	NPV C$M	NPV US$M
Wheeler River	777	612
McClean Lake	81	64
Investments	335	264
Net Cash	31	24
Other	-27	-21
Total NPV	**1197**	**943**
NPV/Share	1.46	1.15
Diluted NPV/Share	1.40	1.10

RESERVES AND RESOURCES

Attributable Wheeler River	Ore Tonnage (Mt)	Grade U3O8 (%)	Contained U3O8 (Mlb)
U3O8 Reserves	1.5	3.36%	110.0
U3O8 Resources	3.9	2.63%	227

CASH FLOW ANALYSIS - C$M

(Dec Year End)	2020A	2021A	2022E	2023E	2024E	2025E
Cash Flows From Operating Activities						
Net Profit	(16.3)	19.0	28.6	(13.2)	(14.3)	(14.0)
D&A	7.1	0.5	1.5	2.0	3.2	3.3
Changes in Working Capital	(0.3)	(0.2)	4.3	0.0	0.0	0.0
Other	(4.0)	(40.5)	(53.0)	(2.4)	(2.7)	(2.6)
Cash Flows From Investing Activities						
Acq.of Property, Plant and Equip.	(0.1)	(1.1)	(3.2)	(0.3)	(0.3)	(0.3)
Exploration Expenditure	(0.0)	0.0	0.0	0.0	0.0	0.0
Other	0.5	(97.9)	(1.0)	0.0	0.0	0.0
Cash Flows From Financing Activities						
Net Change in Borrowings	(0.5)	(0.2)	(3.3)	(4.6)	(4.3)	(4.4)
Dividends Paid	0.0	0.0	0.0	0.0	0.0	0.0
Other	31.0	160.0	8.9	0.0	50.0	0.0
Net Increase In Cash Held	17.3	39.6	(17.2)	(18.5)	31.6	(18.0)
Cash At End of Year	19.3	64.0	46.6	28.1	59.7	41.7

BALANCE SHEET ANALYSIS - C$M

(Dec Year End)	2020A	2021A	2022E	2023E	2024E	2025E
Current Assets						
Cash and Liquids	25.0	64.0	46.6	28.1	59.7	41.7
Other	24.4	22.9	26.8	26.8	26.8	26.8
Non-Current Assets						
Investments	0.3	154.6	202.0	202.0	202.0	202.0
Fixed Assets	256.9	254.5	252.1	250.4	247.5	244.5
Other	14.1	14.3	15.3	15.3	15.3	15.3
Current Liabilities						
Borrowings	0.0	4.7	1.1	1.2	1.1	1.1
Creditors	7.2	8.6	12.6	12.6	12.6	12.6
Other	4.7	3.1	25.1	25.1	25.1	25.1
Non-Current Liabilities						
Borrowings	33.1	31.9	28.1	23.4	19.1	14.7
Other	48.4	65.4	41.3	41.3	41.3	41.3
Minority Interest	0.0	0.0	0.0	0.0	0.0	0.0
SHAREHOLDERS FUNDS	227.3	396.7	434.6	419.0	452.0	435.4
Net Debt/Equity %	4%	-7%	-4%	-1%	-9%	-6%

DIVISIONAL EARNINGS (EBIT) - C$M

(Dec Year End)	2020A	2021A	2022E	2023E	2024E	2025E
Canadian Operations/Wheeler River	-9.0	-20.0	-22.0	-12.4	-12.6	-12.8
McLean Lake Toll	-1.0	-1.9	0.6	-1.4	-2.9	-2.9
Denison Environmental Services	1.4	1.0	1.1	1.5	1.5	1.5
Corp + UPC	-5.0	-1.7	-8.0	-5.2	-5.2	-5.2

URANIUM PRODUCTION AND SALES

		2020A	2021A	2022E	2023E	2024E	2025E
U3O8 Production	Mlb	0.0	0.0	0.0	0.0	0.0	0.0
Cash Cost	C$/lb	0.00	0.00	0.00	0.00	0.00	0.00
Total Cost	C$/lb	0.00	0.00	0.00	0.00	0.00	0.00
U3O8 Sales	Mlb	0.0	0.0	0.0	0.0	0.0	0.0

Source: BMO Capital Markets, Company Data

Fission Uranium – Summary Model

Fission Uranium

FCU
TSX

As at	22-Jun-22		
Recommendation:	Market Perform (S)	Alexander Pearce BMO Capital Markets	
Share Price (C$)	$0.63	Share Price (US$)	$0.50
Target Value (C$)	$0.75	Target Value (US$)	$0.59
NPV (C$)	$0.73	NPV (US$)	$0.57
Ordinary Shares (M)	676.2		
Dilution (M)	39.9		
Market Cap (C$M)	$426	Market Cap (US$M)	$336

PRICE ASSUMPTIONS

(Dec Year End)		2020A	2021A	2022E	2023E	2024E	2025E
C$/US$ Exchange Rate		0.75	0.80	0.80	0.80	0.79	0.78
Spot Price (U3O8)	US$/lb	29.50	35.16	49.65	47.88	46.38	50.00
Realised Price (U3C	US$/lb	29.50	35.16	49.65	47.88	46.38	50.00

FINANCIAL SUMMARY

(Dec Year End)		2020A	2021A	2022E	2023E	2024E	2025E
NPAT (Adj)	**(C$M)**	**-8.9**	**-7.4**	**-6.2**	**-2.0**	**-2.3**	**-2.8**
EPS	(US$/sh)	-0.02	-0.01	-0.01	0.00	0.00	0.00
PER	(x)	n/a	n/a	n/a	n/a	n/a	n/a
EPS Growth	(%)	-84.3	33.7	22.8	71.2	-13.7	-20.0
EBITDA	**(C$M)**	**-6.3**	**-6.2**	**-7.1**	**-5.0**	**-5.0**	**-5.0**
EBITDA per Share	(US$/sh)	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
EV/EBITDA	(x)	n/a	n/a	n/a	n/a	n/a	n/a
Dividend	**(US$/sh)**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Yield	(%)	0.0	0.0	0.0	0.0	0.0	0.0

PROFIT AND LOSS STATEMENT - C$M

(Dec Year End)	2020A	2021A	2022E	2023E	2024E	2025E
Sales Revenue	0.0	0.0	0.0	0.0	0.0	0.0
Other Revenue	0.0	0.0	0.0	0.0	0.0	0.0
Cash Operating Costs	0.0	0.0	0.0	0.0	0.0	0.0
Gross Operating Profit	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Depreciation	0.2	0.1	0.1	0.1	0.1	0.1
Exploration and Royalties	0.0	0.0	0.0	0.0	0.0	0.0
Corporate and Other	6.0	6.2	7.1	5.0	5.0	5.0
Share of Associate Profit	-0.3	0.0	0.0	0.0	0.0	0.0
EBIT	**-6.2**	**-6.3**	**-7.2**	**-5.1**	**-5.1**	**-5.1**
Less Net Interest Expense	2.8	1.1	-0.4	-2.5	-2.2	-1.6
Pre-Tax Profits	**-8.9**	**-7.4**	**-6.8**	**-2.5**	**-2.9**	**-3.5**
Less Tax	0.0	0.0	-0.6	-0.5	-0.6	-0.7
Less Minorities	0.0	0.0	0.0	0.0	0.0	0.0
NPAT (pre-Abs)	**-8.9**	**-7.4**	**-6.2**	**-2.0**	**-2.3**	**-2.8**
Net Abnormals	-0.2	-0.6	1.5	0.0	0.0	0.0
Reported Profit	**-8.7**	**-6.8**	**-7.8**	**-2.0**	**-2.3**	**-2.8**

DIVISIONAL VALUATION

	NPV C$M	NPV US$M
Patterson Lake Sou	540	418
Exploration	173	134
Net Cash	42	33
Corporate/Other	-47	-37
Total NPV	**708**	**548**
NPV/Share	1.05	0.81
Diluted NPV/Share	0.73	0.57

RESERVES AND RESOURCES

	Ore Tonnage (Mt)	Grade U3O8 (%)	Contained U3O8 (Mlb)
Total Reserves	2.3	1.61%	82
Total Resources	3.4	1.79%	135

CASH FLOW ANALYSIS - C$M

(Dec Year End)	2020A	2021A	2022E	2023E	2024E	2025E
Cash Flows From Operating Activities						
Net Profit	(9.0)	(6.8)	(7.8)	(2.0)	(2.3)	(2.8)
D&A	0.2	0.1	0.1	0.1	0.1	0.1
Changes in Working Capital	0.1	0.1	(0.5)	0.0	0.0	0.0
Other	3.7	3.3	4.0	0.0	0.0	0.0
Cash Flows From Investing Activities						
Acq.of Property, Plant and Equip.	0.0	(0.0)	0.1	0.0	(16.0)	(16.0)
Exploration Expenditure	(2.8)	(20.1)	(18.2)	(16.0)	0.0	0.0
Other	0.0	0.3	0.1	0.0	0.0	0.0
Cash Flows From Financing Activities						
Net Change in Borrowings	9.5	(0.1)	(0.1)	0.0	(8.7)	0.0
Dividends Paid	0.0	0.0	0.0	0.0	0.0	0.0
Other	23.6	46.9	60.6	0.0	0.0	0.0
Net Increase In Cash Held	25.2	23.7	38.2	(18.0)	(26.9)	(18.7)
Cash At End of Year	29.9	53.6	91.8	73.9	46.9	28.2

BALANCE SHEET ANALYSIS - C$M

(Dec Year End)	2020A	2021A	2022E	2023E	2024E	2025E
Current Assets						
Cash and Liquids	29.9	53.6	92.0	74.0	47.1	28.4
Other	0.2	0.9	0.9	0.9	0.9	0.9
Non-Current Assets						
Investments	1.0	2.4	1.7	1.7	1.7	1.7
Fixed Assets	320.3	342.3	362.1	378.1	394.0	409.9
Other	0.0	0.0	0.0	0.0	0.0	0.0
Current Liabilities						
Borrowings	0.0	0.0	0.0	8.7	0.0	0.0
Creditors	0.7	1.6	2.3	2.3	2.3	2.3
Other	0.1	0.0	0.1	0.1	0.1	0.1
Non-Current Liabilities						
Borrowings	7.1	7.6	8.7	0.0	0.0	0.0
Other	2.8	2.8	3.5	3.5	3.5	3.5
Minority Interest	0.0	0.0	0.0	0.0	0.0	0.0
SHAREHOLDERS FUNDS	340.9	387.1	442.1	440.1	437.8	435.0
Net Debt/Equity %	-7%	-12%	-19%	-15%	-11%	-7%

DIVISIONAL EARNINGS (EBIT) - C$M

(Dec Year End)	2020A	2021A	2022E	2023E	2024E	2025E
Patterson Lake South	0.0	0.0	0.0	0.0	0.0	0.0

URANIUM PRODUCTION AND SALES

		2020A	2021A	2022E	2023E	2024E	2025E
U3O8 Production	Mlb	0.0	0.0	0.0	0.0	0.0	0.0
Cash Cost	US$/lb	0.00	0.00	0.00	0.00	0.00	0.00
Total Cost	US$/lb	0.00	0.00	0.00	0.00	0.00	0.00
U3O8 Sales	Mlb	0.0	0.0	0.0	0.0	0.0	0.0

Source: BMO Capital Markets, Company Data

Kazatomprom – Summary Model

Kazatomprom

As at 22-Jun-22
Recommendation: Outperform

Alexander Pearce
BMO Capital Markets

Share Price (US$)	24.76	Share Price (KZT)	11282
Target Value (US$)	47.50	Target Value (KZT)	21644
NPV (US$)	37.64	NPV (KZT)	15740
Shares OS (M)	259.36		
Market Cap (US$M)	6422	Market Cap (KZTM)	2926098

PRICE ASSUMPTIONS (Dec Year End)		**2020A**	**2021A**	**2022E**	**2023E**	**2024E**
Exchange Rate	KZT/USD	414	427	447	440	440
Uranium - Spot	US$/lb	29.50	35.16	49.65	47.88	46.38
Realised Uranium Price	US$/lb	29.32	32.29	43.44	45.86	45.30
Realised Uranium Price	KZT/lb	12132	13772	19400	20179	19932

FINANCIAL SUMMARY (Dec Year End)		**2020A**	**2021A**	**2022E**	**2023E**	**2024E**
Adjusted Profit	**(KZTM)**	**163,209**	**144,786**	**302,188**	**292,695**	**326,150**
EPS (Adj)	(KZTps)	629	558	1165	1129	1258
PER	(x)	17.9	20.2	9.7	10.0	9.0
EPS Growth	(%)	44%	-11%	109%	-3%	11%
Adj. Attributable EBITDA	**(KZTM)**	**295,465**	**275,844**	**453,321**	**450,206**	**493,171**
EBITDA per Share	(KZTps)	1270	1348	2270	2243	2431
EV/EBITDA	(x)	9.0	8.4	5.0	4.9	4.4
CFPS	(KZTps)	623	458	1415	1734	2093
Dividend	**(KZTps)**	**579**	**329**	**947**	**1,297**	**1,557**
Yield	(%)	5%	3%	8%	11%	14%
Net Debt/EBITDA	(x)	0.0	-0.1	-0.4	-0.6	-0.8

PROFIT AND LOSS STATEMENT - KZTM (Dec Year End)	**2020A**	**2021A**	**2022E**	**2023E**	**2024E**
Group Revenue	587,457	691,011	929,889	961,610	999,610
Operating Costs	-233,865	-308,231	-356,787	-383,865	-375,937
MET	-23,775	-25,474	-30,714	-34,961	-36,680
Depreciation	-61,984	-69,262	-55,495	-61,939	-65,875
Gross Profit	**267,833**	**288,044**	**486,892**	**480,846**	**521,118**
Corporate/Other	-40,410	-54,335	-50,000	-50,000	-50,000
Share of Associate & JV Profit	40,086	51,583	96,242	88,984	93,444
EBIT	**267,509**	**285,292**	**533,134**	**519,830**	**564,562**
Other Finance Cost	-2,697	365	-688	3,218	6,788
Pre-Tax Profits	**264,812**	**285,657**	**532,447**	**523,048**	**571,350**
Tax	-63,776	-61,618	-106,489	-104,610	-114,270
Profit After Tax	**201,036**	**224,039**	**425,957**	**418,438**	**457,080**
Minoroties	-37,827	-79,253	-123,769	-125,743	-130,930
Adjusted Profit	**163,209**	**144,786**	**302,188**	**292,695**	**326,150**
Net Abnormals	20,332	-4,013	0	0	0
Reported Profit	**183,541**	**140,773**	**302,188**	**292,695**	**326,150**

ASSET NPV	US$M	KZTB
Ortalyk	533	235
SaUran	896	395
RU-6	424	187
Appak	367	161
Baiken-U	556	245
Khorassan-U	872	384
Inkai JV	1902	838
Akbastau	692	305
Karatau	1102	486
Semizbai-U	351	155
Zarechnoye	26	11
Katco	1199	528
SMCC	453	199
THK	266	119
UMP	199	88
Other & Investments	411	-40

GROUP VALUATION	US$M	KZTB
Asset NPV	10250	4296
Corporate	-649	-286
Net Cash	163	72
Group NPV	**9763**	**4082**
NPV/Share	37.64	15740

RESERVES AND RESOURCES 100% Basis	Contained U3O8(Mlb)
Reserves	1328
Resources	1723
BMO Estimate	1362

CASH FLOW ANALYSIS - KZTM (Dec Year End)	**2020A**	**2021A**	**2022E**	**2023E**	**2024E**
Cash Flows From Operating Activities					
Profit Before Tax	264,812	285,657	532,447	523,048	571,350
Depreciation & Amortisation	61,984	69,262	55,495	61,939	65,875
Asso. & JV Profit	-40,086	-51,583	-96,242	-88,984	-93,444
Changes in Working Capital	-29,521	-76,177	-17,575	55,139	106,649
Taxes Paid	-116,511	-152,974	-106,489	-104,610	-114,270
Other	20,915	44,544	-688	3,218	6,788
Cash Flows From Investing Activities					
Acquisition of PP&E & LT Assets	-35,412	-45,851	-101,012	-62,584	-69,966
Dividends from Associates & JVS	47,886	17,108	61,487	61,210	65,274
Investments - Other	3,856	-44,479	0	0	0
Other	32,429	187,839	0	0	0
Cash Flows From Financing Activities					
Net Change in Borrowings	-72,898	-10,583	0	0	0
Dividends Paid	-99,002	-150,082	-85,304	-245,567	-336,282
Share Issue & Other	-465	-452	0	0	0
Non-controlling Dividend	-29,050	-26,584	-64,168	-75,054	-76,284
Net Increase In Cash Held	8,937	45,645	177,951	127,755	125,689

BALANCE SHEET ANALYSIS - KZTM (Dec Year End)	**2020A**	**2021A**	**2022E**	**2023E**	**2024E**
Current Assets					
Cash and cash equivalents	113,347	161,190	339,141	466,896	592,585
Accounts Receivables	117,418	220,138	311,756	304,927	243,869
Inventories	233,389	275,856	228,850	183,791	155,660
Other	78,135	114,572	114,572	114,572	114,572
Non-Current Assets					
PP&E	172,747	171,487	209,320	202,886	201,478
Mineral Rights & Intangibles	791,862	777,851	785,535	792,615	798,115
Investment in Associates & JVs	119,887	154,695	154,695	154,695	154,695
Other	62,494	75,715	75,715	75,715	75,715
Current Liabilities					
Borrowings	21,526	11,317	11,317	11,317	11,317
Accounts Payables	43,948	66,014	66,014	66,014	66,014
Other	46,098	81,491	81,491	81,491	81,491
Non-Current Liabilities					
Borrowings	76,570	77,700	77,700	77,700	77,700
Other	161,345	177,881	177,881	177,881	177,881
Minority Interest	267,137	347,258	406,859	457,548	512,194
SHAREHOLDERS FUNDS	1,072,655	1,189,843	1,398,321	1,424,146	1,410,092
Net Debt/Equity %	-1%	-5%	-14%	-20%	-26%

EARNINGS & CASH FLOW MATRIX (Dec Year End)		**2020A**	**2021A**	**2022E**	**2023E**	**2024E**
Adjusted EBITDA	KZTM	329,481	349,628	588,630	581,768	630,437
Adjusted Attributable EBITDA	KZTM	295,465	275,844	453,321	450,206	493,171
Free Cash Flow (Adj)	KZTM	148,873	18,923	263,254	373,322	461,971
Dividend Paid	KZTM	99,002	150,082	85,304	245,567	336,282

ATTRIBUTABLE U3O8 PRODUCTION			**2020A**	**2021A**	**2022E**	**2023E**	**2024E**
Project	**Ownership***						
Ortalyk	100%	Mlb	3.4	3.1	2.1	2.1	2.3
SaUran	100%	Mlb	3.2	3.9	3.9	4.2	4.6
RU-6	100%	Mlb	1.7	2.1	1.8	1.9	2.2
Appak	65%	Mlb	1.1	1.4	1.3	1.6	1.6
Baiken-U	53%	Mlb	1.6	1.7	1.9	2.2	2.5
Khorassan-U	50%	Mlb	1.9	2.1	2.2	2.4	2.5
Inkai JV	60%	Mlb	4.0	5.4	4.6	5.2	5.5
Akbastau	50%	Mlb	1.8	2.0	1.8	2.0	2.2
Karatau	50%	Mlb	3.2	3.3	2.8	2.8	3.6
Semizbai-U	51%	Mlb	1.0	1.3	1.3	1.3	1.5
Zarechnoye	50%	Mlb	0.8	0.9	1.0	0.3	0.0
Katco	49%	Mlb	3.6	3.6	3.9	4.5	5.1
SMCC	30%	Mlb	1.8	1.8	1.9	1.9	2.0
Group Attributable Prod		**Mlb**	**27.9**	**30.8**	**29.8**	**32.6**	**35.6**
* 2019 onwards							
Group Uranium Sales**		**Mlb**	**42.7**	**43.0**	**43.6**	**44.7**	**47.2**
Cash Cost - Mines		US$/lb	8.95	8.99	11.44	11.78	11.08
AISC - Mines Att		US$/lb	12.07	12.63	18.01	15.58	14.99
** Including minority share							

Source: BMO Capital Markets, Company Data

NexGen Energy – Summary Model

NexGen Energy

NXE
TSX

As at	22-Jun-22		
Recommendation:	Outperform (S)	**Alexander Pearce**	
		BMO Capital Markets	
Share Price (C$)	$4.64	Share Price (US$)	$3.66
Target Value (C$)	$6.50	Target Value (US$)	$5.12
NPV (C$)	$6.00	NPV (US$)	$4.72
Ordinary Shares (M)	469.3		
Dilution (M)	46.1		
Market Cap (C$M)	$2,178	Market Cap (US$M)	$1,715

PRICE ASSUMPTIONS

(June Year End)	2020A	2021A	2022E	2023E	2024E	2025E
C$/US$ Exchange Rate	0.75	0.80	0.80	0.80	0.79	0.78
Spot Price (U3O8) US$/lb	29.50	35.16	49.65	47.88	46.38	50.00
Realised Price (U3C US$/lb	29.50	35.16	49.65	47.88	46.38	50.00

FINANCIAL SUMMARY

(June Year End)		2020A	2021A	2022E	2023E	2024E	2025E
NPAT (Adj)	**(C$M)**	**-32.9**	**-47.5**	**-13.2**	**-6.5**	**1.8**	**-14.5**
EPS	(US$/sh)	-0.09	-0.10	-0.03	-0.01	0.00	-0.02
PER	(x)	n/a	n/a	n/a	n/a	50.0	n/a
EPS Growth	(%)	-26.3	-13.5	72.4	54.6	+>100%	->100%
EBITDA	**(C$M)**	**-12.3**	**-49.0**	**-16.5**	**-7.0**	**-5.0**	**-5.0**
EBITDA per Share	(US$/sh)	-0.03	-0.10	-0.03	-0.01	-0.01	-0.01
EV/EBITDA	(x)	n/a	n/a	n/a	n/a	n/a	n/a
Dividend	**(US$/sh)**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Yield	(%)	0.0	0.0	0.0	0.0	0.0	0.0

PROFIT AND LOSS STATEMENT - C$M

(June Year End)	2020A	2021A	2022E	2023E	2024E	2025E
Sales Revenue	0.0	0.0	0.0	0.0	0.0	0.0
Other Revenue	0.0	0.0	0.0	0.0	0.0	0.0
Cash Operating Costs	0.0	0.0	0.0	0.0	0.0	0.0
Gross Operating Profit	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Depreciation	2.3	2.1	1.9	2.0	2.0	2.0
Exploration and Royalties	0.0	0.0	0.0	0.0	0.0	0.0
Corporate and Other	21.3	49.0	16.5	7.0	5.0	5.0
Share of Associate Profit	0.0	0.0	0.0	0.0	0.0	0.0
EBIT	**-23.6**	**-51.2**	**-18.4**	**-9.0**	**-7.0**	**-7.0**
Less Net Interest Expense	13.2	3.1	0.9	-1.4	-9.1	10.1
Pre-Tax Profits	**-36.8**	**-54.3**	**-19.3**	**-7.6**	**2.1**	**-17.1**
Less Tax	0.7	1.1	-1.3	-1.1	0.3	-2.6
Less Minorities	-4.7	-7.9	-4.7	0.0	0.0	0.0
NPAT (pre-Abs)	**-32.9**	**-47.5**	**-13.2**	**-6.5**	**1.8**	**-14.5**
Net Abnormals	77.0	71.6	18.7	0.0	0.0	0.0
Reported Profit	**-109.8**	**-119.1**	**-31.9**	**-6.5**	**1.8**	**-14.5**

DIVISIONAL VALUATION

	NPV C$M	NPV US$M
Rook 1	2,999	2,323
Exploration	326	253
Net Cash	97	76
Other	-52	-41
Total NPV	**3370**	**2612**
NPV/Share	6.54	5.07
Diluted NPV/Share	6.00	4.66

Attributable Rook 1	Ore Tonnage (Mt)	Grade U3O8 (%)	Contained U3O8 (Mlb)
U3O8 Reserves	4.6	2.37%	240
U3O8 Resources	8.2	1.88%	337

CASH FLOW ANALYSIS - C$M

(June Year End)	2020A	2021A	2022E	2023E	2024E	2025E
Cash Flows From Operating Activities						
Net Profit	(109.8)	(47.5)	(13.2)	(6.5)	1.8	(14.5)
D&A	2.3	2.1	1.9	2.0	2.0	2.0
Changes in Working Capital	0.2	(0.1)	(0.3)	0.0	0.0	0.0
Other	96.7	28.7	3.0	0.0	0.0	0.0
Cash Flows From Investing Activities						
Acq.of Property, Plant and Equip.	(0.2)	(1.0)	(6.2)	(48.0)	(119.0)	(262.0)
Exploration Expenditure	(18.1)	(45.7)	(34.7)	(12.0)	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0	0.0
Cash Flows From Financing Activities						
Net Change in Borrowings	27.8	(1.0)	0.0	0.0	0.0	585.3
Dividends Paid	0.0	0.0	0.0	0.0	0.0	0.0
Other	22.9	192.3	0.7	611.1	0.0	55.9
Net Increase In Cash Held	21.9	127.8	(48.8)	546.6	(115.2)	366.6
Cash At End of Year	74.0	201.4	152.7	699.3	584.1	950.7

BALANCE SHEET ANALYSIS - C$M

(June Year End)	2020A	2021A	2022E	2023E	2024E	2025E
Current Assets						
Cash and Liquids	74.0	201.8	152.8	699.4	584.2	950.8
Other	1.0	11.5	10.8	10.8	10.8	10.8
Non-Current Assets						
Investments	0.0	0.0	0.0	0.0	0.0	0.0
Fixed Assets	282.3	333.2	380.7	438.7	555.7	815.7
Other	0.1	0.1	0.1	0.1	0.1	0.1
Current Liabilities						
Borrowings	0.0	0.0	0.0	0.0	55.9	0.0
Creditors	6.5	7.5	15.3	15.3	15.3	15.3
Other	0.8	0.7	0.7	0.7	0.7	0.7
Non-Current Liabilities						
Borrowings	226.9	72.0	55.9	55.9	0.0	641.2
Other	4.0	5.0	4.4	4.4	4.4	4.4
Minority Interest	(25.0)	(27.7)	(24.9)	(24.9)	(24.9)	(24.9)
SHAREHOLDERS FUNDS	119.3	461.3	468.0	1072.6	1074.5	1115.8
Net Debt/Equity %	162%	-30%	-22%	-61%	-50%	-28%

DIVISIONAL EARNINGS (EBIT) - C$M

(June Year End)	2020A	2021A	2022E	2023E	2024E	2025E
Rook 1	0.0	0.0	0.0	0.0	0.0	0.0

URANIUM PRODUCTION AND SALES

			2020A	2021A	2022E	2023E	2024E	2025E
U3O8 Production	Mlb		0.0	0.0	0.0	0.0	0.0	0.0
		LOM						
Cash Cost	US$/lb	7.74	0.00	0.00	0.00	0.00	0.00	0.00
Total Cost	US$/lb		0.00	0.00	0.00	0.00	0.00	0.00
U3O8 Sales	Mlb		0.0	0.0	0.0	0.0	0.0	0.0
AISC	US$/lb	19.86	0.00	0.00	0.00	0.00	0.00	0.00

Source: BMO Capital Markets, Company Data

IMPORTANT DISCLOSURES

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Distribution of Ratings (June 25, 2022)

Rating category	BMO rating	BMOCM US Universe*	BMOCM US IB Clients**	BMOCM US IB Clients***	BMOCM Universe****	BMOCM IB Clients*****	StarMine Universe~
Buy	Outperform	53.1 %	21.0 %	54.5 %	55.6 %	59.4 %	57.7%
Hold	Market Perform	45.4 %	18.9 %	42.0 %	42.9 %	38.6 %	37.5%
Sell	Underperform	1.5 %	50.0 %	3.6 %	1.4 %	2.0 %	4.8%

* Reflects rating distribution of all companies covered by BMO Capital Markets Corp. equity research analysts.

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~ As of April 1, 2019.

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Prior BMO Capital Markets Rating System

(April 2013 - October 2016)
http://researchglobal.bmocapitalmarkets.com/documents/2013/rating_key_2013_to_2016.pdf

(January 2010 - April 2013)
http://researchglobal.bmocapitalmarkets.com/documents/2013/prior_rating_system.pdf

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