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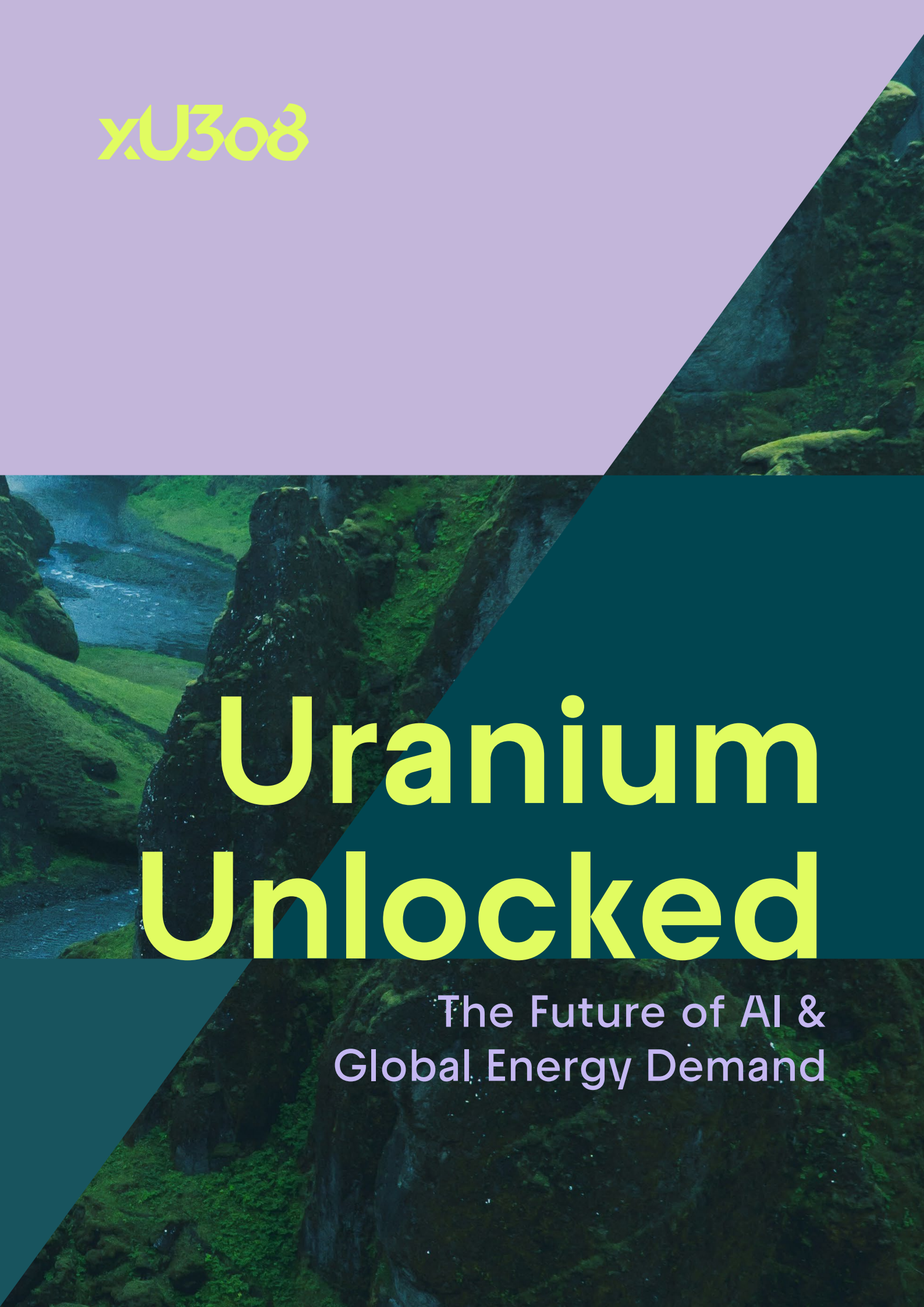

Uranium Unlocked

The Future of AI & Global Energy Demand

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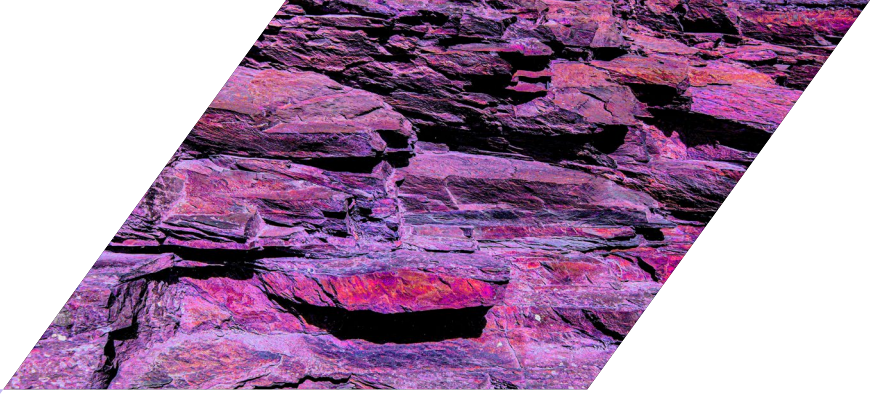
1. About Uranium.io

Founded in 2024, Uranium.io, a **member of the World Nuclear Association*** delivers institutional-grade access to one of the world's most **critical yet historically inaccessible** commodities: physical uranium.

For decades, U_3O_8 was reserved for utilities, sovereigns and specialist funds, despite its central role in global energy security. Uranium.io has opened that market, offering **transparent pricing and 24/7** access at the precise moment when AI and hyperscale data-center growth is driving unprecedented demand for clean, reliable baseload power.

With real-time pricing, full compliance, and seamless integration across financial and digital-asset infrastructure, uranium.io gives investors **secure, direct exposure** to the uranium market. Its technology-led model is redefining how uranium is owned and traded, setting a new standard for **real-world asset innovation** and clean-energy investment.

As the energy transition accelerates, uranium's strategic value has never been clearer and, for the first time, it's within reach of all investors.



2. Executive Summary

Uranium is approaching a decisive, critical juncture; A recent survey of over 600 global investors spanning the US, EU, APAC and the UK shows a clear shift in sentiment toward **uranium as a strategic asset** in a world defined by supply scarcity, energy insecurity, and the exponential rise of AI-driven electricity demand.

Our data shows that, **three in five investors (63%) believe uranium remains misunderstood and materially mispriced,** despite nearly **six in ten (58%) already expressing a bullish outlook.** The majority of respondents view uranium as a **3–5 year strategic opportunity,** with energy security (49%), clean-energy transition (39%), and the supply-demand imbalance (36%) cited as core drivers of performance.

At the same time, uranium remains severely under-owned. **Around 90% of respondents** say they would either invest or consider investing if access were simpler, highlighting a structural barrier in market infrastructure rather than a lack of conviction. Additionally, nearly **75% of respondents now view uranium as a clean-energy allocation,** reflecting the shift in **ESG** frameworks that increasingly recognize nuclear's low-carbon profile. This access gap is already being challenged by the rapid adoption of real-world asset tokenization, which has moved firmly into institutional territory. With **75% of investors indicating they would use tokenized uranium to alleviate friction and bypass market barriers**, digital exposure to physical uranium is emerging as the mechanism capable of unlocking this latent demand.

These findings coincide with a period of accelerating global nuclear expansion; **88% of investors** believe reactor growth including small modular reactors (SMRs), reactor restarts, and new reactor builds will have a positive impact on uranium demand. Qualitative responses also make a strong link between **AI/data-center growth** and long-term nuclear baseload demand, reinforcing uranium's role as an **energy–AI macro trade**, not merely a decarbonization play.

2026 Predictions

2026 will be the pivotal year based on structural supply trends, policy momentum, and the emerging AI energy supercycle, the market anticipates:

Uranium Prices Could Break Into Triple Digits. Prices may surge toward US$100–$120/lb (and potentially higher) as structural deficits collide with accelerating global reactor demand, with Bank of America projecting ~US$135/lb by 2026, and some analysts suggesting upside as high as $200/lb.*[1]

Mined supply may fall to <75% of reactor demand, widening the deficit.[2] A widening supply gap is emerging as mine depletion outpaces new project development, setting the stage for a multi-year shortage.

Western utilities may further reshape procurement away from Russia and Central Asia, intensifying competition for secure supply. Geopolitical pressures and energy security priorities are driving Western utilities to shift away from reliance on Russian or Central Asian uranium supplies. As a result, competition for secure, non-Russian supply will intensify - favouring producers in politically stable jurisdictions and increasing premiums for risk-free sources.

SMR programs may reach major commercial milestones.[3] The first wave of SMRs could cross from concept to commercial reality, unlocking a new demand engine for uranium fuel.

The first AI–nuclear power agreements could begin to materialise. Explosive AI-driven energy needs may trigger the first dedicated nuclear power agreements, binding data-center growth directly to uranium demand.

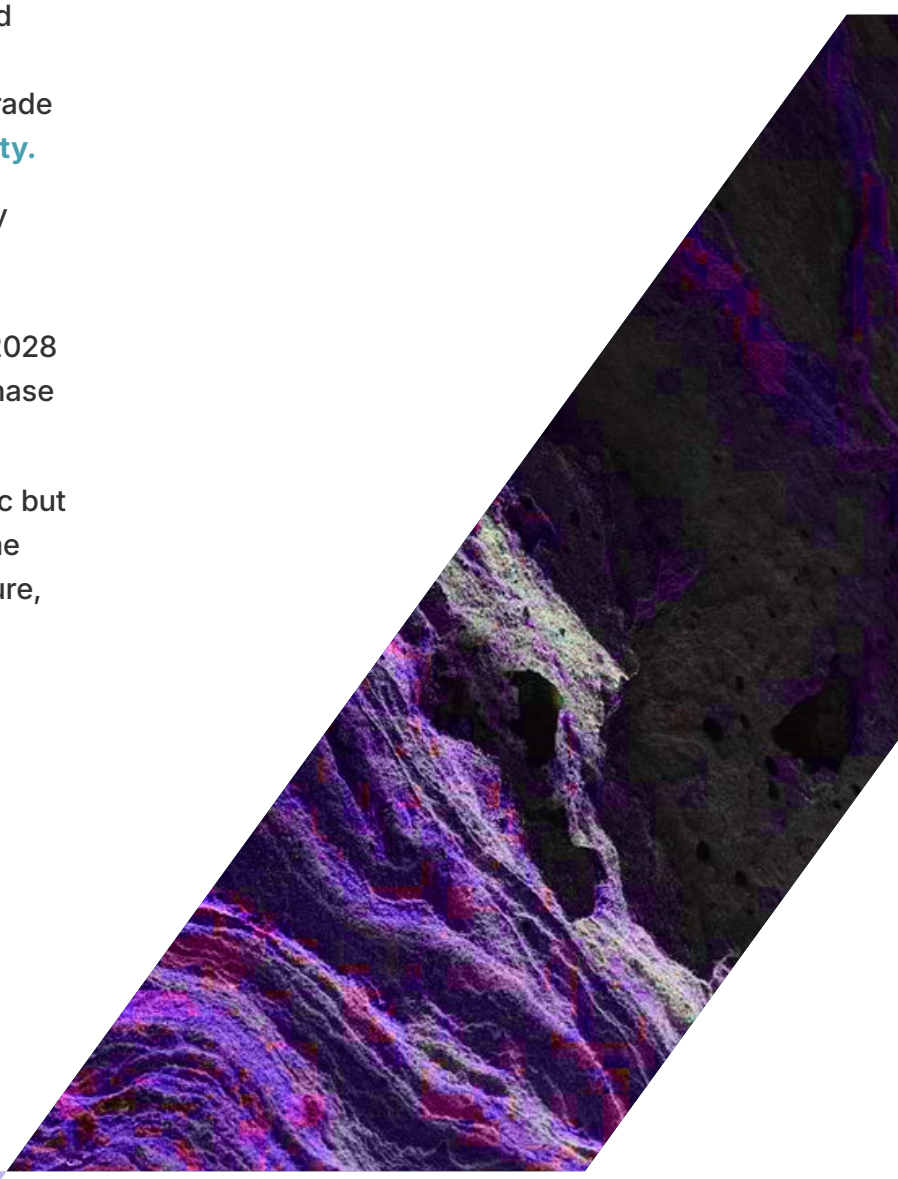
Tokenized uranium, such as xU3O8 emerges as the third[4] exposure route, alongside ETFs and equities, as 75% of investors say they would use tokenized uranium to bypass access frictions. Digital uranium products are gaining investor traction, offering a new access channel that bypasses traditional market frictions and broadens participation.

RWA Tokenization Is Poised to Accelerate the Rise of Tokenized Commodities As institutional adoption of RWAs surges, uranium has emerged as a perfect use-case providing investors with tokenized exposure, turning a once-inaccessible commodity into a digitally enabled asset class.

Taken together, the combination of **structural scarcity, accelerating nuclear demand, AI-driven electrification**, and **digital access models** indicates that uranium is moving from a contrarian trade into a **mainstream strategic commodity.**

This report brings together proprietary survey data, forward-looking market analysis, and emerging digital-asset infrastructure to illustrate why 2026–2028 could represent the most important phase in uranium's modern market cycle.

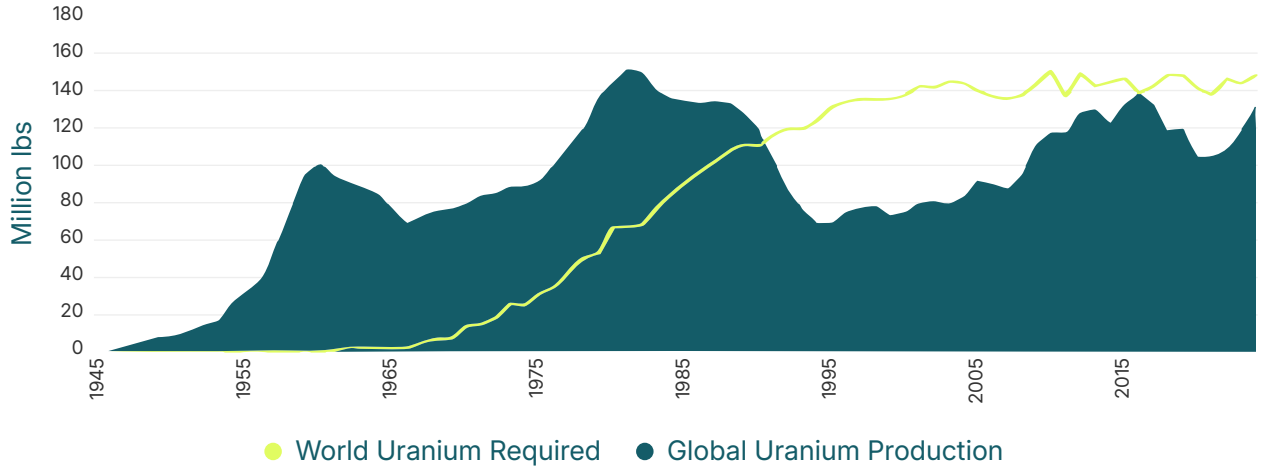
Uranium.io is breaking open a strategic but inaccessible asset class. With real-time data and regulatory-grade infrastructure, it's giving investors direct exposure to physical uranium just as AI and data-center demand is rewriting the global energy landscape.



3. Uranium's Widening Supply Deficit

Uranium supply & demand: mine production has not met demand since 1991

Source: Global X. Using information from: OECD-NEA/IAEA, World Nuclear Association as of 12/31/2022. And World Nuclear Association (n.d.) Uranium Supply and Demand. Accessed on 06/09/2024.



The uranium market is heading toward a structural imbalance unlike anything seen in modern commodities. Over the next two decades, **demand is set to surge to roughly 397 million pounds by 2040**,[5] which equates to an increase of roughly **133%** over today's demand, driven by nuclear restarts, new reactor builds, and the electrification of industry powered by AI and hyperscale data centers.

On the supply side, the picture looks dramatically different. **Forecasted production reaches only around 201 million pounds by 2040**[6]—a mere **14% increase**. Mining output remains largely flat, constrained by decade-long development cycles, underinvestment, and geopolitical bottlenecks.

Meanwhile, **utility inventories are tightening**, and the global shift away from Russian supply is intensifying competition for secure Western uranium.

The result is a market structurally unable to balance: **the world is demanding vastly more uranium at precisely the moment it is least available;** a dynamic that places the commodity at the center of the global energy transition.

From an economic perspective, a market with **compounding demand growth and structurally constrained supply** tends to adjust through price rather than production. Uranium is entering precisely this phase. With mine development cycles measured in decades and geopolitical pressures limiting new sources of supply, the market cannot respond fast enough to meet accelerating global demand.

While this is not financial advice, historical commodity cycles show that when **scarcity becomes the dominant feature,** markets typically reprice to ration existing inventories and signal the need for future production.

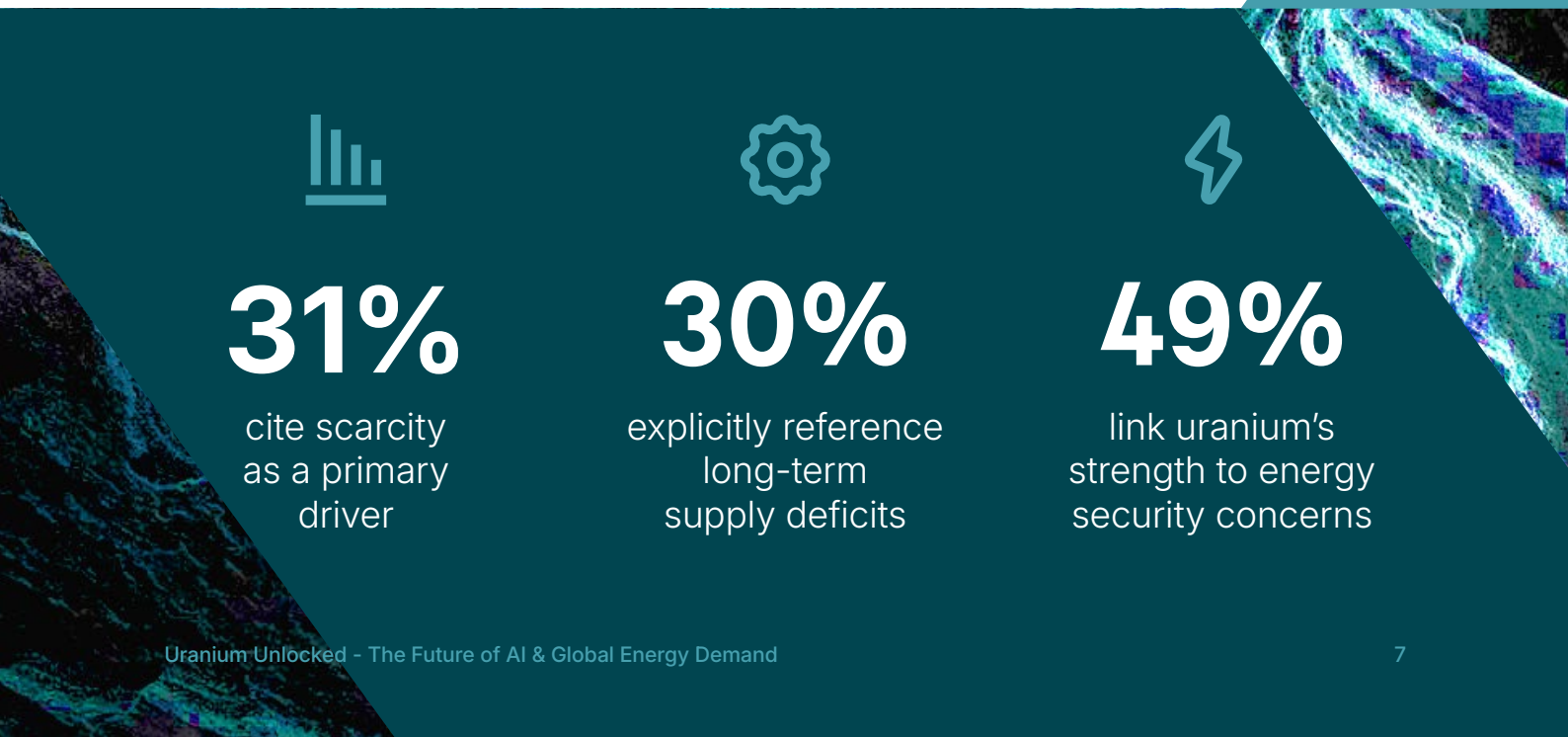
Uranium today reflects the classic characteristics of such a market: **structural deficit, limited elasticity of supply, and rising strategic importance**, conditions that have traditionally driven significant realignment in commodity valuations.

3.2 Investor Perception of the Supply Imbalance

Investor sentiment is increasingly aligned with the fundamentals of the uranium market. Survey responses show that **over one-third of investors already attribute uranium's performance to the widening supply–demand imbalance**, recognising that demand growth and constrained production are shaping the commodity's trajectory. Scarcity is a recurring theme: **31% cite scarcity as a primary driver,** and **30% explicitly reference long-term supply deficits.**

Energy security further reinforces this view. **Nearly half of respondents (49%) link uranium's strength to energy security concerns**, highlighting tightening inventories and a growing desire for stable, politically secure supply chains.

Yet despite this awareness, the market has **not fully priced in the scale or persistence of the structural deficit.** The gap between recognition and repricing is widening. Investors understand scarcity, but valuations appear not yet to have adjusted to reflect a decade-long supply constraint.



31%
cite scarcity as a primary driver

30%
explicitly reference long-term supply deficits

49%
link uranium's strength to energy security concerns

3.3 A Forward-Looking View Toward 2026

Looking ahead, **2026 may be the first year the market fully grasps the depth of uranium's structural under-supply.** Several trends point toward a pivotal inflection point. Prices could **test the $100–$120/lb range** if current fundamentals accelerate, while **Western utilities are likely to continue decoupling from Russian supply chains,** intensifying competition for secure, politically aligned uranium.

On the production side, mined supply may fall to **less than 75% of global reactor requirements**[7], increasing reliance on secondary sources and prompting **the potential return of strategic stockpiling** in the US, UK, EU, and allied jurisdictions. At the policy level, more nations are expected to follow the US and **formally classify uranium as a critical mineral**[8], further elevating its strategic status within the clean-energy transition.

Taken together, these dynamics suggest that **2026 could mark the moment when the market's narrative shifts from cyclical optimism to structural recognition,** bringing the long-term supply deficit into sharper focus for institutions, policymakers, and investors alike.

4. Nuclear Renaissance: The Demand Landscape Redrawn

Safe
85X fewer deaths
per MWh than coal power

Firm
>80% capacity factor
and grid stability (inertia)

Low footprint
50X lower land use than coal power, **63X lower** than solar

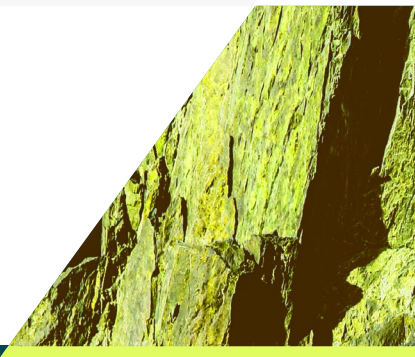
Clean
Only 6 tCO2e/GWh
vs 970 for coal and 440 for gas

Energy independence
Reduced reliance
of fossil fuel imports

Advanced reactors
Reduce radioactive waste,
passive saftey

4.1 Global Nuclear Momentum

Investor sentiment around nuclear growth is unequivocal. **88%** of survey respondents view the global nuclear build-out as a direct positive for uranium demand, and not a single respondent sees it as a negative factor. This confidence mirrors the policy reality taking shape across major economies.



88%
view the global nuclear build-out as a direct positive for uranium demand

In the **United States**, regulators are progressing along the SMR licensing pathway.

France is reviving its EPR program, signalling a long-term recommitment to large-scale nuclear capacity.

Japan continues to accelerate reactor restarts, while **South Korea** has reinstated nuclear as a central pillar of its energy strategy.

Across the **Middle East and Asia-Pacific**, governments are laying the foundations for long-range nuclear infrastructure designed to support industrial and population-driven growth.

Taken together, these actions reflect a world re-embracing nuclear not as a legacy asset, but as an essential driver of energy security and decarbonization. And critically, investors are recognizing this shift early.

This renewed nuclear momentum sets the stage for a far larger demand-side transformation now emerging from the technology sector.

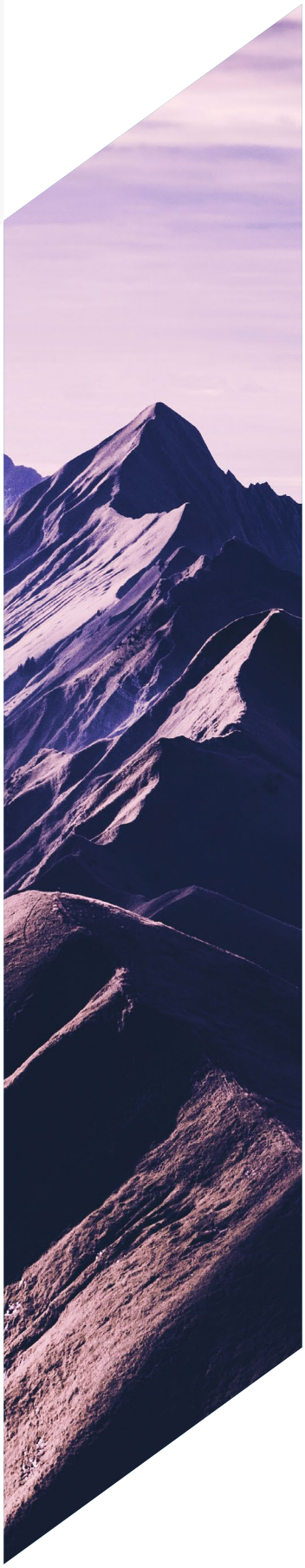
4.2 AI, Hyperscalers and the New Energy Constraint

Investors we surveyed repeatedly emphasised that AI and hyperscale data centers are driving medium-term structural electricity demand, creating a relentless requirement for 24/7 baseload power that intermittent renewables cannot meet alone. Many noted that **"nuclear is the only credible clean baseload for AI-scale compute"**, a view now mirrored at institutional levels.

BlackRock recently stated that

"technology hyperscalers have expressed a preference for nuclear energy to power their artificial intelligence (AI) data centers, boosting sentiment for uranium and uranium mining companies."[9]

This alignment between investor perception and institutional positioning marks a pivotal moment: **AI is transforming nuclear from a public-policy tool into a commercial necessity.** The next phase of demand is no longer driven by governments alone, it is emerging from hyperscalers, industrials, and global tech platforms.



This shift is already underway and over the course of 2026, it may fundamentally redefine the uranium demand curve.

2026 is emerging as the strategic tipping point, as the market begins to recognize the scale of nuclear's new demand profile. AI-driven electricity needs are set to exceed earlier forecasts, pushing utilities and hyperscalers toward jurisdictions that can guarantee stable, baseload power.

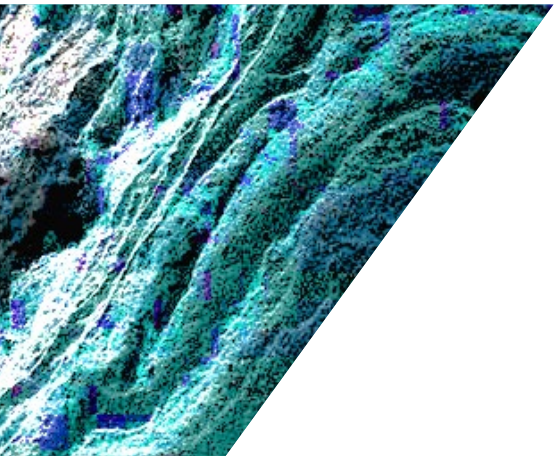
Early **AI–nuclear power purchase agreements (PPAs)** may begin to appear as tech operators seek long-term energy certainty, while **two to three SMR designs** are expected to progress into advanced licensing and site preparation. Industrial energy users, facing electrification and decarbonization pressures, may also start committing to nuclear-backed contracts.

The center of gravity in nuclear demand is **shifting from governments to corporates,** with private-sector energy consumers emerging as the new anchor buyers. Together, these forces signal a **technology-driven demand reset**, the strongest macro driver for uranium in the decade ahead, powered by AI, energy security, and a global revaluation of nuclear's role.

5. Historic Barrier to Entry: The Missing Layer of Infrastructure

Despite the strength of the underlying fundamentals, uranium remains **significantly under-owned**. The issue is not demand, investors clearly recognize the structural deficit, the nuclear resurgence, and the AI-driven energy transition. The barrier is infrastructure. The uranium market still operates with layers of friction that make it difficult for most investors to participate, a reality reflected directly in our survey data.

These frictions explain not only **why today's ownership levels remain low**, but also **why uranium.io exists**: to remove the practical and operational obstacles that stand between investors and one of the world's most strategically important commodities.



5.1 Perception Challenges

Investor perception remains shaped by long-held assumptions about uranium, many of them outdated and inaccurate, but still influential. Survey respondents cited a range of concerns that create psychological and institutional hesitation:

34%	Regulatory risk
31%	Geopolitical concerns
30%	Perceived illiquidity
27%	"Only for large institutions"
25%	ESG confusion

These perceptions create the first layer of resistance: even those who understand the fundamentals often assume the market is too complex, too restricted, or too opaque to navigate.

5.2 Legacy Access Issues

Beyond perception, the **operational realities** of the uranium market introduce a second layer of friction. Investors face practical barriers that make participation difficult or, in some cases, impossible within existing mandates.

Key obstacles cited include:

29% Pricing opacity

23% Regulatory uncertainty

23% Converter set-up complexity

22% Limited liquidity

22% High minimum sizes

22% Lack of internal mandate

21% ESG compliance hurdles:

This constellation of frictions means that even investors with strong conviction often cannot execute that conviction in practice.

5.3 The Unlock

The data reveals a clear inflection point: **interest is not the issue but access is:**

From our research, nearly **90% of investors could rotate into uranium** with better market infrastructure.

63% say easier access would make their firm **more likely to invest**

61% would be **"very interested"** if access improved

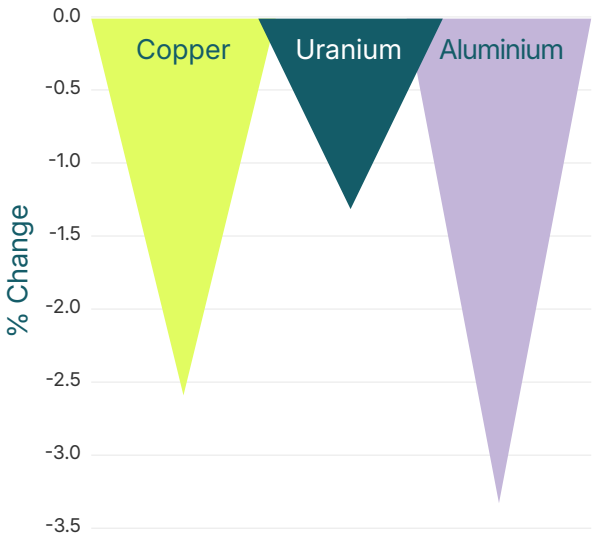
Therefore it is fair to conclude that this infrastructure is the missing layer the market has been waiting for: transparent pricing, clear regulatory pathways, simplified operational access, and institutional-grade infrastructure supporting physical uranium exposure.

6. Uranium's Resilience Through Market Volatility

Recent trade-policy shocks in July 2025 following Trump's tariff announcements have underscored one of uranium's most overlooked qualities: **its remarkable resilience in the face of macro volatility** especially when compared with other commodities; As US-imposed tariffs rippled through global markets in 2025, traditional industrial metals reacted sharply. **Copper dropped more than 20% in a single week**, and steel and aluminium followed with similarly violent swings as supply chains and manufacturing sentiment were hit.

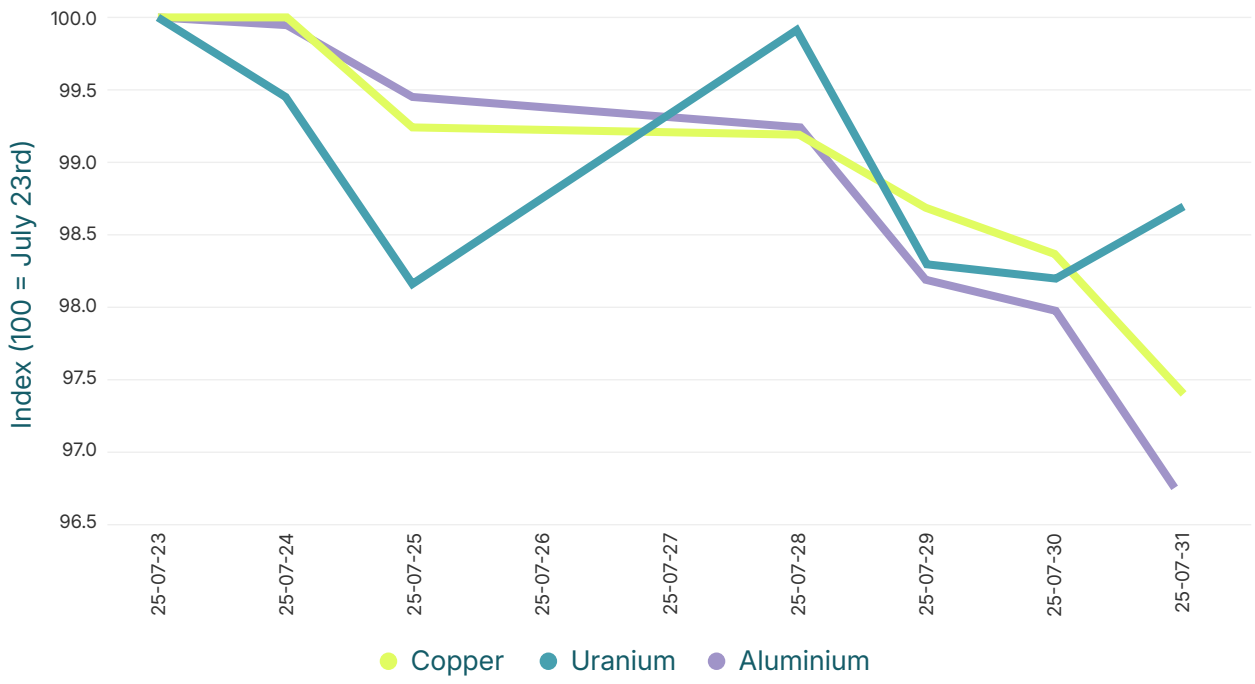
Volatility: % Change from 23-31 July 2025

Bloomberg



Copper vs Uranium vs Aluminium - Normalised to 100 (23-31 July 2025)

Bloomberg



Uranium, meanwhile, barely moved. **Spot prices held steady around $71/lb,** even as broader commodities whipsawed around shifting policy signals.

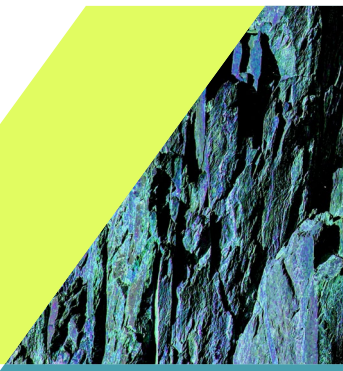
This divergence is not incidental - it is **structural**.

Uranium behaves differently because the forces that drive its price are fundamentally distinct from those that shape other commodity markets:

- It is **not priced by consumer-cycle sensitivity**
- **Long-term utility contracts** anchor demand
- **Reactors cannot reduce consumption** due to tariffs, slowdowns, or recessions
- **Supply is slow-moving, capital-intensive, and chronically constrained**
- And now, **AI and hyperscale data-center growth provide a powerful, counter-cyclical demand driver**

As our research shows, **uranium is not priced by policy but it is priced by access**. And access remains structurally scarce.

This scarcity acts as a stabilising force, creating price integrity at moments when other commodities sell off on headlines. It is this behavior that increasingly positions uranium as a **non-correlated, strategic asset**, one with the potential to play a differentiated role inside institutional portfolios as global energy demand enters a new era.



6.1 Tokenization & Uranium: Meeting Market Demand Already in Motion

Uranium.io operates at the convergence of two accelerating trends: the rising strategic importance of uranium as a commodity, and the rapid institutional adoption of real-world asset (RWA) tokenization. The result is a market environment where demand for a tokenized uranium instrument is not emerging, it already exists.

6.2 Real World Asset Adoption Has Moved Beyond Experimentation

Investor familiarity with tokenized real-world assets is now overwhelmingly high.

91% of surveyed participants say they are already familiar with RWA tokenization, signalling that this is no longer a fringe or exploratory segment of digital finance.

Institutional investors have moved past the learning phase; the infrastructure, regulatory frameworks, and operational comfort are in place. This is not an early-stage market, it is a market poised for institutional transition, awaiting credible assets and compliant platforms.

6.3 Clear Demand for Tokenized Uranium

The survey data makes one thing unmistakably clear:
tokenization directly solves the access frictions investors face in uranium.

62%

would deploy tokenized uranium as collateral, yield instruments, or structured product components

75%

would use tokenized uranium specifically to bypass market-access barriers

This demonstrates a market dynamic rarely seen in commodities:
latent demand that is blocked not by conviction, but by infrastructure.
Uranium.io provides the mechanism that allows that demand to activate.

7. The Future is Nuclear

As we look ahead, 2026 is shaping up to be a pivotal year, not just for uranium, but for the broader integration of tokenized commodities into institutional portfolios. The conditions outlined throughout this report point toward a market that is preparing to reprice uranium's strategic role while simultaneously embracing new forms of ownership, custody and distribution.

Tokenized real-world assets are moving rapidly toward mainstream adoption, and based on the pace of institutional adoption highlighted by **BlackRock, Citi, JP Morgan and SWIFT**, tokenized real-world assets are moving quickly toward mainstream use. Under accelerated-adoption scenarios, tokenized commodities could represent a meaningful share of sophisticated portfolios by 2026 - potentially in the 10-15% range as infrastructure, custody, and regulatory clarity continue to mature.*

Within this landscape, **tokenized uranium is positioned to emerge as a third major exposure route**, sitting alongside equities and ETFs, and providing a structurally distinct way to access the underlying commodity. As investors become more conscious of uranium's unique supply dynamics and its centrality to global energy security, the market is also likely to see the arrival of **new uranium-specific ETFs, ETPs, and structured vehicles**, broadening the ecosystem around the asset class

At the same time, the demand for **yield-bearing uranium products**, whether structured through financing, off-take agreements, or compliant staking mechanisms is set to grow sharply. Survey results indicate that **61% of investors actively want yield**, and **83% say they are open to yield-bearing uranium instruments**, suggesting strong early traction for products that combine uranium's scarcity with income-generating potential.

Taken together, these dynamics suggest that 2026 may be the year the market transitions from early recognition to active adoption, with tokenized uranium standing at the center of that shift.

61%

of investors
actively want yield

*This projection reflects Uranium.io's forward-looking scenario based on the pace of institutional adoption highlighted by major market participants. Boston Consulting Group (BCG) forecasts tokenized real-world assets could reach US$16 trillion by 2030; Citi reports that most institutional investors are planning to adopt tokenized assets this decade; JP Morgan's Onyx platform and SWIFT's cross-chain interoperability trials both demonstrate accelerating institutional readiness; and BlackRock has publicly stated that tokenization is set to transform capital markets. Collectively, these signals support the potential for tokenized commodities to represent a meaningful share of sophisticated portfolios by 2026.

7.1 What To Expect

Bringing together the signals from policy, technology, investor sentiment, and market fundamentals, **2026 is shaping up to be the pivotal year in which uranium transitions from a specialist commodity into a mainstream strategic asset.** The convergence of energy security, AI-driven electricity demand, and deep structural supply deficits is accelerating the timeline for this shift.

Looking ahead, we anticipate several defining developments:

A decisive price revaluation:

Uranium could **test the $100–$120/lb range**, with major financial institutions increasingly publishing bullish outlooks. Bank of America now forecasts **~$135/lb by 2026**, citing the scale of structural deficits and the intensity of global nuclear expansion.

Deepening supply deficits:

Utilities are expected to **outbid traders, ETFs, and even Sprott** as they rush to secure long-dated supply in a tightening market.

Western reshoring of procurement:

The geopolitical diversification away from Russian supply is set to accelerate, reshaping contracting cycles and increasing competition for Western-origin uranium.

Acceleration of SMR deployment:

We anticipate **early site approvals and continued licensing momentum**, marking the transition from concept to implementation.

AI-driven electricity demand reshaping energy strategy:

Hyperscalers and data-center operators will become influential buyers of baseload power, leading to **potential early AI–nuclear corporate PPAs.**

Further ESG reframing:

With new frameworks recognizing nuclear as a low-carbon asset, uranium could enter the mandate space previously closed to it.

Tokenized uranium becomes an institutional gateway:

Digital infrastructure will provide a new access route for investors, with tokenized uranium increasingly used for **collateral, treasury allocation, and structured exposure.**

Rising interest from digital-asset treasuries:

As real-world assets gain prominence, xU3O8 may become a preferred hard-asset allocation within Web3 and crypto-native balance sheets.

Strategic stockpiling by new jurisdictions:

Governments seeking energy sovereignty may initiate or expand uranium reserves, adding a new layer of structural demand.

Early allocations of xU3O8 will begin to appear across a diverse set of institutions including:

- Hedge Funds
- Asset Manager
- Commodities Desks
- Energy Companies
- Listed Companies with Digital-Asset Treasuries
- Sovereign Wealth Funds
- Family Offices
- Crypto-Native Funds

Together, these dynamics point toward a redefined market landscape in 2026, one where uranium's scarcity, strategic relevance, and new access mechanisms reshape how institutions engage with the commodity.

Conclusion: Unlocking a Critical Commodity for the Modern Economy

Uranium is entering a new market regime, one defined not by sentiment or cycles, but by structural necessity. Across policy, technology, and energy systems, the trajectory is unmistakable: demand is accelerating faster than supply can respond, and the world is rebuilding its relationship with nuclear energy at the exact moment AI-driven electrification reshapes the global power landscape.

The result is a commodity transitioning from misunderstood to mission-critical. Utilities, governments, hyperscalers and industrials are converging on the same conclusion: secure, low-carbon baseload power is no longer optional. Uranium sits at the center of this shift.

Investors see this clearly. They recognize the widening supply deficit, the nuclear resurgence across major economies, and the price resilience that distinguishes uranium from traditional industrial metals. What has held them back is not conviction, but access.

By providing transparent pricing, regulatory clarity, compliant custody, and frictionless exposure to physical uranium, uranium.io delivers the infrastructure the market has lacked for decades. It transforms a previously closed, institution-only commodity into an investable, programable real asset aligned with modern portfolio needs.

As tokenization becomes a standard component of institutional infrastructure, uranium gains a third credible access route alongside equities and ETFs, one that matches the demands of sophisticated capital: liquidity, fractionalisation, interoperability, and institutional-grade controls.

2026 is set to be the step-change. The drivers: Geopolitical reshoring, SMR deployment, AI-scale electricity demand, and entrenched supply constraints are structural, not cyclical. They underpin a market shifting from early recognition to broad-based adoption, where uranium transitions from a contrarian allocation to a mainstream strategic asset.

In this emerging landscape, accessibility is not just a convenience, it is the catalyst that unlocks the next phase of market participation. Thanks to uranium.io, the next cycle of uranium will be defined by access.

Appendix

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Sources

1. https://www.nucnet.org/news/price-could-hit-usd135-in-2026-says-bank-of-america-analysts-10-1-2024
2. https://world-nuclear.org/information-library/nuclear-fuel-cycle/uranium-resources/supply-of-uranium/
3. https://www.cruxinvestor.com/posts/ai-smr-demand-surge-to-double-uranium-consumption-as-mine-depletion-threatens-20-year-supply-gap
4. Sentiment data from over 600 investors.
5. https://world-nuclear.org/our-association/publications/global-trends-reports/world-nuclear-fuel-report-2025
6. https://www.miningvisuals.com/post/the-uranium-opportunity-limited-supply-meets-rising-demand
7. https://www.world-nuclear-news.org/articles/fuel-cycle-players-respond-to-supply-gaps
8. https://www.usgs.gov/news/science-snippet/interior-department-releases-final-2025-list-critical-minerals
9. https://www.trustintelligence.co.uk/investor/articles/news-investor-results-analysis-blackrock-energy-and-resources-income-retail-feb-2025

Disclaimer:

This report contains forward-looking statements based on current conditions, survey data, and publicly available information. These include expectations about future uranium prices, nuclear development, energy demand, tokenization adoption, and market behavior. Forward-looking statements involve risks and uncertainties and actual outcomes may differ materially. Uranium.io undertakes no obligation to update these statements except as required by law.

To discuss this report or its methodology in more detail, please contact:

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