

Specialty Minerals and Metals

Global Equity Research

2 February 2022

Company	Rating	Price	Target
Specialty Minerals and Metals			
BOE-ASX	Spec Buy	A\$2.00	A\$2.88
CCO-TSX	Buy	C\$24.71	C\$34.00
DML-TSX	Spec Buy	C\$1.54	C\$3.00
FCU-TSX	Spec Buy	C\$0.77	C\$1.10
LOT-ASX	Spec Buy↑	A\$0.25	A\$0.30↑
previous	Hold		A\$0.28
NXE-TSX	Spec Buy	C\$5.23	C\$10.00
PDN-ASX	Buy	A\$0.72	A\$1.05
PEN-ASX	Spec Buy	A\$0.19	A\$0.30
U.UN-TSX	Buy	C\$14.10	C\$18.50↓
previous			C\$21.00
UEC-NYSE	Spec Buy	US\$2.61	US\$5.50↓
previous			US\$6.00
URC-TSXV	Spec Buy	C\$4.17	C\$6.00↓
previous			C\$7.50
VMY-ASX	Spec Buy	A\$0.18	A\$0.25
YCA-AIM	Buy	319p	435p ↓
previous			510p

Priced as of close of business 1 February 2022

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Uranium | Looking out to 2022

2021 recap: The uranium market in 2021 was dominated by financial players who clearly accelerated price discovery in a relatively thinly traded spot market. As a result, the spot price rose 40% in 2021 and peaked at an impressive \$50/lb U₃O₈ in September, its highest level in nine years. The uranium equities followed suit, returning ~110% on average across our coverage. In our view, the recent rise in prices would not have occurred if there was not already a fundamental supply deficit.

2022 outlook: While we expect some near-term volatility, we remain bullish on our outlook for uranium. From a fundamental perspective, the argument to maintain exposure to uranium remains strong. Demand for nuclear power continues to increase as the global transition to clean energy gains momentum. At the same time, primary mine supply sits at a 12-year low, and while uranium prices have recovered significantly to >\$40/lb, we don't believe this is sufficient to incentivize mine restarts and investments in new mine supply. Accordingly, we believe this cycle still has a long way to go.

Conventional demand remains extremely robust: Positive news continues to roll through the markets as governments affirm their commitment to nuclear power as a key tool for decarbonization. Since our last update, China announced plans to build 150 new reactors by 2035, the EU has elected to classify nuclear as 'green' in its Sustainable Taxonomy draft, and Japan's new Prime Minister has reconfirmed his support for additional reactor restarts, among several other developments — all of which are net positive for our demand outlook. We continue to forecast demand growth of 2.8%pa through 2035.

Secondary demand: the return of the 'SPUT market'? Just as in 2021, we expect SPUT to play an influential role in the spot market this year. We estimate that the Trust has ~US\$2.4bn in buying power left on its US\$3.5bn ATM facility. The Trust is also targeting a NYSE listing in 2022, which could act as a key catalyst for investor inflow.

Long-term contract indicators are rising: We believe that 2022 could be the year that utilities return to the long-term market in a material way. Total contracted volumes were 36% higher in 2021 (vs. 2020), and we've seen a growing number of RFPs on market in addition to increasing off-market activity. More important, is the fact that these LT contracts are being signed at higher price levels; the term price rose 23% in 2021, the largest single-year gain since 2007. Throughout 2022, we'll be watching for further activity by US utilities, the Chinese, and larger utilities in other markets.

Supply is not in a position to front run demand: Primary mine supply remains under significant pressure, a situation that has only been compounded by recent COVID-19 disruptions and ongoing supply chain issues. We estimate that over the last six years, uranium production has declined by 24%, to ~122mlbs, and, following years of insufficient incentive pricing, we believe supply is not in a position (or willing) to front run demand. In our view, higher pricing signals are still needed to bring idled production back online, and this production alone will not be enough to satisfy long-term demand.

Price deck, rating, and target price changes: In this report, we have updated our estimates to reflect our latest uranium price forecasts. We no longer model a peak pricing scenario. While this change has resulted in lower price forecasts through 2024 (vs. our previous estimates), our long-term price remains unchanged at US\$65/lb. We've upgraded LOT-ASX to SPEC BUY, from HOLD.

Top picks for 2022: Our top picks for 2022 are NexGen Energy (**NXE-TSX**) and Denison Mines (**DML-TSX**) in North America; Paladin Energy (**PDN-ASX**) and Boss Energy (**BOE-ASX**) in Australia; and Yellow Cake plc (**YCA-AIM**) in the UK.

A quick look back at 2021

2021 was another strong year for uranium. The spot price was up 40% over the year, as financial players clearly accelerated price discovery in a relatively thinly traded spot market. Share price performance was led by developers, who returned 116% on average, followed by producers who averaged 84%, and uranium holding companies up 32% (Figure 1).

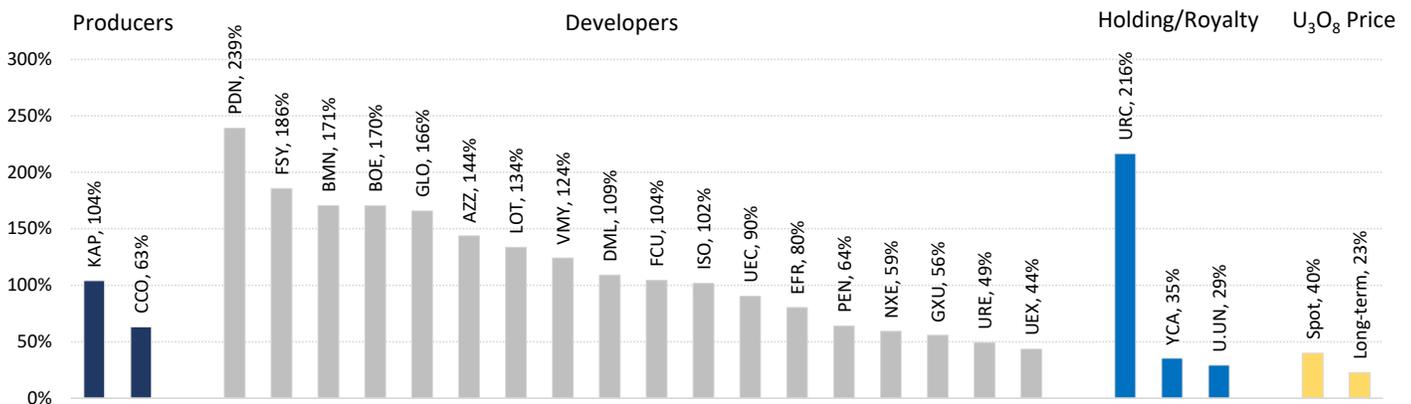
The Sprott Physical Uranium Trust (“SPUT”) dominated the market and the majority of our discussions with industry participants and investors. Since launching its ATM program on August 17, the fund purchased ~23mlbs of U₃O₈ in 2021, the equivalent of ~13% of annual demand. These purchases directly impacted the spot price, which rose to a nine-year high of US\$50/lb in late September (+64% in just four weeks). In our view, SPUT’s powerful impact on the market would not have occurred if we were not already in a fundamental supply deficit.

In addition to non-traditional demand, the outlook for traditional demand also strengthened over 2021. China released its 14th Five Year Plan in March, which outlined a 40% expansion of its nuclear fleet to 70GWe by 2025, and ~120GWe by 2030 (>2x current capacity). Adding to this was a more constructive view around North American and European demand in the wake of 1) clear support for nuclear energy in the American Jobs Plan; 2) increased financial support to keep reactors online; and 3) the European Commission announcing that it will potentially include nuclear in the EU’s sustainable taxonomy.

At the same time, primary supply remained under significant pressure. Production in 2021 was impacted by yet another wave of COVID-19 – with the Cigar Lake mine shut down in Q1 and Kazatomprom’s operations producing below guidance. These disruptions added to existing supply curtailments which have helped remove excess pounds from the spot market since 2016 (as major producers continue to purchase spot material to fulfil sales commitments).

Our analysis suggests that the spot market is now very tight, and no longer a reliable source of incremental supply for utilities, which leaves an issue of security of supply. As a result, we started to see increased interest in off-market and on-market long-term contracting, a trend we expect to continue in 2022. The UxC term price ended the year at US\$40.50/lb, its highest level in five years.

Figure 1: Performance of select uranium equities and pricing over 2021 (in US\$)



Source: Factset, UxC LLC, Canaccord Genuity estimates

Uranium | Looking out to 2022

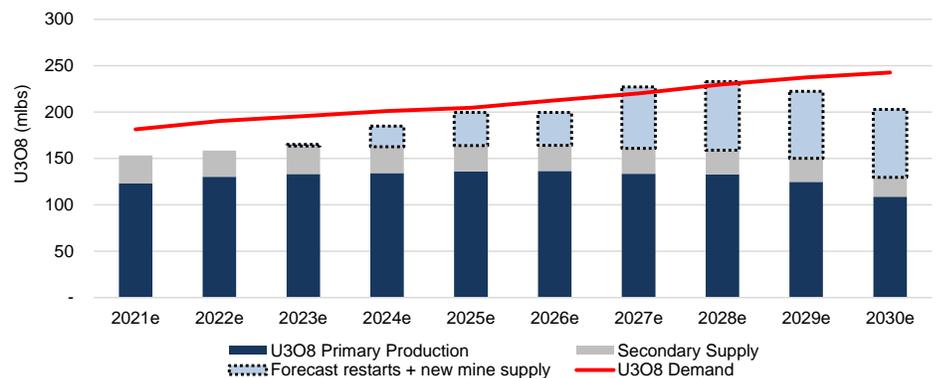
In this report, we outline our forecasts for supply and demand, and highlight key issues and potential market developments that we believe will impact the direction of the uranium market in 2022.

Overall, we remain cautious in the near term, as COVID-19 continues to drive – and halt – economic growth and geopolitical risks (Russia/Ukraine/US) impact global market sentiment. Significant macro uncertainty has driven broader market weakness, with the most intense selling pressure on speculative equities. Our uranium coverage is down 10% YTD vs. the S&P 500 down 6%. However, as 2022 progresses, we expect clarity to emerge on several fronts, including inflation and central bank policies.

From a fundamental perspective, however, the argument to maintain exposure to uranium remains extremely strong. Demand for nuclear power continues to increase as the global transition to 'clean energy' gains momentum. At the same time, primary mine supply sits at a 12-year low. Uranium prices have recovered significantly to ~US\$43/lb but have not yet reached sustainable levels required to bring idled mines back into production or to incentivize the development of new mine supply.

As a result, we remain bullish long term and continue to forecast a rise in uranium prices over the medium term toward our long-term price of US\$65/lb (unchanged).

Figure 2: Supply and demand forecast



Source: UxC LLC, WNA, Company Reports, Canaccord Genuity estimates

Conventional demand remains extremely robust

Conventional demand remains extremely robust. Global nuclear capacity currently stands at ~390GWe (from 440 operable reactors) and there are currently 55 new reactors under construction in 19 countries. We expect demand for uranium to grow at ~2.8%pa through 2035, on the back of improved policy sentiment driven by the decarbonization imperative. The importance of nuclear in the clean energy transition is further evidenced by the ongoing energy crisis.

Several developments have been announced since our last SxD update in September which increase our confidence in demand in going forward.

- China announced plans to build 150 new nuclear reactors by 2035, more than the rest of the world has built in the past 35 years.
 - Growth from China and other non-OECD nations remains the bedrock of our positive demand outlook; we model 64GWe of nuclear capacity by 2025 and 108GWe by 2030 (below current targets to be conservative).
- The European Union has elected to classify some nuclear energy projects as 'green' in its Sustainable Taxonomy draft (see further details [here](#)). If this

decision is ratified by the European Commission in 2022, it is likely to provide incumbent generators and developers with the certainty required to make large investment decisions.

- Our forecasts include limited growth in Western and Central European nuclear capacity out to 2035. In light of this result, our forecasts could be overly pessimistic.

The US Congress is set to consider the Biden Administration’s Build Back Better initiative, which, in its current form, includes a tax credit to help keep nuclear power plants operating.

- We note that Exelon’s Bryon and Dresden plants were already saved from early closure in 2021 with nearly \$700 million in new state subsidies.
- We would not be surprised to see the US grant more 20-year lifetime extensions.

Japan’s new Prime Minister, Fumio Kishida, reconfirmed his support for additional restarts of existing reactors as well as replacement capacity (including SMRs) to help the country reach its 2050 carbon-neutral goal.

- Ten reactors have already restarted and another 16 are currently in the process of restart approval.

UK Prime Minister Boris Johnson confirmed his government’s commitment to decarbonize the UK’s power system by 2035. The government is in talks with Westinghouse to construct a new AP1000 reactor in Wales and is also working with Rolls-Royce to construct up to 16 SMR sites across the UK.

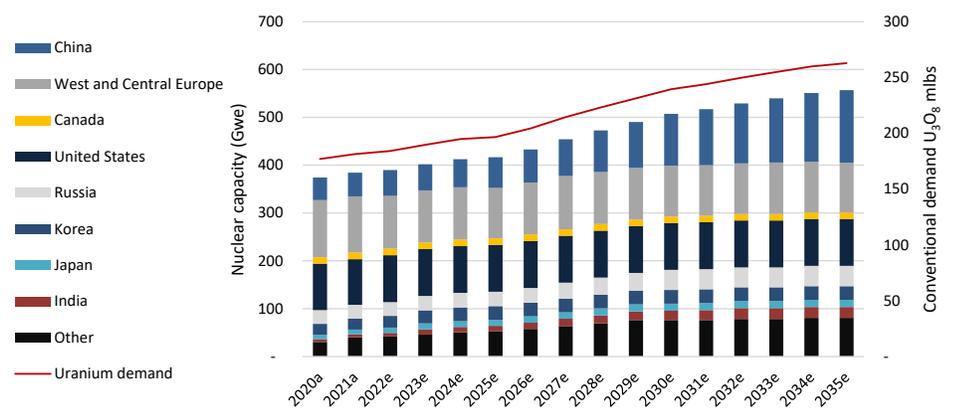
French President Emmanuel Macron announced a €30 billion investment plan designed to reduce carbon emissions and revitalize the country’s industrial sector by 2030, which included €1 billion for the development of SMRs and advanced nuclear reactors.

Rosatom announced its plan to build 15 new 1,200MWe Gen 3+ reactors by 2035. Most units are expected to be built at existing sites where older units are to be decommissioned.

For the first time since the Fukushima Daiichi accident in 2011, the International Atomic Energy Agency (IAEA) has revised its projections for nuclear power growth upwards. Its high-case scenario now forecasts a doubling of nuclear capacity to 792Gwe by 2050 (vs. 2021), which represents a 10% increase over prior forecasts.

In 2022, we’ll be closely watching further policy decisions regarding new builds, early reactor retirements, and potential lifetime extensions and how these impact our forecasts. Our latest demand projections are summarized in Figure 3 below.

Figure 3: CG forecast nuclear capacity by region

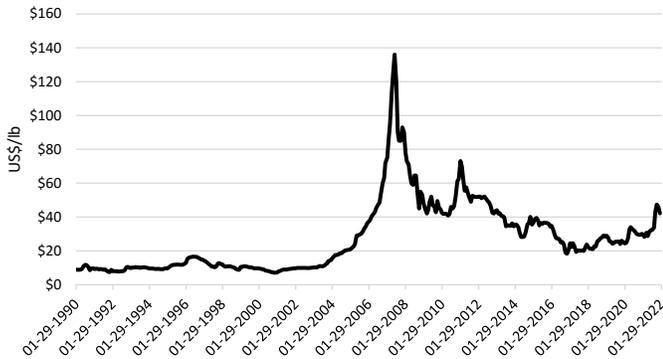


Source: Canaccord Genuity estimates

Secondary demand: the return of the 'SPUT market'?

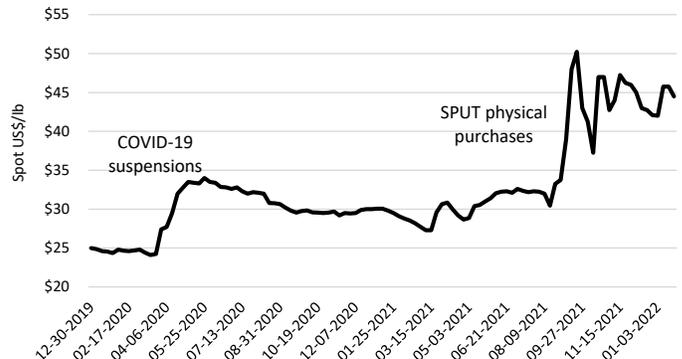
In 2021, the uranium market was heavily influenced by secondary demand from financial players and junior miners; the most notable being the Sprott Physical Uranium Trust. The spot market effectively became the 'SPUT market', with Sprott's aggressive buying, pushing prices north of ~US\$50/lb in late September. Despite a slowdown in buying activity in December (related to broader market weakness), we were encouraged to see the spot price end the year above US\$40/lb. In our view, the days of US\$30/lb uranium are long behind us.

Figure 4: U3O8 spot price history (1990-now)



Source: UxC LLC

Figure 5: U3O8 spot price history (2020-now)



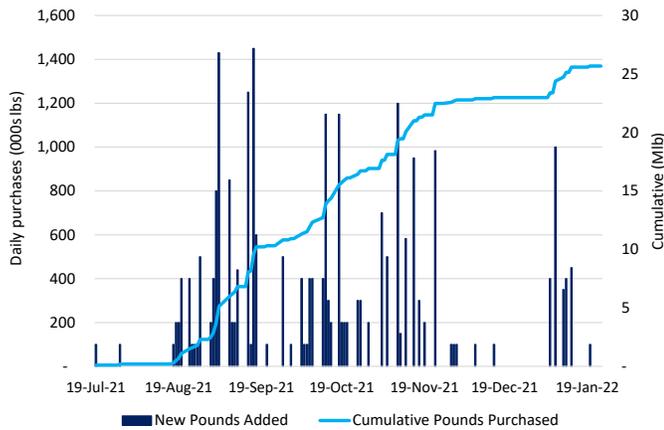
Source: UxC LLC

While the Trust currently has ~US\$23 million in cash on hand to purchase more uranium, the extent to which SPUT will continue to have a major impact on the market in 2022 remains to be seen. The Trust can only issue units when its shares trade at a premium to NAV. Therefore, SPUT's ability to execute further transactions in 2022 will be highly dependent on future demand for its units.

We see catalysts on the horizon that could generate additional demand. At the beginning of the year, SPUT was able to elevate its US OTC listing to OTCQB, which should provide greater access to US investors. The company is also targeting a NYSE listing sometime in 2022. Management expects to submit its filings in Q1, which could ignite some excitement in the market again. We estimate that the Trust has ~US\$2.4 billion in buying power left on its US\$3.5 billion ATM, the equivalent of ~53mlbs of uranium (U₃O₈) at current spot prices. Any additional buying by SPUT is likely to put upward pressure on prices.

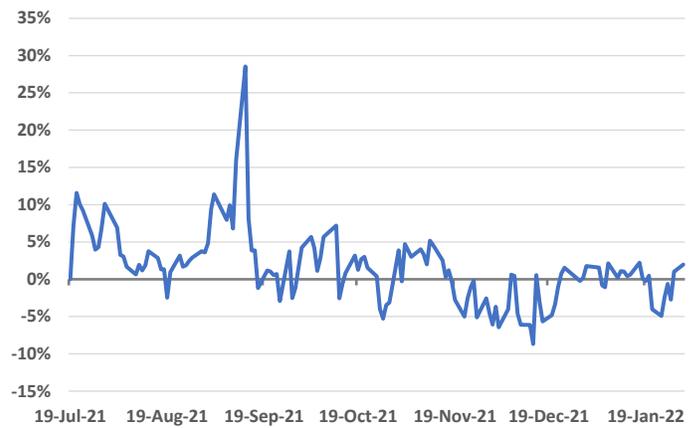
We'll also be watching Yellow Cake plc, another uranium holding company, to see if it exercises its option to purchase \$100 million of physical uranium from Kazatomprom (KAP) in 2022. With KAP's production already under pressure (due to supply chain issues), KAP may enter the spot market again in 2022 to cover pounds and shore up its inventory (they executed several spot transactions in Q4 2021).

Figure 6: SPUT daily and cumulative purchases



Source: Company Reports, Canaccord Genuity estimates

Figure 7: Historical premium/discount to NAV



Source: Company Reports, Factset, Canaccord Genuity estimates

Long-term contract indicators are increasing

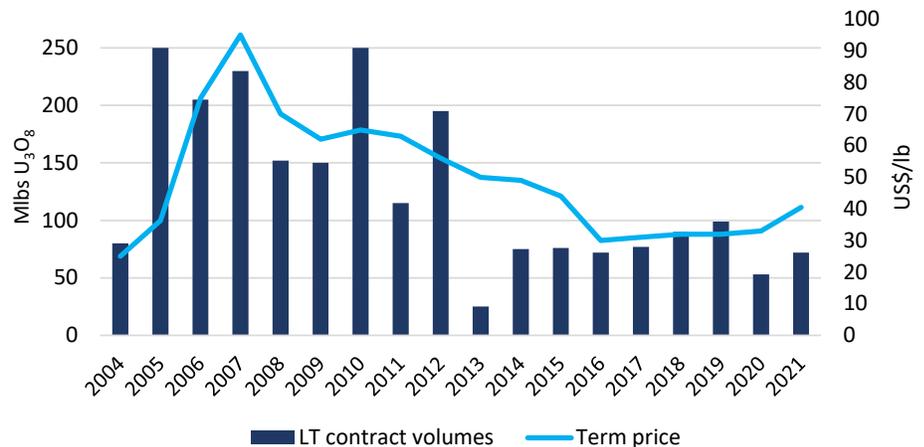
Despite the financial activity we've seen over the last 12 months, we need to remind ourselves that the spot market is not the fundamental market. The majority of uranium is still bought and sold under long-term contracts.

We believe that 2022 could be the year that utilities return to the long-term market in a material way. In fact, over the last year, we've already seen evidence of increasing on-market and off-market interest. Third-party data indicated that contracted volumes totalled ~72mlbs U₃O₈ through 2021, a notable step-up from the 53mlbs contracted in 2020 (albeit still low - Figure 8). US utilities were the most active, posting their highest overall buying levels since 2008. Despite this, activity from non-US utilities remained low.

Another positive indicator is the growing number of RFPs on market. Our channel checks indicate that Exelon, the largest utility in the US, recently concluded an RFP and that a Chinese utility was active in the last two months. More important, is the fact that these LT contracts are being signed at higher price levels; the term price rose 23% in 2021, its largest single year gain since 2007.

In 2022, we expect US utilities to be quite active again. We'll also be watching for increased activity by non-US utilities, especially the Chinese.

Figure 8: Long-term contract volumes and term price



Source: UxC LLC

We estimate that the average utility currently holds ~2-3 years forward coverage, which suggests a need to renegotiate long-term contracts by 2023 to meet rising long-term demand (and also does not mean that a utility will not come to market to negotiate term contracts for 2024 and beyond). In our view, these contracts are likely to be struck at a premium to the current base indicator to (1) stimulate mine restarts and greenfield developments and (2) improve supply certainty. Recent unrest in Kazakhstan highlights the importance of security of supply, in our view.

A brief note on Kazakhstan

In early January, violent protests broke out across Kazakhstan (~46% of global supply) as a response to a doubling of LPG prices (which most Kazakhs use to fuel their cars). In response, Kazakhstan's President Kassym-Jomart Tokayev dismissed the government, declared a two-week state of emergency, and enacted an internet blackout. However, these actions did not quell the protests, which had turned into a grievance against general economic inequality in the country. Order was eventually restored following intervention of the CSTO, a Russian-backed security force.

While the protests did not directly impact production in the country, the situation served as a reminder of how concentrated uranium supply is. Furthermore, we acknowledge that the political risk profile of Kazakhstan has likely increased in the eyes of utilities, which could lead them to favour further diversification of supply.

How producers respond will be a key factor

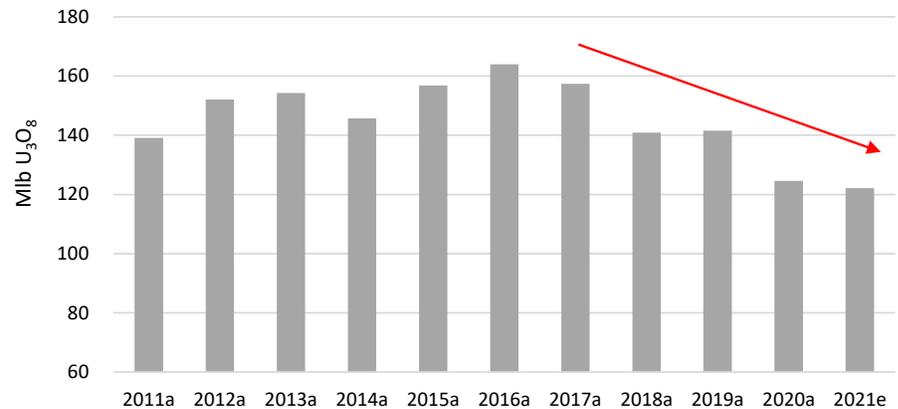
The 2022 uranium market will not only be driven by the actions of utilities, but also producers. We will be paying close attention to any announcements from Cameco, Kazatomprom, and other major producers that hint at changes in near-term or long-term production plans. An announced restart of the McArthur River mine and/or another supply disruption (among other production changes) would impact the direction of pricing, in our view.

Furthermore, we acknowledge the fact that major producers may also be unwilling to contract at current price levels given the expectation of a continued rise in prices. We'll be closely watching how producers respond to RFPs in the market and what this means for a 'durable' long-term price.

Supply is not in a position to front run demand

Primary mine supply remains under significant pressure, a situation which has only been compounded by recent COVID-19 disruptions, ongoing supply chain issues, and the shutdown of both Ranger and Cominak. We estimate that over the last six years (2016-2021), annual uranium production has declined by ~24% to 123mlbs U_3O_8 , its lowest level in 12 years. And following years of insufficient incentive pricing, supply is not in a position (or willing) to front run demand.

Figure 9: Primary mine supply has been on the decline in recent years



Source: WNA, UxC LLC, Company Reports, Canaccord Genuity estimates

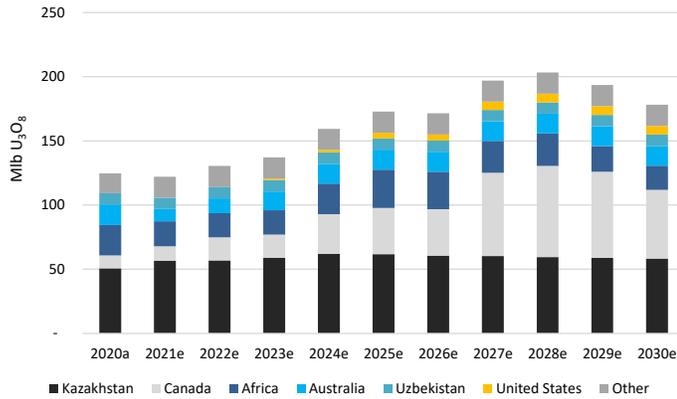
It is telling, in our view, that Cameco remains short production (~11-13mlb of purchases guided to in FY21) and that Kazatomprom has extended its 20% production cut through 2023, removing ~15mlbs per year from the market. This supply-side discipline has helped remove excess pounds from the spot market.

With the spot market tightening, and primary mine production on the decline, utilities should be focused on securing future supply. In our view, higher pricing signals (>US\$45/lb) will be needed to bring idled production capacity back online. We've yet to see Cameco or other advanced projects (Langer Heinrich, Honeymoon) announce a restart decision, this is despite a 40% increase in the spot price and a 23% increase in the term price in 2021.

Furthermore, based on our updated supply forecasts this production alone will not be enough to satisfy longer-term demand. Advanced greenfield projects will also need to come online. While our supply demand model suggests that the market could rebalance mid-decade, we note that many of the development projects we model as achieving production (e.g., NexGen, Denison, Global Atomic, etc.) still face significant political, permitting, and funding challenges.

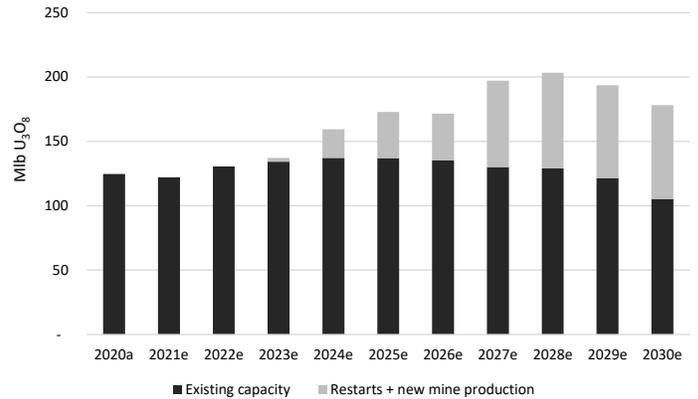
Our updated primary mine supply forecasts are presented below. For existing producers, our production numbers have been updated to reflect the most recent company guidance. In 2022, we expect supply chain issues to continue to impact production out of Kazakhstan and have reduced our forecasts accordingly (-3%). Our medium-term estimates continue to reflect the addition of mine restarts and new greenfield developments as a response to higher prices.

Figure 10: CG forecast primary mine supply by country



Source: Company Reports, Canaccord Genuity estimates

Figure 11: CG forecast primary mine supply by type



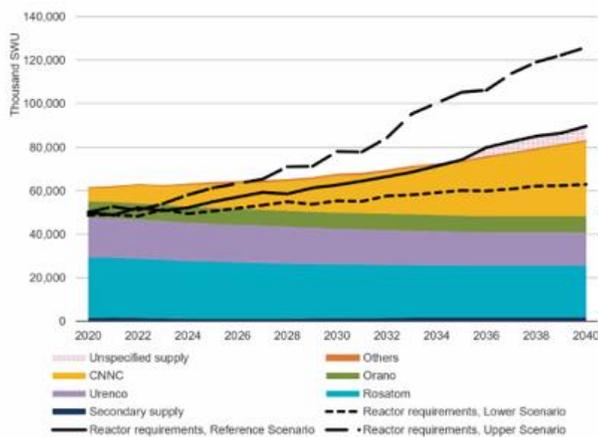
Source: Company Reports, Canaccord Genuity estimates

Secondary supply also on the decline

We maintain our view that secondary supply will ultimately shrink toward ~22mlb per annum in the long term, down from ~30mlb currently. We expect increases in enrichment demand and SWU prices to reduce the viability of underfeeding going forward, with separative working units now priced at US\$56, up from US\$34 in July 2018. These higher prices, which reflect higher demand (Figure 12), reduce the economic drivers for secondary supply as when SWU prices are lower, enrichers are more likely to use excess SWU themselves, which increases secondary supply via underfeeding and tails re-enrichment in the U_3O_8 market. Current global enrichment overcapacity results in ~18Mlb U_3O_8 per annum from underfeeding and tails re-enrichment. We expect this number to decline to ~6Mlb by 2030.

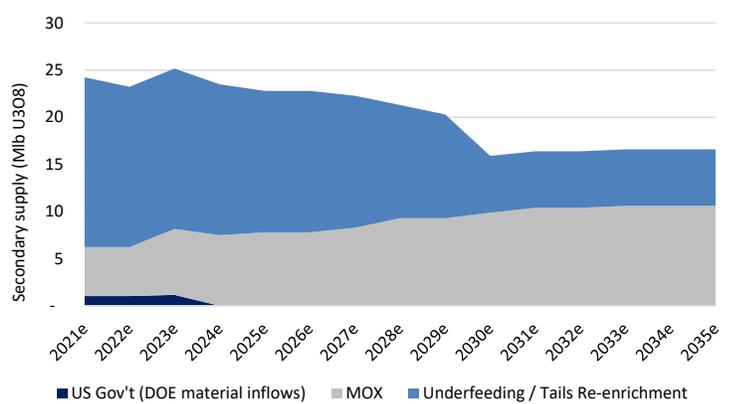
The gradual decrease in underfeeding and tails re-enrichment is expected to be slightly offset by an increase in recycled uranium and plutonium as MOX fuel is forecast to play a more significant role in the latter half of this decade compared to its current share of secondary supply (~20% - Figure 13).

Figure 12: WNA enrichment requirements for SWU



Source: World Nuclear Association

Figure 13: CG forecast secondary supply



Source: World Nuclear Organization, Canaccord Genuity estimates

Price deck – key changes

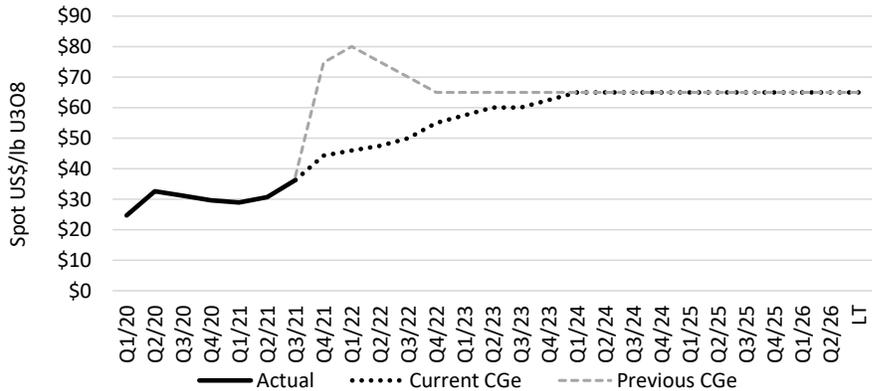
In September 2021, we published a report ([Chain reaction – mixing fundamentals and financials](#)) that considered the potential for a near-term uranium price peak (to US\$80/lb), related to increased secondary demand from financial players. Our pricing scenario did not play out, due to a slowdown in demand for SPUT in late November and into December.

Despite this, our fundamental thesis remains unchanged, and we maintain our long-term price forecast of US\$65/lb. Our long-term forecast remains based on our demand and marginal cost of supply forecasts. As seen in Figures 14 and 15:

- We have removed our previous peak pricing scenario and moderated our near-term price forecasts based on our marginal cost of supply forecasts
- We continue to expect the market to be in a meaningful structural deficit over the next few years, even before secondary demand from financial players is considered
 - We note that the below SxD model does not consider the impact of ~40mlbs of U₃O₈ purchases from these players in 2021 nor the future demand impact of small modular reactors
- We expect prices to remain relatively flat through H1 2022. However, SPUT filing for its US listing and nuclear being included in the EU's sustainable taxonomy could act as positive catalysts for higher prices.
- We are more optimistic on pricing in H2 2022. As discussed earlier, we expect utility interest in long-term contracting to increase, which would serve as a catalyst for higher prices. In the absence of utility contracting, we also expect SPUT to complete its listing on the NYSE in mid-2022, which should reinvigorate demand following US broker restrictions last fall.
- By year-end, we expect the uranium price to be north of >\$50/lb. In our view, this price level should incentivize mine restarts (McArthur River, Langer Heinrich, Honeymoon, etc.).
- These projects alone will not be sufficient to meet growing long-term demand. Investments in new Tier 1 mine supply will be required; however, many of these projects (Arrow, Wheeler River, etc.) face significant upfront capital costs in addition to outstanding permits. Based on our discussions with management, we do not expect these projects to be sanctioned at a price below US\$60/lb.
- Even after including these projects, we continue to see the potential for significant sustained market deficits from 2029 onward. In our view, Tier 2 and Tier 3 projects will be required to meet this demand, which have notably higher incentive prices.

Figure 14: CGe current vs. previous price deck

U ₃ O ₈ Price Deck	2020a	2021a	2022e	2023e	2024e	2025e	LT
Current CGe	\$29.53	\$35.06	\$49.63	\$60.00	\$65.00	\$65.00	\$65.00
Previous CGe	\$29.53	\$42.99	\$72.50	\$65.00	\$65.00	\$65.00	\$65.00
% Change	0%	-18%	-32%	-8%	0%	0%	0%



Source: UxC LLC, Canaccord Genuity estimates

Figure 15: Uranium SxD model summary

(in million lbs U3O8)	2019A	2020A	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
Mine Supply												
Kazakhstan	60	51	57	57	58	59	61	62	64	63	62	62
Canada	18	10	12	18	18	31	36	36	65	71	67	54
Australia	16	16	9	12	15	15	15	15	15	15	15	15
Africa	23	24	20	19	19	24	30	29	25	25	20	19
China	4	4	5	5	5	5	5	5	5	5	5	5
Russia	8	7	8	8	8	8	8	8	8	8	8	8
RoW	12	12	13	13	13	15	17	17	18	19	20	20
Total Mine Supply	142	125	123	130	135	157	172	172	200	207	197	182
Mine Supply as a % of Demand		70%	68%	71%	71%	80%	87%	84%	93%	93%	85%	76%
YoY % Change		-12%	-1%	6%	4%	16%	10%	0%	16%	3%	-5%	-8%
Total Secondary Supply	31	30	30	28	30	29	28	28	27	26	25	21
Secondary Supply as a % of Demand		17%	17%	15%	16%	15%	14%	14%	13%	12%	11%	9%
Total Supply	173	155	153	159	165	185	200	200	227	233	223	203
World Nuclear Generating Capacity (GWe)	373	374	385	390	402	413	417	433	454	473	490	508
Reactor Capacity (GWe)												
China	46	48	50	54	55	59	64	69	77	87	96	108
United States	98	97	96	98	98	98	98	98	98	98	98	98
Canada	14	14	14	14	14	14	14	14	14	14	14	14
Europe	135	132	131	124	122	123	119	124	127	126	127	126
Russia	29	29	29	29	30	30	30	30	33	36	37	42
Japan	9	9	9	11	12	12	12	13	13	15	15	15
South Korea	23	23	23	25	27	29	29	29	29	29	29	29
India	6	6	7	8	11	11	11	13	15	17	18	20
RoW	14	17	27	29	33	38	40	43	48	52	57	57
Total Reactor Capacity (GWe)	373	374	385	390	402	413	417	433	454	473	490	508
Total Demand (U3O8)	176	177	181	184	190	195	197	204	214	223	231	240
YoY % Change		1%	3%	1%	3%	3%	1%	4%	5%	4%	4%	4%
Market Balance - restarts/new supply	(3)	(22)	(28)	(26)	(25)	(10)	3	(5)	13	10	(9)	(37)
Market Balance - excluding restarts/new supply	(3)	(22)	(28)	(26)	(26)	(32)	(33)	(40)	(54)	(64)	(81)	(110)

*Excludes the impact of secondary demand and SMRs

Source: WNA, UxC LLC, Company Reports, Canaccord Genuity estimates

Uranium equities

We have updated our estimates for each of the companies we cover to reflect our revised uranium price deck and company specific updates. Our revised target prices and ratings are presented in Figure 16 below. Given the fact that most of our developers achieve production after 2024, our target prices are largely unchanged (as they remain based on US\$65/lb LT).

While we remain bullish on uranium, we recognize the opaque nature of the market and inherent risks in uranium mining and project development. Accordingly, we continue to prefer companies with a sound balance sheet and positive company-specific catalysts. Our preferred equity exposures are NexGen Energy (**NXE-TSX**) and Denison Mines (**DML-TSX**) in North America; Paladin Energy (**PDN-ASX**) and Boss Energy (**BOE-ASX**) in Australia; and Yellow Cake plc (**YCA-AIM**) in the UK.

Figure 16: Revisions to target prices and ratings

		Target Price		Rating		Share Price	% Return
		New	Previous	New	Previous	2022-01-31	
Boss Energy Ltd.	BOE-ASX	A\$2.88	A\$2.88*	SPEC BUY	SPEC BUY	A\$2.00	44%
Cameco Corp.	CCO-TSX	C\$34.00	C\$34.00	BUY	BUY	C\$24.71	38%
Denison Mines Corp.	DML-TSX	C\$3.00	C\$3.00	SPEC BUY	SPEC BUY	C\$1.54	95%
Fission Uranium Corp.	FCU-TSX	C\$1.10	C\$1.10	SPEC BUY	SPEC BUY	C\$0.77	43%
Lotus Resources Ltd.	LOT-ASX	A\$0.30	A\$0.28	SPEC BUY	HOLD	A\$0.25	22%
NexGen Energy Ltd.	NXE-TSX	C\$10.00	C\$10.00	SPEC BUY	SPEC BUY	C\$5.23	91%
Paladin Energy Ltd.	PDN-ASX	A\$1.05	A\$1.05	BUY	BUY	A\$0.72	46%
Peninsula Energy Ltd.	PEN-ASX	A\$0.30	A\$0.30	SPEC BUY	SPEC BUY	A\$0.19	62%
Sprott Physical Uranium Trust	U.UN-TSX	C\$18.50	C\$21.00	BUY	BUY	C\$14.10	31%
Uranium Energy Corp.	UEC-US	US\$5.50	US\$6.00	SPEC BUY	SPEC BUY	US\$2.61	111%
Uranium Royalty Corp.	URC-TSX	C\$6.00	C\$7.50	SPEC BUY	SPEC BUY	C\$4.17	44%
Vimy Resources Ltd.	VMY-ASX	A\$0.25	A\$0.25	SPEC BUY	SPEC BUY	A\$0.18	43%
Yellow Cake Plc	YCA-LON	£4.35	£5.10	BUY	BUY	£3.19	36%

* Reflects 8 to 1 share consolidation

Source: Factset, Canaccord Genuity estimates

Figure 17: Global uranium comps

Uranium Coverage Universe	Ticker	Price 2022-01-31	Market Capitalization	Enterprise Value	Rating	Target Price	Return to Target	P/NAV	Primary Project(s)	Metal(s)	Location(s)	Analyst
Boss Resources Ltd.	BOE-ASX	A\$2.00	A\$571	US\$315	SPEC BUY	A\$2.88	44%	0.69	Honeymoon	U ₃ O ₈	South Australia	JB
Cameco Corp.	CCO-TSX	C\$24.71	C\$9,834	US\$7,318	BUY	C\$34.00	38%	1.22	Cigar Lake, Inkai, McArthur River	U ₃ O ₈ , UF ₆	Canada, Kazakhstan	KL
Denison Mines Corp.	DML-TSX	C\$1.54	C\$1,243	US\$876	SPEC BUY	C\$3.00	95%	0.80	Wheeler River	U ₃ O ₈	Saskatchewan, Canada	KL
Fission Uranium Corp.	FCU-TSX	C\$0.77	C\$510	US\$324	SPEC BUY	C\$1.10	43%	0.87	Triple R	U ₃ O ₈	Saskatchewan, Canada	KL
Lotus Resources Ltd.	LOT-ASX	A\$0.25	A\$295	US\$121	SPEC BUY	A\$0.30	22%	0.82	Kayelekera	U ₃ O ₈	Malawi	JB
NexGen Energy Ltd.	NXE-TSX	C\$5.23	C\$2,494	US\$1,734	SPEC BUY	C\$10.00	91%	0.65	Rook I - Arrow	U ₃ O ₈	Saskatchewan, Canada	KL
Paladin Energy Ltd.	PDN-ASX	A\$0.72	A\$1,929	US\$1,119	BUY	A\$1.05	46%	0.69	Langer Heinrich	U ₃ O ₈	Namibia	JB
Peninsula Energy Ltd.	PEN-ASX	A\$0.19	A\$184	US\$123	SPEC BUY	A\$0.30	62%	0.62	Lance Uranium Projects	U ₃ O ₈	Wyoming, USA	JB
Sprott Physical Uranium Trust	U.UN-TSX	C\$14.10	C\$2,305	NA	BUY	C\$18.50	31%	0.76	Holding Company	U ₃ O ₈ , UF ₆	Various	KL
Uranium Energy Corp.	UEC-US	US\$2.61	US\$698	US\$559	SPEC BUY	US\$5.50	111%	0.63	Texas Portfolio, Reno Creek	U ₃ O ₈	Texas & Wyoming, USA	KL
Uranium Royalty Corp.	URC-TSX	C\$4.17	C\$384	US\$219	SPEC BUY	C\$6.00	44%	1.41	Royalty Company	U ₃ O ₈	Various	KL
Vimy Resources Ltd.	VMY-ASX	A\$0.18	A\$185	US\$83	SPEC BUY	A\$0.25	43%	0.70	Mulga Rock	U ₃ O ₈	Western Australia	JB
Yellow Cake Plc	YCA-LON	£3.19	£586	US\$524	BUY	510p	60%	0.63	Holding Company	U ₃ O ₈	Various	SC
Uranium Average								0.81				

*KL = Katie Lachapelle, Canaccord Genuity Corp (Canada), JB = James Bullen, Canaccord Genuity (Australia) Ltd, SC = Sam Catalano, Canaccord Genuity Ltd (UK)

Source: Factset, Canaccord Genuity estimates

Boss Energy – A bigger, better Honeymoon

BOE-ASX: A\$2.00 | SPEC BUY | A\$2.88 TP (unchanged)

BOE shares were up 170% in 2021 as the company continued to progress its flagship Honeymoon development, raised capital to purchase physical uranium and benefited from improved uranium sentiment.

BOE's decision in early 2021 to acquire 1.25Mlb of physical uranium at ~US\$30.50/lb, a price which is below the current estimated AISC cost at Honeymoon, makes sense on a number of fronts, in our view. It: 1) improves security/certainty of supply for potential offtakers; 2) provides contracting optionality; 3) provides funding optionality; 4) enhances market connectivity; and 5) provides physical exposure at what we view as an opportune time.

Fully permitted, low capital intensity and fast restart potential

As a brownfield, restart development Honeymoon has a number of competitive advantages versus its greenfield peers. BOE completed an enhanced feasibility study (EFS) in June and is currently undertaking front-end-engineering-design for Honeymoon. This work is expected to be completed in the MarQ'22 with project sanction, assuming a supportive uranium market, occurring shortly thereafter.

Key highlights from the EFS included:

- Name plate production capacity rises 22.5% to 2.45Mlb of U₃O₈ (CG at 2.2Mlb prior).
- All-In Costs fall 11% to US\$31.86/lb; All-In-Sustaining Costs fall 16% to US\$25.62/lb (CG at US\$27.5/lb prior); with Cash Costs falling 21% to US\$18.46/lb.
- Capital cost of restart has fallen to US\$60mn (down from US\$70mn) but upfront capex has increased to US\$80mn as a consequence of the capacity increase, which is in line with CG.
- Accuracy of -10/+15%.
- EFS is based on only 36Mlbs of the total JORC Resource of 71.6Mlbs; there remains scope for further capacity increases and life extensions beyond 12 years, in our view.
- Honeymoon remains fully permitted for production, storage, and export of U₃O₈ (up to 3.3Mlb).

With a modelled breakeven of US\$35/lb, OECD location and a short <12-month development lead time, we believe Honeymoon will be in the first wave of project restarts.

Potential catalysts

- **Completion of FEED**
- **Term market activity** in the medium term is likely to increase, in our view, on the back of improving market sentiment and increasing uncovered demand.
- **Exploration update**; passive seismic to recommence in the near term.

Target price A\$2.88/sh; maintain SPEC BUY rating: Our target price, which is primarily NPV8 based, is unchanged (based on the 8 for 1 share consolidation). The company remains catalyst rich, in our view, and consequently we retain our SPEC BUY rating.

Cameco Corporation – Uranium kings

CCO-TSX: C\$24.71 | BUY | C\$34.00 TP (unchanged)

2021 Review: Cameco's shares returned 63% in 2021, on the back of improving uranium market sentiment and positive company-specific catalysts. As of Q3 2021, Cameco added over 20mlbs of U₃O₈ to its long-term contract portfolio, a significant increase over the 12.5mlbs contracted in 2020.

We continue to believe that Cameco is well positioned to add additional contracts to its portfolio in 2022. Relative to peers, Cameco offers long-life, Tier 1, permitted and proven operating assets in safe jurisdictions. These competitive advantages are likely to be favoured by utilities as they look to negotiate new LT contracts. In our view, the price rise in 2022 has put Cameco in a far better negotiating position.

In 2021, we also saw a partial resolution of CCO's long-running dispute with the CRA. Based on this positive ruling, CCO has filed an appeal with the Tax Court requesting a reversal of the transfer pricing adjustments for the remaining tax years in question (2007-2013). If successful, ~\$777 million in cash and letters of credit will be returned to CCO, further improving its already strong balance sheet (\$1.4bn in cash + \$1bn undrawn revolver).

2022 Outlook: Cameco is expected to release its 2022 guidance along with its fourth-quarter financial results on February 9. Overall, we forecast total 2022 revenue of C\$1.8 billion and EBITDA of ~C\$362 million. Our current forecasts assume that the Cigar Lake mine is back up and running at full capacity, producing ~18mlbs per annum (100% basis). However, in Kazakhstan, we do believe that supply chain issues could pose a risk to 2022 production levels and operating costs. Furthermore, we expect Cameco to be an active purchaser in the spot market again in 2022, based on our forecast sales commitments of 25mlbs U₃O₈.

With respect to McArthur River, no restart decision has been announced. However, as Cameco continues to lock in additional long-term contracts, we do believe a decision is on the horizon. Our estimates assume that CCO announces its plan to restart McArthur River before year end, but that first production will not occur until 2024. Once a restart decision is made, the mine will take ~18 months to reach targeted capacity (allowing CCO time to rehire, train staff, etc).

Potential catalysts:

- Signing of additional long-term contracts. Term market activity in the medium term is likely to increase, in our view, on the back of improving market sentiment and increasing uncovered demand.
- A McArthur River re-start decision
- A full resolution of the ongoing CRA dispute
- Potential M&A

Maintain BUY rating; C\$34.00/sh target price. We have updated our model to reflect our revised uranium price deck and slight changes to our operating forecasts. As a result of these changes, our NAVPS declined by only 1%, and we maintain our C\$34.00 target price and BUY rating.

Denison Mines – further de-risking on deck

DML-TSX: C\$1.54 | SPEC BUY | C\$3.00 TP (unchanged)

2021 Review: DML shares performed well over the course of 2021, up 109%, driven by improving uranium market sentiment and the execution of multiple company-specific catalysts.

DML was the first of many developers to announce a strategic uranium purchase in 2021, having acquired 2.5mlbs U₃O₈ with the intention of holding uranium as a long-term capital asset to help fund its flagship Wheeler River project. The company also acquired 50% of JCU Exploration, which in our view, gave Denison exposure to some of Canada's best undeveloped uranium assets and consolidated an additional 5% of the Wheeler River project (bringing total ownership to 95%).

Over the course of 2021, Denison also made significant progress in the field. The company installed and completed a five-spot Test Pattern consisting of commercial scale wells. New high-grade mineralization was also discovered at Phoenix. Drill hole GWR-045 intersected 22% eU₃O₈ over 8.6 metres, higher than the current resource grade of 19.1% U₃O₈. This mineralization is located outside the existing high-grade resource domain; therefore, we believe it has the potential to increase the Phase 1 mine life.

2022 Outlook: We highlight Denison as one of our top picks for 2022, with a number of de-risking catalysts on deck. Field work completed to date has set the stage for an in-ground lixiviant test mid-year. Given some ongoing uncertainty with respect to the use of ISR in the Athabasca Basin, we believe a successful test would be viewed very positively by the market and would act as a re-rating catalyst.

We also look forward to updates regarding the use of a "freeze wall" design as opposed to a "freeze dome". A trade-off study was completed in late 2020, which highlighted the potential for lower upfront capex in addition to reduced technical and operational risk, as the mine would be developed in a phased approach. The results of this work will be incorporated into a final Feasibility Study, which is expected later this year or early next.

Potential catalysts:

- Results of ISR test work including an in-ground lixiviant test - H2 2022
- Exploration results
- Advancement of EA level work/EIS submission
- Definitive Feasibility Study – late 2022/early 2023

Maintain SPEC BUY rating and C\$3.00/sh target price.

Fission Uranium – fishing for more U

FCU-TSX: C\$0.77 | SPEC BUY | C\$1.10 TP (unchanged)

2021 Review: FCU’s shares performed well in 2021, returning a 104% gain. In Q2 2021, the company commenced work on its final Feasibility Study. The Feasibility Study is expected to include an updated mineral resource estimate based on infill and expansion drilling completed throughout 2021. Two successful programs were completed targeting the R780E zone and the R840W zone, with all holes having hit mineralization in multiple stacked intervals. Based on the results released to date we anticipate a material upgrading of inferred resources to the indicated category, and a potential mine life extension of ~3 years in the upcoming Feasibility Study (current mine life, seven years).

In 2021, the company also made important advancements in the permitting process for Triple R. An Engagement and Capacity Agreement was entered into with the Clearwater River Dene Nation. This development is an important step toward completing long-term Impact Benefit Agreements, a key part of establishing the requisite working relationships with local Indigenous rights holders.

2022 Outlook: The next major milestone for Fission will be the release of its Final Feasibility Study. The FS follows the results of a Pre-Feasibility Study completed in 2019, which detailed an underground-only mining scenario producing ~11mlbs per year, at first-quartile cash costs.

Although still far from production (CGe 2030), we remind investors of our view that Triple R is one of the best undeveloped uranium assets globally (high-grade, low-cost, safe jurisdiction). Accordingly, Fission’s pounds provide strong leverage to rising uranium prices. We expect increased interest in the project as the market continues to strengthen; however, over the first half of 2022, share price performance is likely to be predicated on uranium price movements, given a lack of significant company-specific catalysts.

Potential catalysts:

- Project Description submission and acceptance
- 2022 field work results – geotechnical drilling
- Final Feasibility Study (late 2022)

Maintain SPEC BUY rating and C\$1.10/sh target price.

Lotus Energy – upgraded

LOT-ASX: A\$0.25 | SPEC BUY (from HOLD) | A\$0.30 TP (from A\$0.28 TP)

Lotus Resources (LOT-ASX) is focused on restarting the idled Kayelekera Uranium Project (KUP, 85% LOT) in Malawi, which currently has a gross Mineral Resource totalling 27.1Mt at 630ppm U₃O₈ for 37.5Mlb U₃O₈. While not at the bottom of the cost curve, we believe mines such as KUP will be required in the medium term to alleviate the current primary supply deficit.

Bringing back a 3.0Mlb producer for US\$50mn

KUP produced 11Mlbs over its 4year commercial life and benefits from US\$200mn in sunk infrastructure which has been left in good condition.

LOT's restart study highlighted two options for bringing KUP back online: 1) an eight-year life of mine, producing 16.4Mlbs U₃O₈ with average head grade of ~900ppm U₃O₈ and 2) a 14-year life of mine, producing 23.8Mlbs U₃O₈ with treatment of stockpiles from year eight (average head grade ~680ppm U₃O₈). For our modelling and valuation we have focused on the latter - key highlights include:

- Upfront capex of US\$50m and average LOM production of 1.8Mlb per annum.
- LOM AISC of US\$39.8/lb.
- CGe unrisks NPV10 of \$289m using a long-term uranium price of US\$65/lb.

Definitive feasibility study could highlight improved AISC

The company has commenced its DFS with results expected in mid-2022. Given recent encouragement from ore sorting trials there is a distinct possibility that the AISC could decrease materially from the re-start study and annual production could increase.

Potential catalysts

- **DFS progress**
- **Resource update** - Multiple near mine targets were identified in 2021 and drilling concluded in early 2022. This drilling expanded mineralisation by ~100m and an updated Mineral Resource Estimate in the MarQ'22.
- **Milenje exploration** - Assay results from the Milenje Rare Earth and regional (Livingstonia) exploration programs are expected later in the MarQ'22.
- **Term market activity** in the medium term is likely to increase, in our view, on the back of improving market sentiment and increasing uncovered demand.

Increasing target price to A\$0.30/sh; upgrade to SPEC BUY: Our revised target price, which is primarily NPV10 based, increases 7% due to a slight change in our risk profile for the development post a number of technical milestones during 2021.

NexGen Energy – from definition to execution

NXE-TSX: C\$5.23 | SPEC BUY | C\$10.00 TP (unchanged)

2021 Review: NexGen shares returned 59% in 2021, below the uranium developer peer average of 115%. The company started off 2021 strong with the release of the results of a Definitive Feasibility Study. The Feasibility Study outlined a very robust project, with a base case after-tax NPV8% of C\$3.5 billion, an IRR of 52.4%, and a payback period of only 0.9 years. At our long-term price of US\$65/lb U₃O₈, the Arrow project would generate >\$1.3 billion in free cash flow per year during its first five years of production. We continue to believe that NXE is advancing one of the world's best undeveloped projects (across commodities).

In 2021, NexGen also completed a bought deal financing for total gross proceeds of C\$173 million. With ~C\$164 million in net cash currently, the company's balance sheet is well positioned to support project early works (~C\$158 million for surface clearing, airstrip, geotechnical work for foundations, etc.), which are expected to commence this year.

2022 Outlook: NexGen remains our top pick among North American listed peers. In 2022, we expect NexGen to shift away from project definition and towards project execution. With first production expected in 2027, several milestones are expected to be achieved in 2022, including final Environmental Impact Statement submission, release of further exploration results, permitting advancements including potential signing of additional Impact Benefit Agreements, and commencement of early works construction at Arrow.

As the project advances closer to production, we believe NXE will be a prime acquisition target for existing major uranium producers and large diversified mining/energy companies looking to improve their ESG profile.

Potential catalysts:

- Signing of remaining two Impact Benefit Agreements
- Final Environmental Impact Statement submission (Q1 2022) and completion of the public comment period (by mid-2022)
- Assay results of regional exploration program (H1 2022)
- Initiation of construction early works (H2 2022)
- Potential project financing announcement (2022 onward)
- Potential acquisition (ongoing)

Maintain SPEC BUY rating and C\$10.00/sh target price.

Paladin Energy – reset and ready

PDN-ASX: A\$0.72 | BUY | A\$1.05 TP (unchanged)

PDN was a standout performer in 2021 with its shares up 229% YTD. The company conducted a transformational \$219mn raising in March to remove its high-cost debt and position itself for a fast re-start at Langer-Heinrich when the market opportunity arises.

With a total company resource base of 355.5Mlb, an ASX300 index inclusion, a revitalised balance sheet, and Langer Heinrich (LH) primed for restart, we believe PDN is the easiest and most liquid way for ASX investors to gain uranium exposure.

Proven product, low capital intensity and fast restart potential

Langer Heinrich (75% PDN) is a proven and well known asset in the tight-knit uranium community. With 11years and 43Mlb of production history, the confidence in this asset is likely a lot higher than its green- and, in some cases, brownfield peers. Further strengthening this case, PDN released an updated restart study in November that reaffirmed that LH stands ready for an expedited restart.

Over US\$400mn has been sunk at LH, and it will only require US\$81mn in upfront capex, of which US\$47mn is allocated to process optimisation work, to deliver 6.0Mlb/year of production. With a ~18 month lead time to first production, sector leading capital intensity and reasonable C1 costs (US\$27.4/lb) we remain confident that LH will be one of the first projects to restart as the market tightens.

Potential catalysts

- **Potential fast-track restart;** first production from Langer Heinrich is anticipated to be within 18 months of the decision to restart. However, the recent work has identified and scoped early works that may be undertaken to provide flexibility and reduce the project delivery schedule.
- **Term market activity** in the medium term is likely to increase, in our view, on the back of improving market sentiment and increasing uncovered demand.
- **Exploration update:** PDN has significant exploration assets in Canada and Australia which have a collective net resource of 265.6Mlb U₃O₈ and have seen >US\$100mn spent on them. We believe these assets are under-appreciated by the market and look forward to PDN providing more details on their potential.

Maintain BUY rating and \$1.05ps price target.

Peninsula Energy – on the improve

PEN-ASX: A\$0.19 | SPEC BUY | A\$0.30 TP (unchanged)

PEN shares were up 64% in 2021 as it completed its MU1A field demonstration and the end of November, which was seven months ahead of schedule. While the demonstration had a slow start, the decision to tighten well spacing proved to be a very good decision with commissioning of the new pattern resulting in production grade specific to this small area peaking above 150ppm U3O8.

Next steps

- Due to the adjustment of multiple variables throughout the progression of the field demonstration and the observed complexity of the mineral system at Lance, the data will require a degree of interpretation and analysis before finalising technical assumptions that can apply across the entire ore body.
- The company contemplates a two-month period of data analysis and process design evaluation prior to commencing an update of the Lance Project capital and operating costs.

Permitting of the identified process enhancements is currently underway. A final decision on resuming production operations with the Low-pH ISR method will be based upon the results of the updated studies and the prevailing uranium market conditions

Potential catalysts

- **Capital and operating costs update** (expected in JunQ'22).
- **Term market activity** in the medium term is likely to increase, in our view, on the back of improving market sentiment and increasing uncovered demand.
- **US Strategic Reserve;** PEN, with its mine in Wyoming, is one of the very few ASX stocks which can directly benefit from the proposed US strategic reserve.

Maintain SPEC BUY rating and A\$0.30/sh target price.

Sprott Physical Uranium Trust – ready for round two

U.UN-TSX: C\$14.10 | BUY | C\$18.50 TP (from C\$21.00 TP)

2021 Review: The Sprott Physical Uranium Trust (SPUT) began trading on the TSX in July 2021 following the completion of its plan of arrangement with Uranium Participation Corp. Immediately after launching its initial US\$300 million ATM in August, the Trust became an active force in the spot market, issuing units and acquiring uranium on a near continuous basis. As demand grew for its unit, the Trust announced an upsizing of its ATM to US\$1.3 billion in September, and a further upsizing to US\$3.5 billion in November.

By December, SPUT had purchased an impressive 23mlbs of U₃O₈ and more than doubled its market cap to ~C\$2.3 billion. The Trust now holds ~44mlbs of U₃O₈, equivalent to ~24% of annual uranium demand.

2022 Outlook: As detailed earlier in this report, the extent to which SPUT will continue to have a major impact on the spot price in 2022 remains to be seen. However, we are optimistic; the Trust has traded at a premium to its NAV more than 50% of trading days so far this year. This has sparked more physical buying, with SPUT increasing its uranium holdings by 7% since January 1. Management noted that over the last few months, investor interest has picked up among larger, more generalist institutional funds and funds that focus on green energy and ESG investments, which we believe bodes well for future demand.

There is one major catalyst on deck for 2022: the completion of a NYSE listing. This listing is likely to drive additional demand and liquidity. Management expects to submit its filings in early Q1, but timing of completion is uncertain due to the fact that this is a novel listing. We assume mid-year 2022 as a reasonable estimate. We continue to like SPUT, as it offers, simple and direct exposure to an increasing uranium price.

Potential catalysts:

- Additional spot purchases and a resultant move higher in the spot price
- NYSE listing

Decreasing target price to C\$18.50/sh; maintain BUY rating: We are modestly decreasing our target price to C\$18.50/sh, from C\$21.00/sh. Our target price remains based on 1.0x our 12-month forward NAVPS estimate of C\$18.47. Our NAVPS is based on our valuation of SPUT's inventory of physical uranium (U₃O₈) priced at our 12-month spot uranium forecast (US\$57/lb), net of working capital adjustments. Our revised target price also reflects uranium purchases over the last quarter, as well as changes in the CAD/USD exchange rate.

Given the 31% implied return to our target, we reiterate our BUY rating. At the current spot uranium price of ~US\$43.25/lb U₃O₈ and based on U.UN's current unit price of C\$14.10/sh, the Trust is currently trading at a 1% premium to its underlying NAV.

Uranium Energy Corp – production ready

UEC-NYSE: US\$2.61 | SPEC BUY | US\$5.50 TP (from US\$6.00 TP)

2021 Review: Uranium Energy Corp's shares returned 90% in 2021. The company continued to advance its portfolio of fully permitted projects in the United States towards a production decision. Its production-ready assets include its hub-and-spoke in-situ recovery portfolios in South Texas and Wyoming.

In November, UEC announced its acquisition of Uranium One Americas (U1A), the US subsidiary of Rosatom for \$112 million in cash. The acquisition more than doubled the company's existing processing infrastructure from 2.0mlbs of capacity to 4.5mlbs and added four permitted projects to its pipeline (+41.9mlbs).

In our view, this acquisition was well thought out, as it creates hub-and-spoke operations potential in Wyoming. The Irigaray plant (acquired from U1A) is located a short 45 miles away from the Reno Creek project. The acquisition, therefore, should eliminate the need for UEC to build and license a processing plant at Reno Creek, which should result in significant capex savings (~\$60 million).

2022 Outlook: With uranium prices now north of US\$40/lb and increased interest in long-term contracts we expect UEC to be active in 2022, speaking with utilities and preparing its assets for a potential restart decision. The company holds ~4.1mlbs of physical uranium (some deliveries still pending), which should help in marketing efforts. A long-term contract and production go-ahead decision in 2022 would be a significant catalyst for UEC's shares.

In 2022, we could also see the US uranium reserve finally come to fruition (\$1.5 billion purchasing program over 10 years). In August, The Department of Energy filed a request for information regarding the reserve and a competitive procurement process is expected to be established sometime in 2022. If this is the case, we believe UEC is well positioned as a potential recipient of support.

Lastly, we expect UEC to release the results of an updated Pre-Feasibility Study on the Reno Creek project this year (delayed from 2021). The PFS is likely to reflect lower capex, related to the U1A acquisition, and the integration of the Irigaray plant.

Potential catalysts:

- News of increasing US government support for nuclear and/or details on the US uranium reserve procurement process
- A production decision at the Texas Hub & Spoke operations
- Reno Creek Pre-Feasibility Study
- Updated technical report on the advanced stage projects from U1A's portfolio

Decreasing target price to US\$5.50/sh; maintain SPEC BUY rating: We are modestly decreasing our target price on UEC to US\$5.50/sh, from US\$6.00/sh previously. Our updated target price reflects a one-year delay in our production timelines for both the Texas Hub & Spoke operations and the Wyoming operations (to FY2024 and FY2025, respectively).

Uranium Royalty Corp – the only U royalty company

URC-TSXV: C\$4.17 | SPEC BUY | C\$6.00 TP (from C\$7.50 TP)

2021 Review: URC's share price appreciated 216% in 2021 – the highest among our North American coverage. Rising spot prices helped contribute to a rise in the value of URC's physical uranium holdings. Over 2021, the company added 1.35mlbs to its portfolio at an average cost of US\$39.80/lb. It also entered into a supply agreement with CGN Global Uranium for an additional 500,000 pounds, with delivery dates through 2025.

2022 Outlook: In 2022, we expect the company to execute on more traditional royalty and steaming transactions, in addition to physical uranium transactions. With ongoing uncertainty in the uranium market, royalty and streaming transactions are still competitive sources of capital, in our view. URC's balance sheet is well positioned, with ~C\$62 million in cash and marketable securities, and \$6 million undrawn on its margin loan facility.

Irrespective of a transaction, the company should benefit from a continued upward trajectory in spot prices (based on CGe price deck). Higher prices directly impact the value of URC's holdings and improve the likelihood that URC's royalty portfolio of assets (McArthur River, Dewey Burdock, Reno Creek, etc.) advance toward production and produce cash flow.

Potential catalysts:

- Additional royalty or streaming transactions
- Additional purchases of physical uranium
- Positive developments in the uranium market resulting in higher prices and/or the advancement of projects on which URC holds royalties

Decreasing target price to C\$6.00/sh; maintain SPEC BUY rating: We are decreasing our target price on URC to C\$6.00/sh, from C\$7.50/sh. Our target price is now based on 1.8x NAV, measured as at January 1, 2023 (previously 2.2x NAV). Despite trading at north of 2.0x NAV in October through November, URC's shares have pulled back significantly the last two months. Our lower multiple better reflects recent trading ranges. Given the 44% implied return to our target, we reiterate our SPEC BUY rating on URC.

We remind investors that URC does not operate as a conventional mining company, but rather a financial entity designed to gain exposure to the positive fundamentals of uranium. As a result, royalty companies often trade at a premium to their producer counterparts. This was the case in 2021 for URC and we expect this trend to continue throughout 2022.

Vimy Resources – a year of change

PEN-ASX: A\$0.18 | SPEC BUY | A\$0.30 TP (unchanged)

VMY is focussed on the delivery of its Mulga Rock Project in West Australia. It is one of the largest undeveloped uranium resources in Australia and the company are targeting a 3.5Mlb/y development.

With significant management changes occurring at the back-end of the year, including a change in CEO, and an unsolicited acquisition proposal from Deep Yellow, 2022 is shaping up as a very important year for the company.

Potential catalysts

- **Completion of strategic review and potential for corporate activity**
- **Term market activity** in the medium term is likely to increase, in our view, on the back of improving market sentiment and increasing uncovered demand.

Maintain SPEC BUY rating; A\$0.30/sh target price.

Yellow Cake Plc – Positive outlook remains

YCA-AIM: £3.19 | BUY | £4.35 TP (from £5.10 TP)

YCA shares were up ~36% in 2021 as the spot uranium price rose from ~US\$30/lb to US\$42/lb by the end of the year. Over the course of the year the company raised ~US\$375m across 3 raises to acquire ~9.5 mlbs of additional physical material bringing the total to ~19 mlbs. In our view, this highlights the continued interest of the market and confidence in the positive thesis for uranium pricing.

Attractive entry point, with market fundamentals improving

Positive news continues rolling through markets with various Governments affirming commitment to nuclear power as a key pillar to support the energy transition. China announced plans to build 150 new nuclear reactors by 2035, the EU has elected to classify some nuclear energy projects as 'green' in its Sustainable Taxonomy draft, the Biden administration's Build Back Better initiative currently includes a tax credit to help keep nuclear plants operating, President Macron reaffirmed the major role that nuclear power will continue to play in France's energy program, in addition to several other developments in the sector.

At the same time, primary mine supply sits at a 12-year low, and while uranium prices have recovered significantly to >US\$40/lb, we don't believe this is sufficient to incentivise the development of new mine supply or bring idled mines back into production.

YCA offers, in our view, simple and direct exposure to an increasing uranium price. As a holding company, YCA provides investors with an indirect way to invest in physical uranium, without being exposed to the operational risks associated with companies that engage in the development, mining and processing of uranium.

Furthermore, in our view, YCA holds a key advantage through the Kazatomprom Framework Agreement, which provides YCA the right to purchase up to US\$100m of U3O8 each year, at prices agreed prior to announcing the transaction to the market. Given the scarcity of spot market supply in the current environment, we believe this agreement can provide YCA with the ability to purchase a large volume without progressively driving up spot prices.

The stock has traded at an average discount to spot of ~5% over the last three weeks and is currently trading at a ~7% discount. In our view, this represents an attractive entry point for investors seeking exposure to uranium's growth story.

Potential catalysts

- U₃O₈ price appreciation
- Persistent discount to spot NAV leading management to pursue buybacks

Changes to our model

In addition to incorporating our updated price outlook, we have also taken the opportunity to reflect recent quarterly updates, which include the recent capital raisings and uranium purchases, in addition to some minor modelling changes.

Valuation and recommendation

We set our target price based on a 1.0x P/NPV multiple (distinct from the spot NAV that is commonly quoted), rounded to the nearest 5p. We lower our target price to £4.35/sh due to the change to our uranium price deck (we now value YCA inventory 12 months forward, using a US\$57.50/lb U3O8 price, down from US\$65/lb), and maintain our BUY rating.

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Investment Recommendation

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