

URANIUM PRICES ¹	As of 12/31/2021	MoM	YTD	YoY
Spot Price US\$/lb U ₃ O ₈	\$42.00	-8.2%	37.8%	37.8%
Long-Term Price US\$/lb U ₃ O ₈	\$40.50	-1.2%	22.7%	26.6%

GLOBAL REACTOR ²	COUNT	GWe	MoM	YTD	YoY
Operable	440	394	-0.2%	-0.5%	-0.5%
Under Construction	56	62	0%	5.7%	5.7%
Planned	99	100	-0.2%	0%	0%
Proposed	325	354	0%	-0.3%	-0.3%

SLU EQUITIES PERFORMANCE	As of 12/31/2021	MoM	YTD	YoY
SLU3O8 Index ³	102	-23	105	105
UProducers Average ⁴	MoM Top Performer: A.PDN: -6.4%	-12.7%	88.7%	88.7%
UDevelopers Average ⁴	MoM Top Performer: L.BKL: +9.1%	-7.8%	71.5%	71.5%
UExplorers Average ⁴	MoM Top Performer: V.AZZ: -1.7%	-7.9%	99.8%	99.8%

1. Price as per UxC, LLC.
2. As per World Nuclear Association; MoM, YTD and YoY percentages based on Global Reactor Count
3. SLU₃O₈ Index is comprised of T.CCO, T.DML, T.EFR, A.ERA, A.PDN, A.PEN, T.JURE, U.UEC, T.AEC, L.BKL, T.FCU, T.FSY, V.GXU, T.LAM, T.NXE, A.TOE, T.UEX, A.VMY, V.AZZ, A.BMN, A.DYL, V.FUU, V.PTU, V.SYH
4. Performance Averages from the SLU₃O₈ UEquity list of companies

Updated on December 31, 2021

MONTH IN REVIEW

Despite the ups and downs of equity prices, the price of the commodity itself took a more cautious path in 2021. For the first 8 months of the year both the Spot price and the Long-Term price hovered around the US\$30.00 per lb U₃O₈ mark. In September, driven by consistent spot purchasing by the Sprott Physical Uranium Trust, both the Spot and Long-Term prices seemed to find a more comfortable position in the US\$40 - 42.00 per lb U₃O₈ range. This has remained its happy place up to now.

Meanwhile, equity values went on a wild ride, well more than doubling by November. It seems, however, that once the market realized that U prices has stalled, share prices backed off considerably over the remaining 2 months of the year.

Let's keep a few things in mind:

1. Long-Term uranium prices only improved this year by just over 25%.
2. The incentive price of uranium begins around US\$50.00 per lb U₃O₈ with most mines requiring US\$60-70.00 per lb U₃O₈ before they can go into production.
3. The price of uranium requires another 50-75% increase before the industry is back in business.

Let's see what 2022 delivers.

Comments or question? Ask us on Twitter ([@SightlineU3O8](https://twitter.com/SightlineU3O8)) or email us at editor@sightlineU3O8.com.

URANIUM STOCKS IN 2022: SPROTT CEO CALLS FOR ANOTHER BULLISH YEAR



Source: [Yahoo Finance](https://finance.yahoo.com)

With descriptors like "enormous growth" and "tremendous impact", Sprott Asset Management's chief executive officer sounds like he's talking about the Incredible Hulk when describing his massive bet on uranium in 2021.

The Toronto-based firm's Physical Uranium Trust (U-UN.TO), the only publicly-listed fund in North America that invests in physical uranium, has grown its assets from US\$630 million when it launched in late July, to just under US\$1.9 billion today.

"It has completely exceeded our expectations," John Ciampaglia told Yahoo Finance Canada in an interview. "We're quite bullish on 2022. The uranium market has clearly come back to life after a long slumber."

CONTINUED ON PG 2

URANIUM STOCKS IN 2022: SPROTT CEO CALLS FOR ANOTHER BULLISH YEAR (CONT'D)

The spot price for the radioactive metal was around US\$30 per pound when the fund's units first hit the market. Since then, Sprott has more than doubled its initial 18.1 million pound stockpile, making its biggest buys over the summer and fall to amass a total of 41.3 million pounds. Meanwhile, prices climbed to nearly US\$46 in November, before dipping to US\$42.75 as of Dec. 20, according to nuclear fuel market research firm UxC.

2021 has been a year of Hulk-like returns for more than just Sprott. Shares of Saskatchewan-based uranium producer Cameco (CCO.TO)(CCJ) have increased 67 per cent year-to-date. The Global X Uranium ETF (URA) and NorthShore Global Uranium Mining ETF (URNM) have also rallied 58 per cent and 81 per cent, respectively, over the same period.

Critical mass acceptance

More than a decade after the deadly Fukushima disaster cast a shadow on the future of nuclear power, Sprott's CEO sees growing acceptance. Ciampaglia notes governments in the United States, France, and the Netherlands have expressed support for building additional capacity. The European Union is considering nuclear's green status for rules to label climate-friendly investments.

In the U.S., Bill Gates and Warren Buffett have made headlines with plans to build a US\$1 billion next-generation reactor on the site of a Wyoming coal plant. Earlier this month, U.S. Secretary of Energy Jennifer Granholm, a Democrat, toured a nuclear plant in Illinois.

"When was the last time you saw that? Nuclear has always been a very Republican stance. Not so much on the Democrat side," Ciampaglia said.

"The fact that the Biden administration has included nuclear in its infrastructure bill, and the support of the energy secretary, it's clearly messaging that nuclear is part of the [clean energy] solution. I think that's a signal people should be focused on."

He also points to the energy crisis unfolding in Europe as evidence that more reliable, zero-emissions power is needed on the continent to support the use of renewables. Germany, in particular, whose government decided to phase out nuclear post-Fukushima, is facing skyrocketing energy prices this winter.

On top of that, there's the growing chorus of net-zero pledges from governments and corporations.

"[Nuclear is] the only way some countries have a chance of hitting their greenhouse gas emission targets," Ciampaglia said. "I think a lot of governments, and scientists for that matter, are making that acknowledgement public."

Gordon Johnson, CEO of New York-based GLJ Research, says uranium went from "a four-letter word" to "being very advantageous" in 2021, as investors increasingly associate nuclear power with clean energy needs.

He sees more upside for spot uranium prices in the near term, with utilities looking to lock in long-term supply as funds like Sprott's remove pounds from the open market. He notes nuclear fuel contracts in China are particularly long in the tooth these days.

"What the Sprotts of the world are doing is they are trying to force those renewals of contracts by basically sucking up all the spot availability and pushing prices higher," Johnson said in an interview. "Once the contracted prices start to move, which they have, that's when things get very interesting."

Ciampaglia concedes his fund has had a "tremendous impact" on the spot market. However, he also notes the cost of uranium is only about four to five per cent of a plant's operating expenses.

"So they're not overly price-sensitive," he said. "But you don't run a power plant on a just-in-time inventory model. We think [contract renewals are] a really important factor for the next 12 to 36 months."

How to invest in uranium in 2022

Ciampaglia says institutional investors and family wealth offices are asking him if 2021's strong performance is a flash-in-the-pan, as was the case in the early 2000s, when the price of

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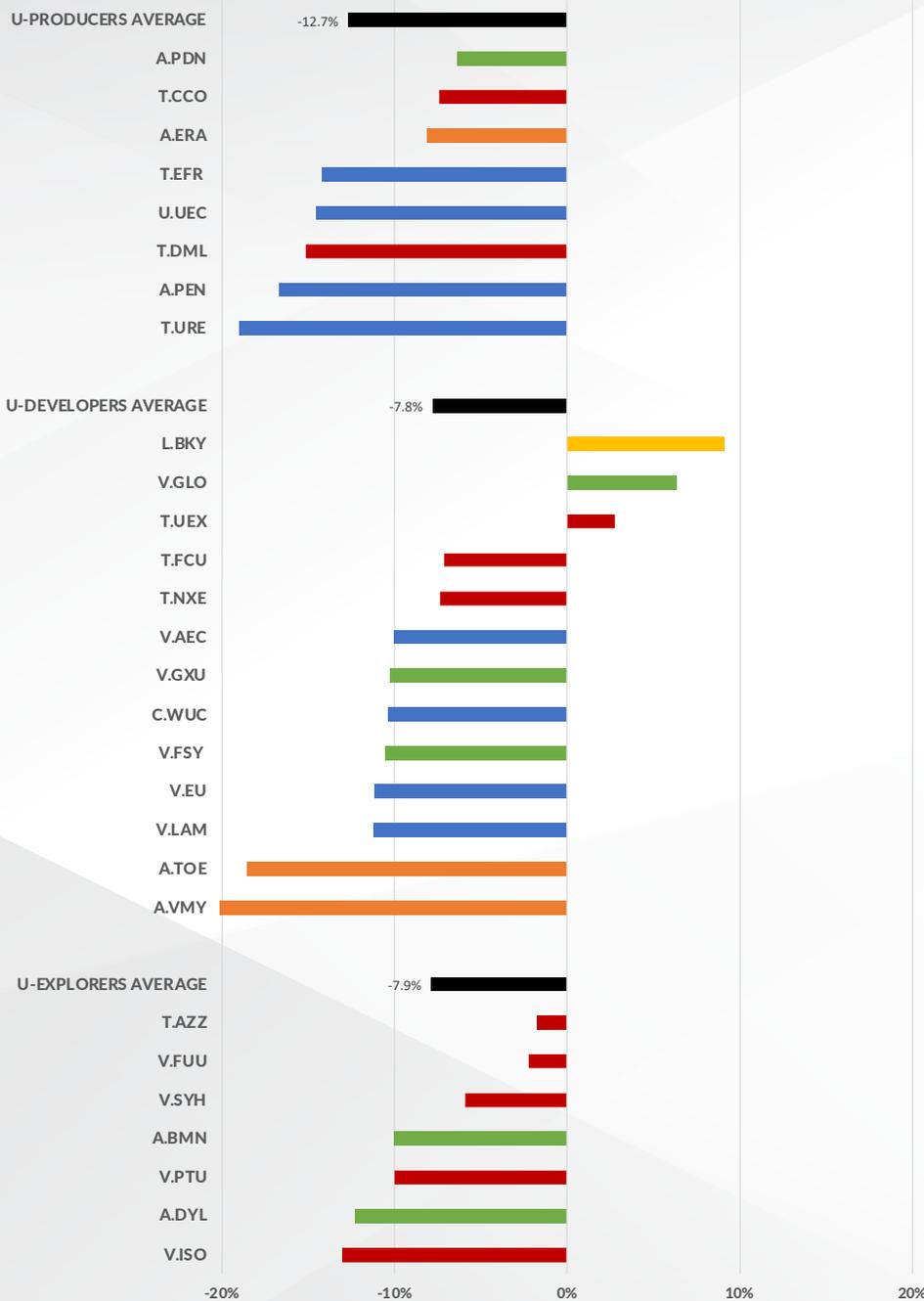
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SLUO EQUITIES MONTHLY PERFORMANCE (DECEMBER 31, 2021)

TOP EQUITIES NEWS

Project Regional Focus:

Red: Canada Blue: USA Green: Africa Orange: Australia Yellow: Spain Gray: Peru



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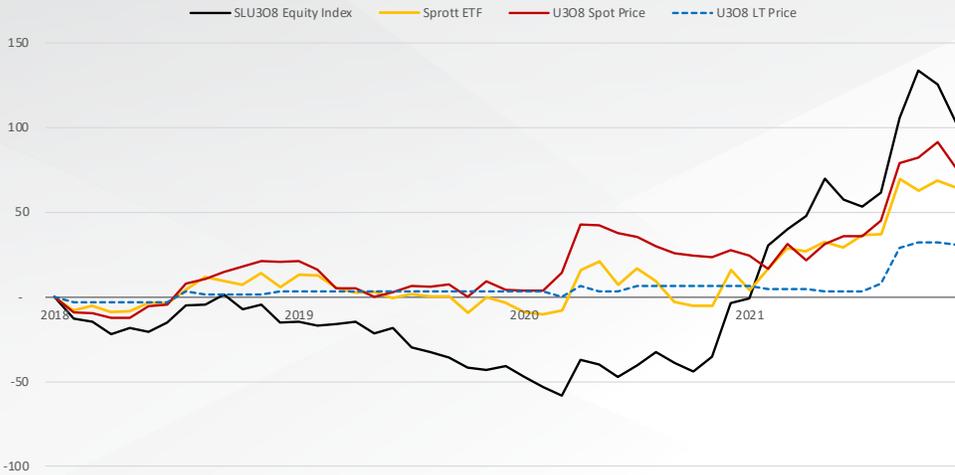
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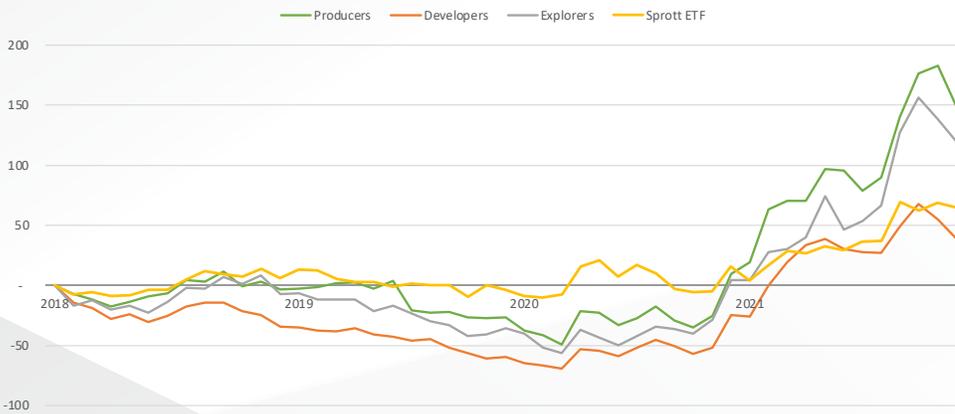
[UEX Closes \\$2.5 Million Private Placement of Flow-Through Common Shares](#)
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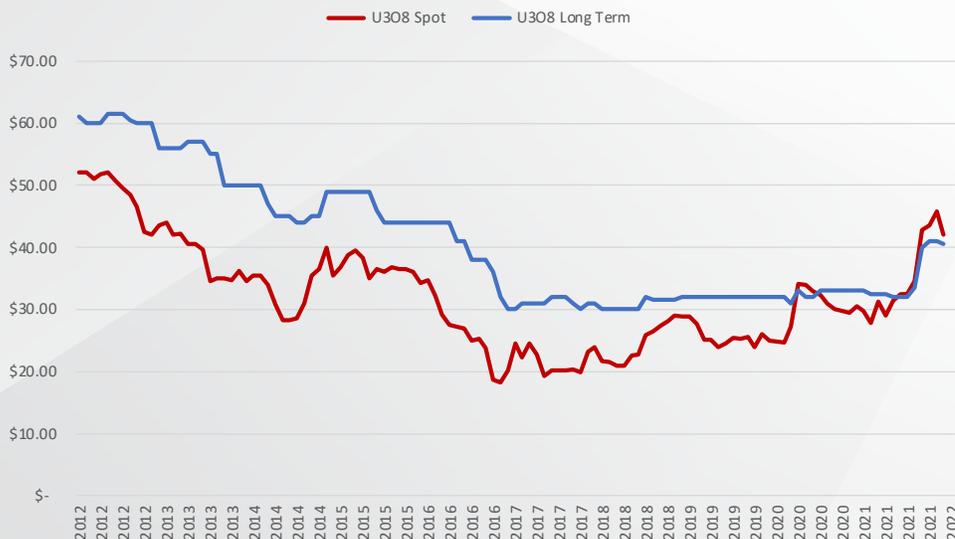
SLU308 EQUITY INDEX



SLU308 EQUITY INDEX BY CATEGORY



U₃O₈ PRICES - HISTORIC



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SLUO EQUITIES

PRODUCING COMPANIES		COUNTRY FOCUS	PRICE AS OF 12/31/2021	52 WEEK HIGH	52 WEEK LOW	MARKET CAP (MILLIONS)
T.CCO	Cameco Corp	Canada	\$27.58	\$35.47	\$15.45	\$10,978.35
T.DML	Denison Mines Corp	Canada	\$1.74	\$2.64	\$0.79	\$1,404.81
T.EFR	Energy Fuels Inc	United States	\$9.66	\$14.33	\$4.51	\$1,297.65
A.ERA	Energy Resources of Australia Limited	Australia	\$0.34	\$0.58	\$0.18	\$1,260.00
A.PDN	Paladin Energy Ltd	Namibia	\$0.88	\$1.12	\$0.24	\$2,360.00
A.PEN	Peninsula Energy Limited	United States	\$0.20	\$0.35	\$0.096	\$199.46
T.URE	Ur-Energy Inc	United States	\$1.54	\$2.72	\$0.94	\$332.66
U.UEC	Uranium Energy Corp	United States	\$3.35	\$5.79	\$1.51	\$892.63
DEVELOPMENT COMPANIES						
V.AEC	Anfield Energy Inc	United States	\$0.09	\$0.225	\$0.075	\$28.85
L.BKY	Berkeley Energia Ltd	Spain	\$12.00	\$41.25	\$8.49	\$102.53
V.EU	Encore Energy Corp	United States	\$1.60	\$2.27	\$0.83	\$321.99
T.FCU	Fission Uranium Corp	Canada	\$0.78	\$1.25	\$0.34	\$512.94
T.FSY	Forsys Metals Corp	Namibia	\$0.85	\$1.30	\$0.255	\$164.32
V.GLO	Global Atomic Corporation	Niger	\$4.19	\$4.84	\$1.39	\$723.74
V.GXU	Goviex Uranium Inc	Niger	\$0.35	\$0.59	\$0.19	\$203.12
T.LAM	Laramide Resources Ltd	United States	\$0.71	\$1.12	\$0.245	\$133.66
T.NXE	NexGen Energy Ltd	Canada	\$5.54	\$8.09	\$3.25	\$2643.40
A.TOE	Toro Energy Limited	Australia	\$0.022	\$0.058	\$0.012	\$85.74
T.UEX	UEX Corporation	Canada	\$0.37	\$0.60	\$0.24	\$199.52
A.VMY	Vimy Resources Ltd	Australia	\$0.20	\$0.31	\$0.065	\$205.70
C.WUC	Western Uranium and Vanadium	United States	\$1.82	\$4.18	\$0.77	\$72.36
EXPLORATION COMPANIES						
T.AZZ	Azarga Uranium Corp	United States	\$0.58	\$0.80	\$0.185	\$147.40
A.BMN	Bannerman Resources Limited	Namibia	\$0.27	\$0.44	\$0.088	\$332.58
A.DYL	Deep Yellow Limited	Namibia	\$0.86	\$1.37	\$0.46	\$332.85
V.FUU	Fission 3.0 Corp	Canada	\$0.22	\$0.30	\$0.08	\$45.81
V.ISO	IsoEnergy Ltd	Canada	\$3.74	\$6.61	\$1.86	\$396.01
V.PTU	Purepoint Uranium Group Inc	Canada	\$0.09	\$0.195	\$0.06	\$29.12
V.SYH	Skyharbour Resources Ltd	Canada	\$0.48	\$0.87	\$0.23	\$63.11
OTHERS						
T.U.UN	Sprott Physical Uranium Trust	Canada	\$13.93	\$18.50	\$9.65	\$2,264.85
L.GCL	Geiger Counter Ltd	UK	\$54.00	\$74.50	\$24.00	\$57.45
U.URA	Global X Uranium ETF	US	\$22.82	\$31.60	\$14.44	\$1,173.91
LYCA	Yellow Cake Plc	UK	\$340.00	\$400.09	\$210.00	\$622.86
T.HURA	Horizon Global Uranium ETF	Canada	\$23.21	\$30.25	\$12.54	\$51.58
U.URNM	North Shore Global Uranium Mining ETF	United States	\$72.02	\$104.00	\$40.68	\$691.39
V.URC	Uranium Royalty Corp	Canada	\$4.62	\$7.31	\$1.32	\$422.07

Note: Currencies for the price and market cap are respective to the country of trade.

URANIUM PRICES Source: U ₃ O ₈	SPOT PRICE US\$/lb U ₃ O ₈	LONG TERM PRICE US\$/lb U ₃ O ₈
December 31, 2021	\$42.00 ↓	\$40.50 ↓

URANIUM STOCKS IN 2022: SPROTT CEO CALLS FOR ANOTHER BULLISH YEAR (CONT'D)

uranium shot up to a record high near US\$140.

At the time, strong demand signals from China as the country began to attempt to phase out coal, and concerns of "peak oil", were among the factors giving rise to uranium prices.

Today, the bullish forecasts are on the supply-side as well. Ciampaglia says 10 years of low uranium prices post-Fukushima have weakened supply, and caused Cameco and Kazatomprom (OZQ.F), the world's top producer, to shut in production.

"All of a sudden, we need to bring that supply back online. Many of these projects have not been touched in 10 years. And the time to bring new mines online at a greenfield level is 10 to 15 years," he said, adding that bringing back Cameco and Kazatomprom's halted production would take one to two years.

For Johnson, who initiated coverage on Cameco in August, owning shares of the low-cost uranium producers (Cameco or Kazatomprom) is the best way to invest in uranium next year. He says NexGen Energy (NXE.TO)(NXE) is another option that carries more risk.

Matt Manara, partner and portfolio manager at Toronto-based Avenue Investment Management, is taking a cautious view on his firm's position in Cameco, after a strong 2021.

"Cameco already trades at a valuation that would suggest uranium is at US\$80, and it's not anywhere near there yet," he said. "We've drawn a line under the stock. As soon as it breaks that trend line, we're out of it."

Of course, critics of nuclear energy say new capacity is too costly and time-consuming to build in order to meaningfully rival wind and solar in adding clean power to grids.

Tom Rand, managing partner at ArcTern Ventures, says the small, modular reactors aimed at solving these issues are decades away from deployment at a scale to meaningfully move the needle on emissions.

"If you build a new nuclear plant today, it would cost a boatload more than wind and solar and storage and that kind of thing, and it will take 15 years," he recently told Yahoo Finance Canada's Editor's Edition.

"It's something that is simply too big, expensive and cumbersome to solve a problem where what we need are fast, nimble, agile, low-cost energy solutions."

Ciampaglia admits large nuclear projects have a reputation for blowing past timelines and budgets. He counters with reliability concerns for renewables as German utilities burn more coal this year than in 2020, due to lower wind speeds and increased demand.

"Just look at Germany this year," he said. "Renewables, while they'll continue to get the lion's share of public support, financial support, government subsidization and whatnot, the reality is, they're not as reliable as everybody had hoped they would be." ●

ABOUT THE SLU₃O₈ EQUITY INDEX

The SLU₃O₈ Equity Index tracks the relative share price of a select basket of uranium-based equities, checking the market's reaction to industry activities. The Index is based on share price movement since January 1, 2018 for the following companies:

Producers: T.CCO, T.DML, T.EFR, A.ERA, A.PDN, A.PEN, T.URE and U.JEC

Developers: V.AEC, L.BKL, T.FCU, T.FSY, V.GXU, T.LAM, T.NXE, A.TOR, T.UEX and A.VMY

Explorers: V.AEC, A.BMN, A.DYL, V.FUU, V.PTU and V.SYH

ABOUT SIGHTLINE SLU₃O₈

Sightline U₃O₈ is a nuclear industry research organization reporting through a monthly newsletter and supporting website created and maintained to provide uranium investors and industry stakeholders with a single source of insight into the ongoing factors that directly affect uranium prices.

We welcome your comments, questions and ideas. Please contact us at

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