



ENERGY SECURITY

The Great Uranium Disconnect

# The Great Uranium Disconnect

The uranium spot price has plunged from over \$100/lb to the mid-\$60s since January 2024, mirroring the sharp rise in investor exits and short positions in uranium equities.

Against this backdrop, the fundamentals of supply and demand continue to move towards a major supply deficit that will remain unfilled for years to come.

Since The Oregon Group's last uranium [report](#) in 2022, forecasting a 10-year bull market, there are more nuclear reactors in operation, more under construction, and more planned. Global uranium consumption has increased. Yet no new major uranium mines have commenced production, nor are any imminent.

Long term contract pricing, where most uranium changes hands, remains near its seventeen-year high. Governments and major corporations – including those behind the AI datacenter surge – continue to push aggressively for greater investment in nuclear power. And, above everything, looms geopolitical conflict.

So the big question, in fact the only question, for value seeking investors, presents itself: is there something going on that signals the party is over or are uranium equities experiencing one of the greatest disconnects between sentiment and fundamentals currently present in today's stock market?

Here at The Oregon Group, we've looked at the data, we've spoken with explorers, developers, and traders, and in this report we share what we've learned.

***“Uranium supply is constrained by setbacks, delays and a chronic need for consistent higher incentive pricing.”***

**Jacob White, ETF Product Manager, Sprott Asset Management (Apr, 2025)**

***“We're on a depletion curve that I don't think many customers have realized”***

**Cory Kos, VP IR, Cameco (Feb, 2025)**

***“It's clear today that the strong comeback for nuclear energy that the IEA predicted several years ago is well underway, with nuclear set to generate a record level of electricity in 2025. In addition to this, more than 70 gigawatts of new nuclear capacity is under construction globally, one of the highest levels in the last 30 years, and more than 40 countries around the world have plans to expand nuclear's role in their energy systems.”***

**Fatih Birol, Executive Director, IEA (Jan, 2025)**

## What's in this report

Uranium explained	3
The big trends	6
Investing in uranium	16
Spotlight Companies	21
Oregon Group Projections	22

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# URANIUM AND NUCLEAR ENERGY BASICS

Uranium is a heavy metal with a variety of uses, yet its most critical role, due to unmatched energy density, is as fuel for nuclear reactors. To give some perspective, one uranium pellet creates the same amount of energy as one ton of coal, 149 gallons of oil or 17,000 cubic feet of natural gas<sup>i</sup>.

**Production.** Uranium deposits are found throughout the world but, in most cases, the grades are so low they are unviable for economic extraction. In terms of extraction techniques, they can be mined by underground, open pit or in situ leaching (ISL) depending on the deposit geology. Once extracted, ore destined for nuclear fuel goes through several processing stages, including enrichment, before being turned into fuel pellets for the reactors.

**Emissions.** Nuclear energy does not generate any greenhouse gas emissions and is therefore one of the cleanest forms of power generation in existence. Unlike other forms of clean energy such as wind and solar, nuclear reactors can run 24/7 and therefore provide baseload energy, which is vital for running power grids.

**Table 1 Nuclear Power Reactors: World Top Ten Countries and Global)<sup>ii</sup>**

	Operable	In Construction	Planned	Proposed	Uranium Rqd (tonnes)
<b>Canada</b>	17	0	2	9	1,455
<b>China</b>	58	30	36	158	13,132
<b>France</b>	57	0	0	6	8,232
<b>India</b>	24	6	12	28	1,725
<b>Japan</b>	33	2	1	8	2,180
<b>South Korea</b>	26	2	2	0	4,309
<b>Russia</b>	36	7	13	51	5,436
<b>Ukraine</b>	15	2	2	7	1,673
<b>United Kingdom</b>	9	2	2	10	1,259
<b>USA</b>	94	0	0	13	18,137
<b>GLOBAL TOTAL</b>	440	66	85	362	67,517

**Reactors.** Currently, nuclear provides about 10% of the world’s electricity<sup>ii</sup> and, in doing so, prevents the emission of 2.1 billion tonnes of CO2 equivalent every year, which is generated by 440 nuclear reactors. Another 66 reactors are under construction, 85 more are planned, and a further 362 are in the proposal stage<sup>iii</sup>. Belgium, Bulgaria, Czech Republic, Finland, France, Hungary, Slovakia, Slovenia, Sweden and Ukraine all get 30% or more of their electricity from nuclear reactors. The largest users of nuclear energy are the US, China and France.

In addition to the reactors owned by power utilities, another 220+<sup>iv</sup> research reactors are in operation around the world and are used to create radioisotopes for use in medicine, agriculture, food preservation, and industry. As well, 200+<sup>v</sup> small reactors are used to power a wide range of ships.

### A Tale of Two Markets

Uranium is different to many other commodities because it does not trade on an open market. Buyers and sellers negotiate contracts privately on either a spot or long-term contract basis. The major purchasers are utility companies that run nuclear power stations, as well as financial players who buy and sell on a speculative basis. Of these two, the utilities are by far the largest purchasers, and, when we talk of the demand side, it’s the utilities to which we are referring.

“Understanding the peculiarities of uranium pricing is the first hurdle for investors looking for their initial position in the market.”

**The Long-Term Market.** Utility companies buy via long-term contracts that guarantee prices and product volume for years at a time. They do not typically publish details on their stockpiles and purchasing plans, which makes it harder (but, by no means impossible) to accurately predict buying cycles.

**The Spot Market.** This is where funds and other major speculators play. As graph 1 illustrates, when the spot price moves, it can move fast and far in both directions. One of the oddities of the uranium sector

is that, even though the vast majority of uranium trades via long-term contracts, equities tend to move in relation to the spot price. As table Y shows, while both markets have trended upwards over the last two years, the spot has been more volatile, which has been reflected in most uranium stocks. The spot market is notoriously thin and is just as opaque as the term market. This makes it vulnerable to financial players which, in turn, compounds its volatility.

**Uranium Stockpile Funds.** There are a couple of physical uranium stockpile funds of note: Yellow Cake and the Sprott Physical Uranium Trust (SPUT), which have holdings of ~21M lbs U<sub>3</sub>O<sub>8</sub>. ~66M lbs of U<sub>3</sub>O<sub>8</sub> respectively. SPUT made a large impact on the spot market in 2021/2, during which it sucked up much of the loose supply and tightened the already constrained market. As Sprott AM chief executive, John Ciampaglia, has previously commented: “We don’t sell any of it. It is a stockpiling fund.”

**Graph 1**  
**Uranium spot and long-term prices January 2000 – April 2025**



**Graph 2**  
**Uranium spot and long-term prices January 2020 – April 2025**



# THE TRENDS

## Overview

Two years ago, most of the conversations around nuclear energy and uranium centered on decarbonization and whether countries were or were not pushing aggressively towards decarbonization. As we cover in this section, the clean energy trend is still in play – though perhaps keeping a lower profile – but the conversation is now dominated by energy demands from data centers for artificial intelligence, geopolitics, security of supply, and energy sovereignty. We believe that combined, these forces have the potential to propel the uranium bull market to new heights in the coming years.



## Geopolitics and Security of Supply

Geopolitics and security of supply are perhaps the most influential trends affecting the long term future of the uranium sector. The Ukraine war, which commenced in February 2022, exposed the EU's reliance on Russian gas and has led to numerous nuclear energy expansion initiatives as countries have woken up to both energy security and energy sovereignty. Less publicized has been the effect of international sanctions on Russia where the uranium sector is concerned. Even more recently, the still-unfolding trade conflict between the US and its largest trading partners has the potential to further upend the sector.

European energy will never be the same. While it's to be expected that an end to the Ukraine war will lead to Russian gas once more flowing to Western Europe, the majority of the EU is determined to avoid its previous dependency. For this reason, as well as nuclear's position as a clean baseload energy source, countries that had been planning to exit nuclear energy, like Belgium, have u-turned and other countries, such as France and the UK, are moving forward with plans to expand nuclear energy generation.

Less appreciated is the fact that Kazakhstan – the world's largest producer of uranium – will likely send most, and perhaps all, of its production to China and Russia going forward. The Chinese have the second largest reactor fleet in the world and have nearly as many reactors under construction as the rest of the world combined. Russia also has a large reactor fleet and a major reactor construction program underway. Neither country has anywhere near sufficient domestic production and so both rely heavily on Kazakhstan, which borders Russia and with which both countries have extremely strong connections.

“Geopolitical instability, notably resulting from the Russia-Ukraine war has led to increased interest in nuclear power for energy security and sovereignty.”

WNA, Nuclear Fuel Report 2024

In a world of intensifying geopolitical tension, spheres of influence are an overriding factor when determining who gets what. Kazakhstan is the largest example but it's not the only one. The country of Niger, which in 2023 produced ~5% of global uranium, did not export any uranium in 2024 after a military coup in 2023 installed a government hostile to the West.

Currently, the US – which owns the world's largest reactor fleet – relies on Kazakhstan for 25% of its uranium. If that source is cut off, the country will be forced to rely more heavily on its other trading partners and on domestic production.

Kazakhstan may be the largest producer but it is not the only producer. World number two, Canada, hosts the world class uranium district in the Athabasca Basin of Saskatchewan. In addition to its major producing mines, the Basin has the three largest development stage projects in the world. However, the trade war means that Canadian uranium currently has a 10% tariff (down from 25% earlier in the year) and whether it will increase, decrease or remain static for the long term is unclear. What is clear,

is that the US is determined to be self-reliant at every level, including fuel for its massive fleet of nuclear reactors. With limited existing producing mines, how is this US determination likely to play out?

Firstly, we expect increasing support for advanced stage US based uranium projects – particularly those with near-term production potential. Secondly, we expect the upwards pressure on uranium pricing to increase significantly over the long term. Even by incentivizing domestic uranium production, the US is not going to be in a position to meet its uranium consumption requirements solely through domestic output. It will have to import and, if tariffs are here for the long-term, then those uranium imports are going to be more expensive. If it weren't for the fact that the market saw a great deal of contracting in the run up to the tariffs, it's likely we would already be experiencing another price spike. As it is, the current pricing pull back is only going to exacerbate the coming supply problem as new mine development is no longer cost efficient, particularly for Western utilities.

In an interview with the Financial Times earlier this year, Cory Kos, VP of investor relations at Canada-based Cameco, the biggest western supplier of uranium, issued a warning: "We're on a depletion curve that I don't think many customers have realized," and the trend is "more flows of material into China".

## The Energy Transition

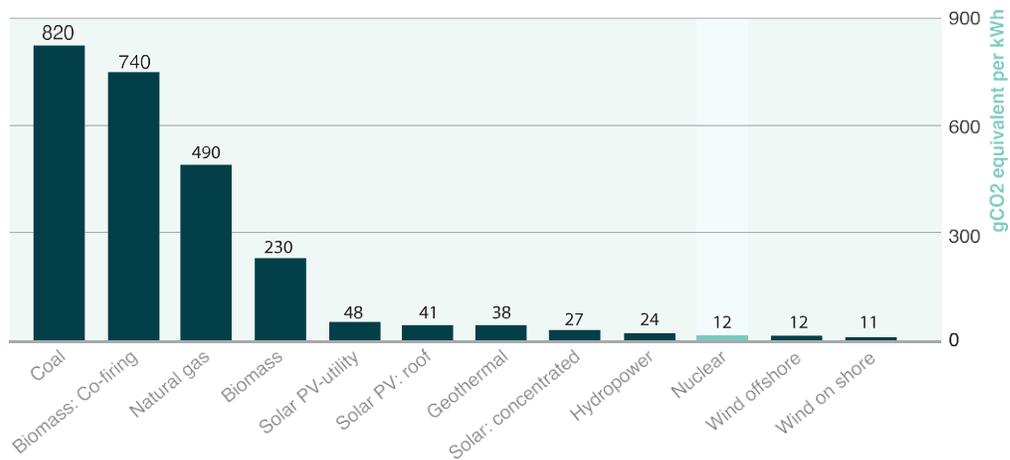
While the politics surrounding the science of climate change can be challenging to say the least, the reality is that the world is gradually transitioning away from fossil fuels. Carbon emissions, energy security, reliability, all have the part to play in the energy transition, and it's here that nuclear truly shines. When it comes to emissions, nuclear equals and, in some cases, outperforms renewables. When it comes to reliability, nuclear easily outcompetes wind, solar, and even hydro power, and it doesn't require high CAPEX energy storage solutions to stabilize the grid. It really is the only clean and reliable energy source that can scale to meet the demands of today and the decades to come.

As a variety of countries and US states with a large percentage of renewable energy generation have discovered, adverse weather often prevents the proper operation of renewable energy plants. This is because the vast majority of power grids are designed to use steady, baseload energy sources. This fact isn't changing anytime soon. Such is the cost of upgrading most power grids, European grid operators have given some of the new wind power installations an estimated waiting time of up to fifteen years before connection. There's no way around it at this time – grids need baseload power.

As a source of clean, baseload energy, there is no direct replacement for nuclear energy.

Baseload supply is a benefit that the nuclear sector has been highlighting for many years and now, with the energy transition well underway, and electricity demand expected to grow exponentially due to AI data centers, governments have finally accepted that nuclear energy must not only be maintained, it must be increased. For this reason, we expect the energy transition trend to maintain unrelenting pressure on nuclear energy growth, and all those new reactors have one thing in common: the need for a constant, uninterrupted supply of uranium.

**Figure 1 Nuclear is Low Carbon (source IPCC)**



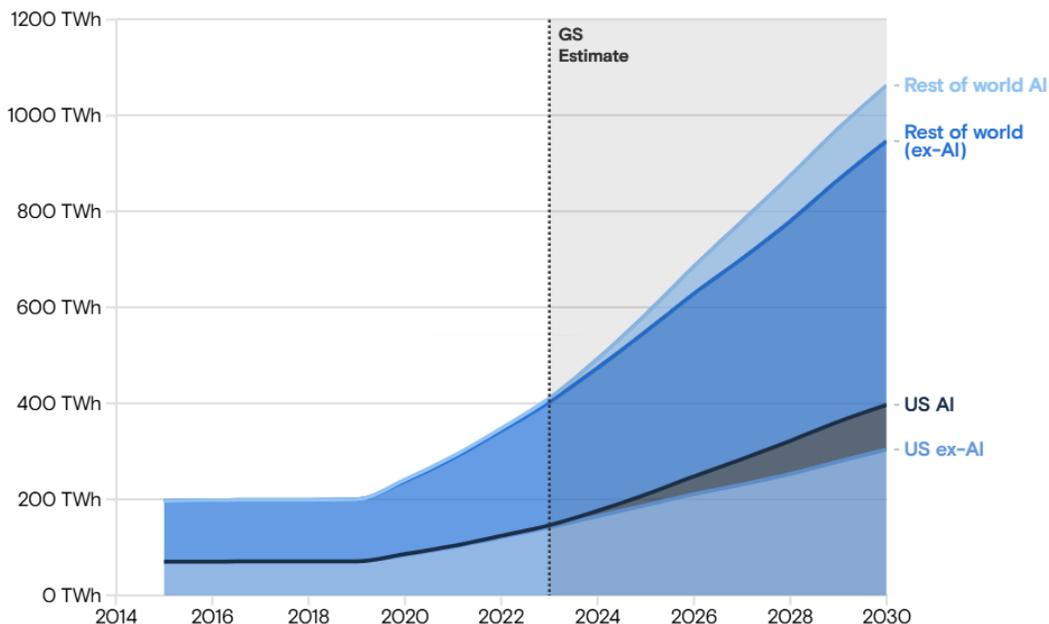
## Technological Evolution and SMRs

AI datacenters and small modular reactors: two technologies with the potential to send uranium demand to levels unimaginable in previous bull markets.

The IEA predicts that electricity demand will double by 2050<sup>vii</sup>. Developing economies and population growth are the big drivers but a major piece of that new demand is going to be driven by data centers — and it's all because of AI. Artificial Intelligence technology, like ChatGPT, requires almost 1000% more electricity to process a single query than a Google search. AI is here, it's moving fast, and it needs a lot of energy. In fact, Goldman Sachs estimates that data center electricity consumption will double by 2030 and, in a report in January, 2025<sup>viii</sup>, pointed to nuclear power as crucial to this growth. Some of the recent AI related nuclear power announcements have included:

- Amazon Web Services (AWS) has bought a 960MW data center powered by a nuclear power plant in Pennsylvania for US\$650 million
- Microsoft has agreed to buy nuclear power to cover up to 35% of the energy needs for its Virginia data centers.
- US Energy Secretary Jennifer Granholm announced a US\$1.52 billion loan to restart the Palisades nuclear plant in Michigan with an interview where she said conversations with big tech companies need "to accelerate, because this [AI] demand for power is only going up."
- OpenAI CEO Sam Altman has in a nuclear startup called Oklo, which is working on SMRs Green Energy Partners, a US data center and energy developer, has proposed 30 new data centers powered by a new 1.6GW Surry Nuclear Power Plant in southeastern Virginia

### Data center power demand



Source: Masanet et al. (2020), Cisco, IEA, Goldman Sachs Research

**Goldman  
Sachs**

However, as we stated in our previous report, nuclear power stations are not constructed overnight. These

are \$multi- billion, multi-year projects that have often suffered from cost overruns – hardly factors that support mass rollouts. This is where small modular reactors (SMR) come in.

SMRs are small reactors comprised of modular components. They are designed to be constructed in a factory, shipped and then assembled on site. They include advanced, built-in safety features and they are designed to be mass produced. They are ideal for powering remote, small to mid-sized communities, or large industrial installations, or chain-ganged for major urban use.

SMRs have been in use for many years (nuclear powered submarines, aircraft carriers, etc) and the first commercial, land based SMR was connected to the grid by China in January, 2022, in preparation for mass production and deployment. Canada is on target to be the second country with a commercial SMR in operation (expected 2028) and both the US and the UK are accelerating plans to build SMR factories. Already, companies like Google have placed orders for SMR units and so, while the current pace may look slow, the board is being set for a huge increase in nuclear energy deployment.

## Demand: Growth with Potential to Completely Outstrip Supply

The World Nuclear Association's (WNA) 2024 Nuclear Fuel Report estimates that nuclear generation may grow by as much as ~240% by 2040.<sup>x</sup> Looking a little further down the road, the Nuclear Energy Agency (NEA) predicts that by 2050 uranium demand will rise from ~59,000 tU in 2023, to as high as 142,000 tU<sup>xiii</sup>.

The trends driving nuclear energy growth in the coming years are incredibly powerful. Still, expanding nuclear energy does not happen overnight so why have the uranium demand forecasts risen so aggressively? A big part of the answer lies in reactor life extensions. A number of countries – notably those with large reactor fleets – are approving major operating license extensions. In some cases, the license extensions will allow existing plants to operate for up to 60 years but in the US it's as long as 80 years. According to the WNA, upwards of 140 reactors may receive extensions through 2040. These numbers are far higher than anticipated by the WNA a few years ago.

Additionally, governments have been providing major financial incentives and support for nuclear utilities. In the US, the Inflation Reduction Act of 2022 provides tax credits for existing nuclear plants, production tax incentives for advanced nuclear reactors, and loan guarantees for clean energy projects including nuclear. More recently, France (with the world's 3<sup>rd</sup> largest reactor fleet) has committed a billion euros to support reactor extensions and has, in February 2025, agreed that a subsidized government loan should be issued to state-owned power utility EDF to cover at least 50% of the cost of constructing six new reactors, which have a combined cost of over €67 billion. Then there is China, where the state-owned nuclear power utilities receive massive amounts of state funding such as low interest rate loans for up to 70% of the reactor cost.

So, we have more reactors running for longer, more reactors under construction, and more reactors in the planning and proposal stages. However, as both the spot and term price pullback shows, this demand is not translating into the level of uranium purchases that would be expected. As the price rises from 2022 to 2024 have highlighted, uranium is now a very tight market with low inventory levels and a supply side that has still not emerged from years of underinvestment. Prices have nonetheless pulled back in 2025 and it's largely because of a freeze in purchasing by utilities. The geopolitical tensions and the tariff war have increased economic uncertainty around the world and in this state of affairs, purchasing has ground to a halt. It is not unusual for utilities to pause during periods of uncertainty. In fact, it's par for the course in the uranium sector.

Whether or not the Ukraine war (including sanctions on Russia) and the tariffs end soon, the fact is that uncovered nuclear fuel requirements will only increase until contracting resumes. Short term requirements will be spoken for (no utility will risk running out of fuel) but as for medium to long term... well, the longer the pause, the greater the pressure to purchase and the greater the intensity of the price response as soon as purchases resume.

# SUPPLY: A CRUNCH LIKE NO OTHER

Uranium supply comes from two sources, of which the largest (primary) is mining. Mining supplied around 49 490 tU in 2022, meeting approximately 74% of annual requirements for utilities<sup>xii</sup>. The remainder came from secondary sources such as stockpiles. But, with the days of inventory overhang well and truly over, future demand must somehow be met by future production. For utilities, that's a problem but, for suppliers and investors, it's hard to see it as anything but a golden opportunity.

After a decade of low prices, uranium mining is in no position to respond to a large, sustained increase in demand. Low prices meant that some operating mines reduced production or were put into care and maintenance, expansion plans were shelved, development stage projects were slow walked and exploration was cut back. While the term price today is nearly triple the 20-year lows in 2018, it's still below the triple digit incentive price required to meet the future demand.

That's not to say that the price growth from 2022 to 2024 had no effect. Production increased moderately thanks largely to the resumption of production at Cameco's McArthur River mine and Key Lake mill in Saskatchewan, Canada. However, let us be clear: the approaching supply crunch will not be resolved easily or quickly. Even if prices double tomorrow, we are many years away from seeing enough new production. There is also no quick fix coming from secondary supply, no secret stockpiles that will save the day. Even the US strategic stockpile would only be a small, temporary fix. New supply will have to come from mining, and while all mining is difficult, uranium mining is especially difficult.

Uranium is among the most heavily regulated resource sectors in the world. Moving from discovery to production can take well over a decade. Moreover, economic uranium deposits are incredibly hard to find. In fact, the bulk of supply and known reserves is concentrated in just a few regions: Kazakhstan, Australia, US, and Canada.

Now, it's important to note the mining industry does have some cards to play. The US in particular is host to a number of past producing uranium mines, and the process for restarting them has already begun. In the last two years, companies such as Energy Fuels (TSX: EFR), Peninsula Energy (PEN.AX) and Ur-Energy (TSX: URE) have been front runners in restarting mines, as well as IsoEnergy, which owns the Tony M, Daneros, and Rim mines in Utah, and is in the process of refurbishing in preparation for restarts. These mines – and those that follow – have the potential to add major value to the companies and shareholders when prices are forced back upwards, but they will not deliver anywhere near enough uranium to solve the coming supply crunch.

“Secondary supplies are expected to decline significantly to 9% of total supply in 2030 and remain near this low level through 2040. Much of this secondary supply stems from utility and government inventories, which have been drawn at an accelerated pace.”

UxC, Uranium Production Cost Study, 2023

Looking further down the line and across the border to Canada, there are some advanced, well-funded projects with great size and very impressive economics, such as NexGen's Arrow (the world's largest high-grade undeveloped deposit) and Denison Mines' Phoenix (a massive ISR project). To date, neither has received construction licenses, let alone commenced construction, and therefore they will not be delivering material in the near future. Even when they do, which in our opinion is very unlikely to occur before 2030, the added production will not solve the expanding long term supply gap.

There are operating mines capable of expanding. However, Kazatomprom is behind on its growth plans – most likely due to capital costs, and, industry major, Cameco, has been clear that it wants higher prices before expansion. It's worth considering the commentary from uranium fuel expert, UxC, which clearly stated that currently operating mines around the world are facing “dwindling reserves and falling grades”, so much so that the cost of production for most existing uranium miners will rise within the coming years.

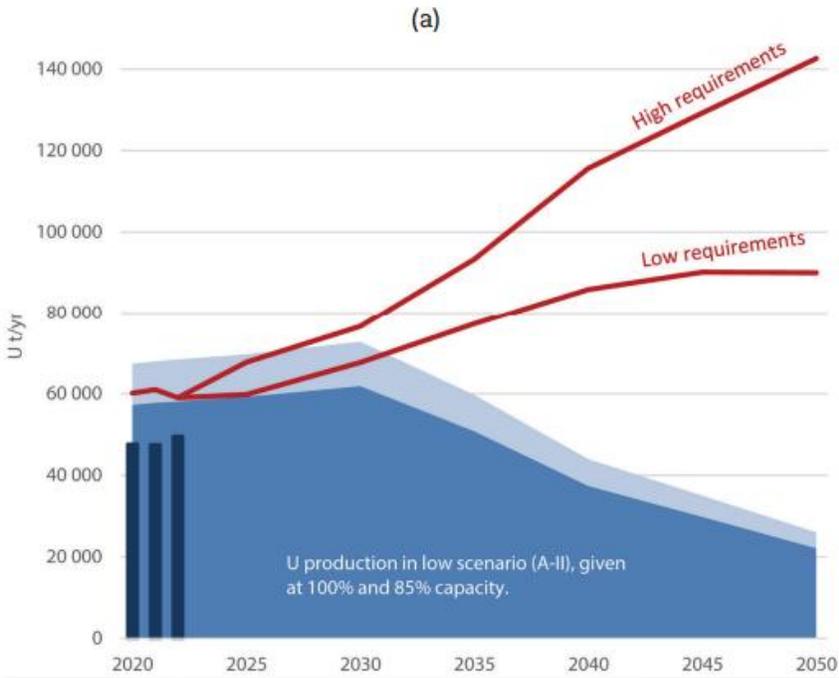
How much is any OPEX rise likely to be? Put another way, what is the incentive price for a major uptick in production? Back in 2022 – when today's tariff war was unimaginable – Cameco CEO, Tim Gitzel, floated \$95/lb as the incentive price required for new production. Today, following some high inflation years and a highly volatile global economy, that incentive price will be north of three figures for many uranium projects. And again, even when prices rise to the level that leads to the majors expanding their production, the long term gap will still remain open.

So what can be expected from this disconnect between supply and demand? Are utilities really holding back solely because of the uncertainty from tariffs and the Ukraine war? Also, what about the end of the war? Will it unleash new supply?

Let's take the last question first. The answer is no. Russia is indeed a uranium producer but it is small fry compared to Kazakhstan and Canada. The country is a massive player in terms of uranium enrichment, but not in terms of raw production. Utilities know this. They are not waiting on raw material to flood the market and push down prices. Their focus on Russia has more to do with enrichment capacity, which Russia dominates with a ~45% global share. This arguably has blinded them to the elephant walking into the room, aka insufficient uranium mining and dwindling secondary supply. It's understandable in some respects. One look at NexGen's Arrow deposit – which will be the largest uranium mine in the world once in production – and you could be forgiven for thinking that Arrow, along with other development projects, mine restarts and mine expansions, will solve the problem. That is until you realize the size of the approaching demand.

Below is a chart from the 2024 Red Book – a biennial report on the global uranium industry produced jointly by the Nuclear Energy Agency (NEA) and the International Atomic Energy Agency (IAEA). This chart says it all.

Figure 2.10. Projected world uranium production capability to 2050 (supported by identified resources at a cost of <USD 130/kgU) compared with reactor requirements



Source: Uranium 2024: Resources, Production and Demand

## INVESTING IN URANIUM

The case for the future of nuclear energy and uranium is clear. It's also clear that global uranium supply has an almost impossible task ahead of it: responding to consistently strong growth in demand over the coming decades. This is setting the stage for significant upwards pressure on commodity prices and for equities in the uranium space. We've outlined the main uranium investment categories in this section as well as a spotlight company that we feel offers particular upside.

## Uranium ETFs

Looking for uranium investment without a lot of heavy lifting when it comes to conducting research and making decisions regarding producers, developers, explorers and refiners? ETFs can provide that broad exposure you may be looking for. Examples include:

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### **Sprott**|ETFs

Sprott Uranium Miners ETF

TICKER: URNM, PRIMARY EXCHANGE: NYSE

A US-listed Uranium ETF with total net assets of \$1.36B, and which is primarily focused on the North Shore Global Uranium Mining Index (URNMX). The Index tracks the performance of companies that devote at least 50% of their assets to mining, exploration, development, and production of uranium, or holding physical uranium, owning uranium royalties, or engaging in other, non-mining activities that support the uranium mining industry. The URNMX Index is rebalanced semi-annually.

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### **GLOBAL X**

Global X Uranium ETF

TICKER: URA, PRIMARY EXCHANGE: NYSE

The Global X Uranium ETF (URA) provides investors with exposure to a broad range of companies involved in uranium mining and the production of nuclear components, including those in extraction, refining, exploration, or manufacturing of equipment for the uranium and nuclear industries.

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### **VanEck**

VanEck Uranium + Nuclear Energy ETF

TICKER: NLR, PRIMARY EXCHANGE: NYSE

VanEck seeks to replicate as closely as possible, before fees and expenses, the price and yield performance of the Uranium & Nuclear Energy Index (MVNLRTR), which is intended to track the overall performance of companies involved in uranium mining projects, construction, engineering and maintenance of nuclear power facilities, the production of electricity from nuclear sources, and providing equipment, technology and/ or services to the nuclear power industry.

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## Physical Uranium Trusts

While investors can't simply step forward and purchase physical uranium, there are public companies that specialize in exactly that. If you want direct exposure to the price of uranium, then physical uranium trusts are there for you.

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### Sprott Physical Uranium Trust

TICKER: U.UN, PRIMARY EXCHANGE: TSX

Typically referred to as SPUT, the trust is currently the world's largest physical uranium fund with ~66 million pounds of uranium (at time of writing). It is widely credited with having helped to drive up the uranium spot price and CEO, John Ciampaglia, has made clear that their approach to physical uranium is currently one of "buy and hold", because they see plenty more upside in prices. It's a liquid way to own physical uranium.

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### Yellow Cake plc

TICKER: YCA, PRIMARY EXCHANGE: LSE

It may be smaller than SPUT (~21 million pounds of uranium) but Yellow Cake shares the same buy and hold strategy for its physical uranium holdings. One key advantage is the long-term contract with Kazatomprom, which enables them to acquire uranium at a pre-agreed price. In essence, this means Yellow Cake can acquire substantial volumes of uranium at undisturbed prices with direct shareholder benefit from any uplift in the uranium price.

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## Uranium Stocks

Juniors vs majors, explorers vs developers vs producers vs fuel processors... Uranium stocks offer the chance for major value growth, however, the challenge for investors is how to position one's portfolio. This task can be daunting given that the number of companies in the sector has recently ballooned and with it, the difficulty distilling the real prospects for each of these companies. Below are a couple of notable companies occupying different roles in the supply chain and, following that, a short list of companies The Oregon Group considers interesting - each with its own unique value proposition - as part of a part of a basket approach to investing in the sector.

### Producers

If you are looking for investment in existing production, here are the two largest for consideration.

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### Kazatomprom JSC

TICKER: KAP, PRIMARY EXCHANGE: LSE

Kazatomprom is the world's largest uranium producer. The company runs the uranium production in Kazakhstan, which overtook Canada and Australia in uranium production back in 2009 thanks to its low-cost, ISR mines. Risk-averse investors should bear in mind that the country sits adjacent to Russia and Ukraine and, per our analysis, there is an expectation that all future production will flow to those two countries.

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Cameco  
TICKER: CCJ, PRIMARY EXCHANGE: NYSE

One of the world's largest publicly traded uranium companies. It has assets on three continents, and its operations and investments span the entire nuclear fuel cycle from exploration to fuel manufacturing and also original equipment manufacturing (through its Westinghouse acquisition) for more than half the global nuclear reactor fleet.

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### Developers

Both of these developers are in the Athabasca Basin in Saskatchewan, Canada – one on the eastern side which benefits from existing infrastructure, and one on the western side from where we anticipate a significant percentage of future uranium production will be supplied.

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NexGen Energy  
TICKER: NXE, PRIMARY EXCHANGE: TSE

Flagship project (Arrow) hosts what promises to be the largest high-grade uranium mine in the world once constructed. Crucially, this remarkable deposit is so high in grade and so large in size that it expects to be one of the lowest cost operators. The project is currently moving through the licensing process with the aim of commencing construction in 2026. Of additional note, the company continues to explore aggressively and in March, 2025, announced its best ever discovery phase intercept.

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Denison Mines  
TICKER: DML, PRIMARY EXCHANGE: TSE

Denison holds interests in a variety of Athabasca Basin projects, including the McLean Lake uranium mill. Its flagship is the Wheeler River project. Like the other advanced developer plays in the Basin, the project (which hosts two deposits) is large and high-grade. However, its advantages are that it's an ISR production play and it's on the east side of the Basin and therefore much closer to existing infrastructure. The company is in the licensing stage with the final construction license hearing to take place in December, 2025. The company expects to commence construction in 2026 with a view to achieving first production in 2028.

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## Explorers

As an element, uranium is not particularly rare. However, economic uranium deposits are a different story. We expect that uranium's bull run will reach new heights and last for many years to come, however, development time is still crucial, and investors should be choosy when considering an early-stage exploration play. We've included a couple that caught our interest due to their potential upside, experienced teams and the opportunity for rapid project development.

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Atha Energy Corp.

TICKER: SASK, PRIMARY EXCHANGE: TSX-V

Atha owns the largest uranium exploration land package in Canada and is one of the most aggressive explorers in the country. The company has advanced exploration projects including Angilak, which hosts a major, high-grade historic resource with district scale potential. Additionally, the company has made a recent discovery at Gemini, and also owns the Pinnacle, Ridge, and Zenith projects, each of which has seen highly promising, early stage or historical exploration work. Atha is well funded and led by a highly experienced team.

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Premier America Uranium

TICKER: PUR, PRIMARY EXCHANGE: TSX-V

A US focused uranium explorer with the potential for rapid transition into a developer. Premier has projects located in three of the top uranium districts in the US and is expecting a catalyst filled 2025, including a resource update and the release of a Preliminary Economic Assessment at its Cebolleta project in New Mexico. Of additional note is its Cyclone project which has in-situ recovery potential and at which the company is planning an aggressive 2025 drill program. Both Management and Board have deep expertise in the uranium sector and the capital markets.

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## IsoEnergy

(NYSE: ISOU) (TSX: ISO)

THE OREGON  
GROUP  
SPOTLIGHT  
COMPANY

### Explorer, Developer, and Near Term Producer

For investors looking to play the market at every stage in the coming years – benefiting from uranium’s legendary price spikes while insulating against pullbacks – diversification of asset class and jurisdiction has a lot to offer, and when it comes to this strategy, we feel there is no better example than IsoEnergy.

IsoEnergy is well funded, expertly led, and is methodically delivering on its strategy to become a multi-asset producer. The company’s assets are strategically located in the US, Canada, and Australia, and they range from grass roots exploration all the way up to near term production. Essentially, the company has built an incredible pipeline of assets that can be brought online sequentially as the sector moves deeper into a state of supply deficit.

**Near-Term Production in the US:** IsoEnergy’s near-term projects are located in the US state of Utah – ranked by the Fraser Institute as the number one mining jurisdiction in the world. The company has received all required permits from the highly supportive State and Federal regulators, and a toll milling agreement is in place with Energy Fuels Inc. The most advanced of the company’s mines, Tony M, is prepped and ready to re-enter production at short notice. IsoEnergy has three other past producing assets currently being advanced to a similar state of readiness.

IsoEnergy also owns the Coles Hill in the State of Virginia – host to the largest uranium deposit in the US. Coles Hill is at an earlier stage of development compared to the company’s Utah projects but has the potential to become a major domestic supplier of uranium in the U.S.

**High-Grade, High Growth Exploration in Canada:** IsoEnergy’s Larocque East project in Canada’s Athabasca Basin hosts the Hurricane Deposit, the world’s highest grade Indicated uranium resource. This ultra high-grade resource consists of 48.6Mlb averaging 34.5% U<sub>3</sub>O<sub>8</sub> Indicated and 2.7Mlbs averaging 2.2% U<sub>3</sub>O<sub>8</sub> Inferred. A major expansion and regional discovery-driven exploration program is ongoing, with follow up drilling taking place on numerous high-grade targets along a 9km strike.

**Early and Mid-Stage Exploration in Canada and Australia:** IsoEnergy owns a combination of earlier stage exploration assets. These range from highly prospective grass roots projects in the Canadian provinces of Saskatchewan and Quebec, as well as projects with historic resources in Australia.

**Leadership Team:** In the mining industry, and particularly in the uranium mining industry, investors are well advised to back teams with strong track records. IsoEnergy’s management and board of directors include some of the most successful executives in the uranium sector. Together, they bring an unrivalled combination of mine building, exploration, corporate finance and M&A expertise, which shows in the company’s continued, remarkable progress across multiple projects as well as corporate development milestones – most recently with a listing on the NYSE-A.

In total, IsoEnergy owns uranium resources in excess of 300Mlbs U<sub>3</sub>O<sub>8</sub> in ‘current’ and ‘historic’ resources across all categories. While there are other uranium companies with impressive uranium assets, we cannot think of any that combine the same breadth and quality of diversification across jurisdiction and asset class, with leadership experience and technical talent. In short, this is a company that is positioned for growth at every stage of the market.

# THE OREGON GROUP PROJECTIONS

Based on the data showing new builds, reactor life extensions and longer term fleet expansions, the path has been laid for robust growth of nuclear energy from now through the coming decades. That growth is backed by positive public and political sentiment, nuclear's undeniable clean energy credentials and, above all, fundamental changes in geopolitics and energy security.

On the supply side, despite two years of significantly higher prices, we see a sector that has yet to emerge from a decade of underinvestment. Some uranium equities – those with near term production in the US and other with development stage assets in Canada – are well positioned for major value growth but globally, they will not deliver sufficient new production to fill the coming supply gap.

So far this year we have seen a pullback in spot pricing and a very modest decline in term pricing. Uranium equities have also pulled back – some more so than others based on asset quality, class and jurisdiction. Viewed in the context of the global trade conflict that commenced this year, such volatility is not unexpected. However, in our opinion, analysis of the sector fundamentals points to an inevitable resumption of price increases with a corresponding growth in equity values. If anything, this pause in growth offers a distinct value driven opportunity for investors to take or grow a position in uranium.

## The Bottom Line

Over the long term, the market cannot escape the fundamentals of supply and demand. The longer the pause, the greater the pressure for price growth beyond the levels we saw in 2024. Uranium is famous for the speed of its price spikes so if you are not already positioned, you may wish to take advantage of today's attractive entry points because they may be gone tomorrow.

## SOURCES

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