

THE **FUEL** MAP

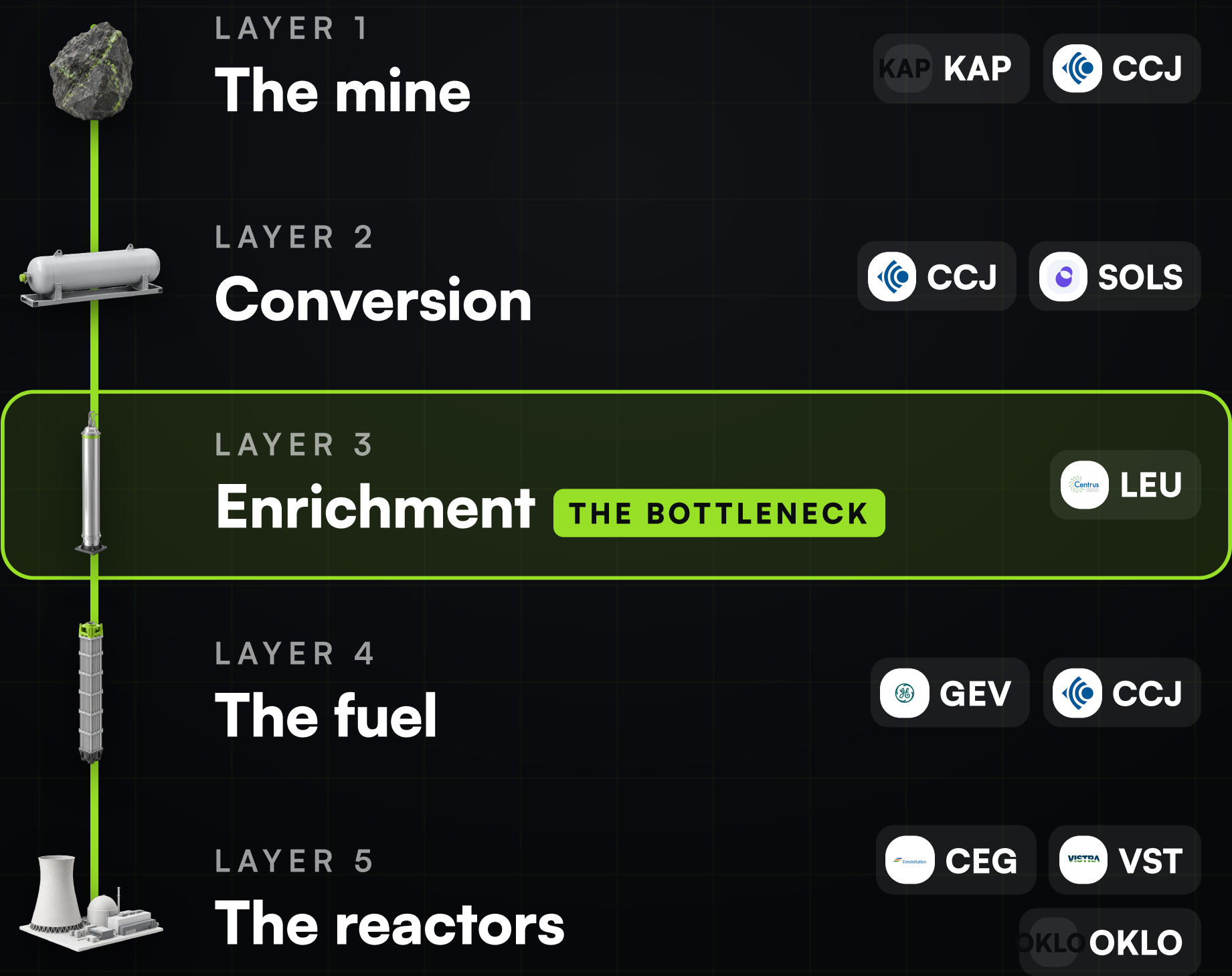
Five layers from the mine to the reactor, and the companies in each one.



THE MAP

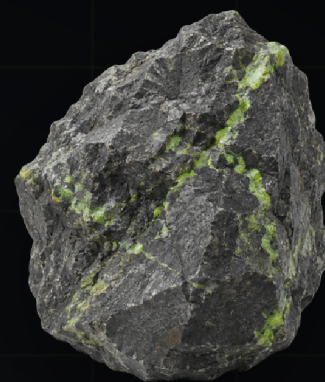
Follow the fuel

Big tech is turning to nuclear to run AI. Here is the whole fuel chain on one page, and the bottleneck in the middle.



LAYER 1

The mine



39%

of the world's mined uranium comes from one country, Kazakhstan (World Nuclear Association)

24%

from Canada, next in line

About 52% of Kazakhstan's West-bound uranium still leaves through St. Petersburg, Russia; the rest takes the Trans-Caspian route.

Only 7% of the uranium US reactor owners bought in 2025 was mined in the US (EIA).

KAP

Kazatomprom **KAP**

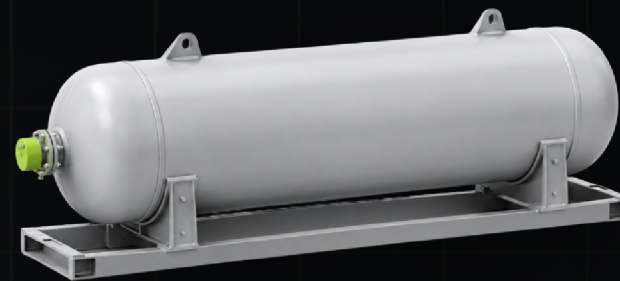
About 20% of world primary supply. Listed in London and Astana, not in the US.



Cameco **CCJ**

About 17% of world output, from McArthur River and Cigar Lake in Canada.

Conversion



3 companies

turn uranium into a gas, ready to enrich, in the West

\$97 per kgU

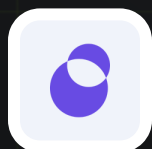
North American spot price at the end of 2024, a record (Cameco)

Orano (majority-owned by the French state) has about 40% of Western conversion capacity.



Cameco CCJ

Converts at Port Hope, Ontario.



Solstice Advanced Materials SOLS

Runs Metropolis, Illinois, the only US conversion plant.

Enrichment



43%

of world enrichment capacity belongs to Russia's Rosatom (World Nuclear Association)

25.8%

of the enrichment US reactor owners bought in 2025 was Russian (EIA)

Only 0.7% of natural uranium is the kind that splits; reactor fuel needs 3 to 5% (NRC).

The US banned Russian uranium in 2024; waivers end no later than 2028. Spot enrichment went from \$34 per SWU in 2018 to \$200 by December 2025.

Racing to fix it: Urenco (private) in New Mexico, about 4.3 million SWU a year, and Orano's planned \$5B plant in Tennessee. The DOE awarded \$2.7B, \$900M each to Centrus, General Matter and Orano.

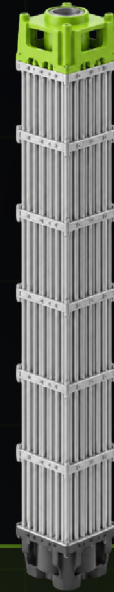


Centrus Energy LEU

Piketon, Ohio. Has made more than 1900 kg of HALEU, the richer fuel many new reactors need.

LAYER 4

The fuel



3 plants

licensed by the NRC press the pellets and bundle US reactor fuel

Westinghouse (Columbia, South Carolina) is owned by Brookfield and Cameco. Framatome (Richland, Washington) is part of France's state-owned EDF.

A US government partnership for at least \$80B of new Westinghouse reactors was announced by Cameco and Brookfield; it is not yet a firm order.



GE Vernova **GEV**

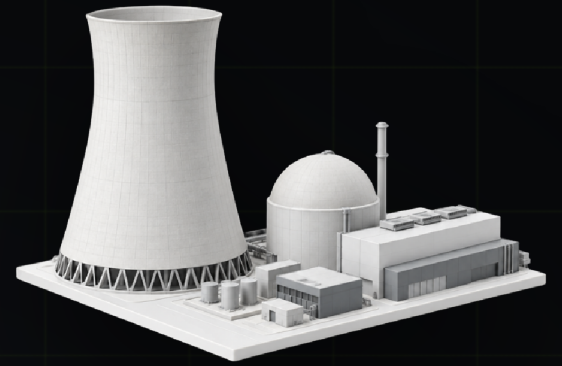
Leads Global Nuclear Fuel (with Hitachi) in Wilmington, North Carolina.



Cameco **CCJ**

Co-owns Westinghouse with Brookfield.

The reactors

**94**

commercial reactors in the US (EIA)

18%

of US electricity

Meta lined up as much as 6.6 GW from Vistra, TerraPower and Oklo. Amazon invested in X-energy (more than 5 GW planned); Google signed with Kairos (up to 500 MW).

Many advanced designs need HALEU. In 2023, the DOE said Russia was the only commercial source.

**Constellation** CEG

Restarting Three Mile Island, now the Crane Clean Energy Center (about 835 MW) for Microsoft.

**Vistra** VST

Selling Meta more than 2.1 GW from two Ohio nuclear plants.

**Oklo** OKLO

Up to 1.2 GW of new reactors planned in Ohio with Meta.

RISK

The honest part

This corner of the market runs on stories, and stories swing. Uranium's month-end spot price went from \$100.25 a pound to \$64.23:

Uranium spot price

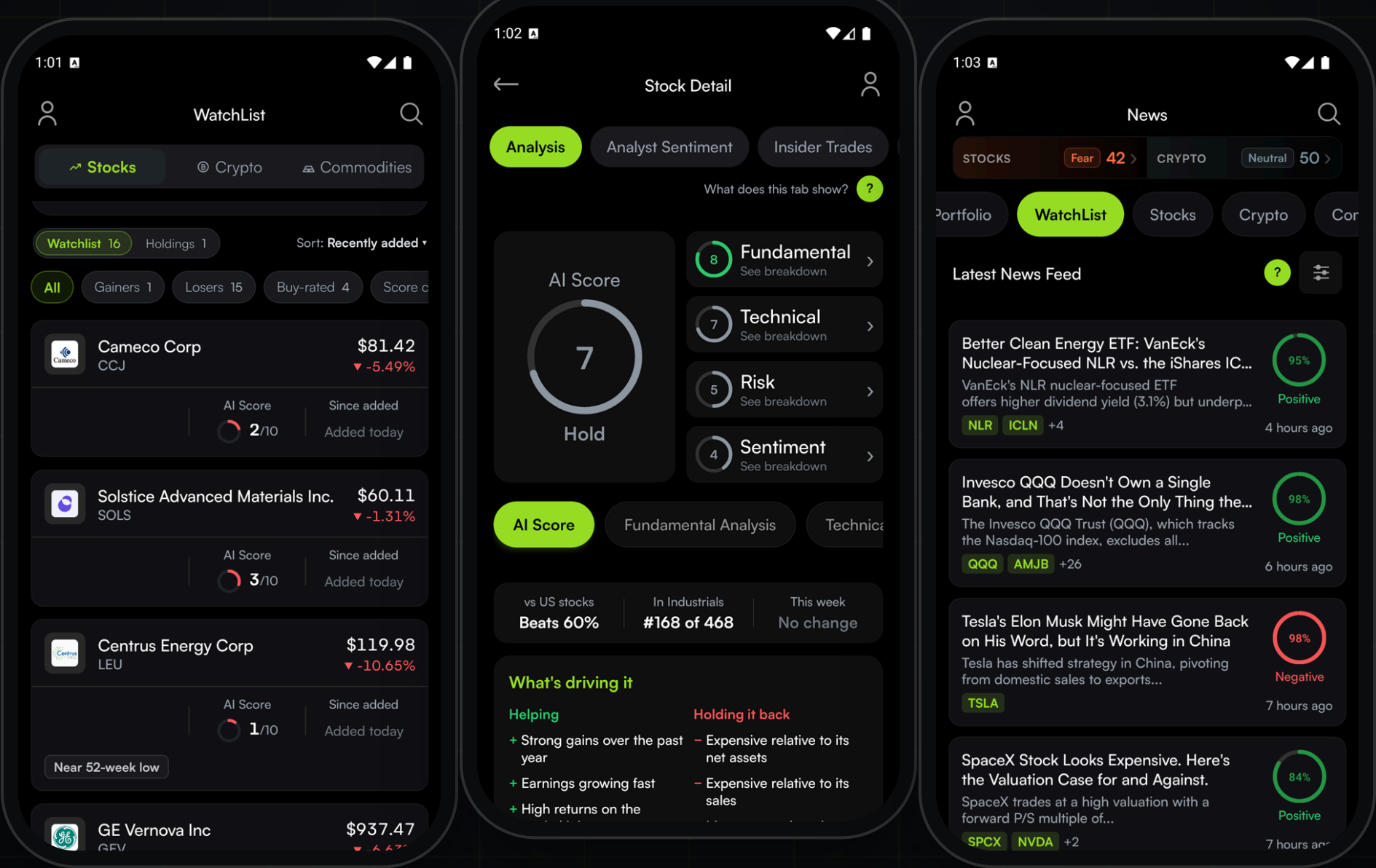
-36%

JANUARY 2024 TO MARCH 2025

And new enrichment plants take years to build. A big story can already be in the price.

How I keep track

I keep every layer on one AssetWisp watchlist, with each company's AI Score and news in one place.



Watchlist

AI Score

News

App Store

Google Play

assetwisp.com

SOURCES

Where the numbers come from

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32. derived: $1 - \text{risk.u_spot_low} / \text{risk.u_spot_high} = 1 - 64.23 / 100.25 = 35.9\%$

Next lesson: AI is eating the memory chips, and your phone pays.

For educational purposes only. Not a recommendation to buy or sell any security. Figures are the latest reported at the time of writing; check them before acting on anything.