WONDERSTRUCT

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A quick digest of relevant news, products, and trends making a difference in building, power, and transportation. Pairs nicely with Beams, our blog. Check out all blogs and newsletters on our site.

Outlook viewers - download external images for the full experience.

Nah, not a comeback... the reactors were just warming up.

Nuclear energy used to be a slow burn. Now it's moving fast, and the infrastructure world is paying attention. Data centers need more power. The grid needs more muscle. So, governments are cutting deals. Here's the story.

The power move

Fission impossible? Not anymore.
The U.S. just went all-in on nuclear. The federal government announced an $80 billion partnership with Westinghouse, Cameco, and Brookfield to build new reactors and expand the domestic fuel supply chain. That's one of the largest nuclear investments in decades and a clear signal that advanced nuclear isn't a side project anymore—it's part of the country's core energy strategy.

Why it matters for infrastructure: The scale of this deal means new demand for heavy construction, transmission upgrades, and uranium supply. It's also an

early test of how quickly the U.S. can actually deploy next-gen reactors at commercial scale.

Meet HALEU

Premium gas, but make it nuclear.

The U.S. is also jump-starting production of a little-known fuel called **HALEU,** short for *high-assay low-enriched uranium*. Think of it as the premium gas for next-gen nuclear reactors: more efficient, smaller volumes, cleaner burn.

Until now, most of it came from overseas (mainly Russia), which is a problem if you're trying to build an independent nuclear industry. HALEU is made by enriching uranium to between 5% and 20% U-235, a step above traditional reactor fuel but below weapons-grade. Washington's new program aims to fund U.S. suppliers to handle that enrichment and fuel fabrication at home.

Without HALEU, small modular reactors can't start up. This program is like paving the highway before the cars arrive.

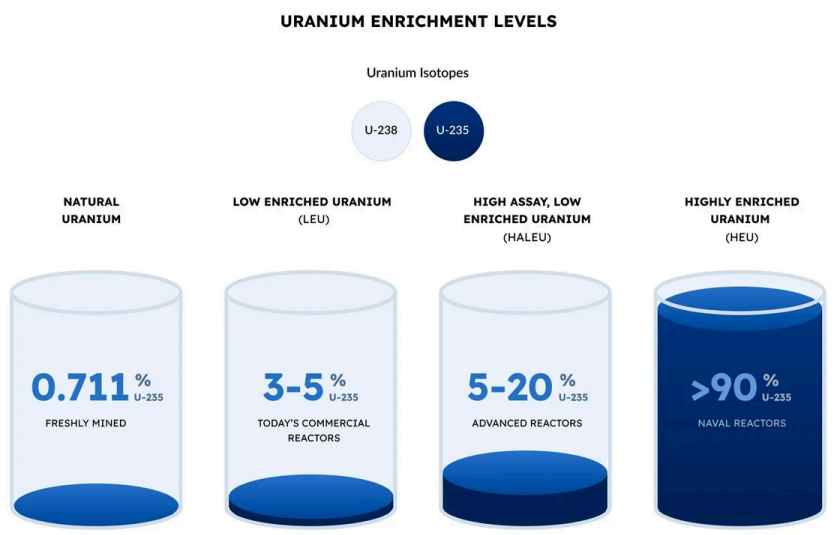

Image: Centrus Energy Corporation, "Uranium Enrichment Levels", Feb 2022

Who's betting big

Amazon

Amazon just went big on nuclear. The company plans to triple the size of its Cascade Advanced Energy Facility in Richland, Washington, from 320 megawatts to 960 megawatts. That's 12 small modular reactors (SMRs) powering their data centers, plus extra juice for the regional grid. Construction starts by the end of the decade, with operations expected in the 2030s.

Why it matters for infrastructure: Big tech is betting on SMRs to meet energy needs. That's a signal for grid planning, site permitting, and long-term energy strategies.

Oklo

Nuclear startup Oklo, backed by OpenAI CEO Sam Altman, gained a 649% increase in stock value this year. The company is developing small modular reactors and

aims to bring its first commercial Aurora Powerhouse reactor online by late 2027 or early 2028.

Fluor
Activist investor Starboard just picked up 5% of Fluor and wants the company to rethink its 40% stake in NuScale, a company that develops small modular nuclear reactors (SMRs). Meanwhile, Fluor's nuclear JV just got the go-ahead to design two new reactors in Romania.

Translation: pressure is on. Investors want clearer ROI. Governments want more capacity. EPC firms are back in the driver's seat.

Why the grid matters

The U.S. grid is getting an upgrade
DOE is putting $2.2 billion into new transmission lines. Private investors are shifting attention to high-demand zones: AI, manufacturing, electrified industry.

This is infrastructure for constant, heavy baseload. Without it, advanced nuclear stays stuck in planning folders.

Japan flips the switch

She's bringing nuclear back
Japan's first female Prime Minister, Sanae Takaichi, is keeping nuclear power front and center, and that's a big deal. After the 2011 Fukushima disaster, Japan shut down most of its reactors and leaned heavily on fossil fuels. Now, Takaichi is signaling a full return to nuclear as a key part of the country's energy strategy, balancing energy security with climate goals. Skeptics worry the earthquake-prone country could experience another catastrophe if not prepped for earthquakes and tsunamis.

But Japan's trying to prove it's learned from the past, with taller seawalls, backup power moved to higher ground, and stricter quake-proofing rules for reactors.

Why it matters: This shift there could open doors across Asia and push other countries to follow suit. It also signals a safety push. How can me make sure nuclear power facilities are safe from natural disasters?

Can nuclear live off-grid?

It is trending.
The answer is: potentially, yes. Modular nuclear reactors could supply more affordable, clean power to off-grid locations currently using diesel fuel. In Canada, Starcore Nuclear is a collective of nuclear engineers and specialists creating SMRs for off-grid use. They use a technology with a failsafe feature to offer safe, small-scale, affordable power to remote communities, starting with Canada's First Nation indigenous communities.

Running on empty

Fuel is officially the new bottleneck.

Uranium prices are rising as global supply tightens. Secondary stockpiles are nearly gone, and new mines haven't caught up. Fuel is becoming the bottleneck.

For energy pros, that means front-end planning has to include secure, long term supply.

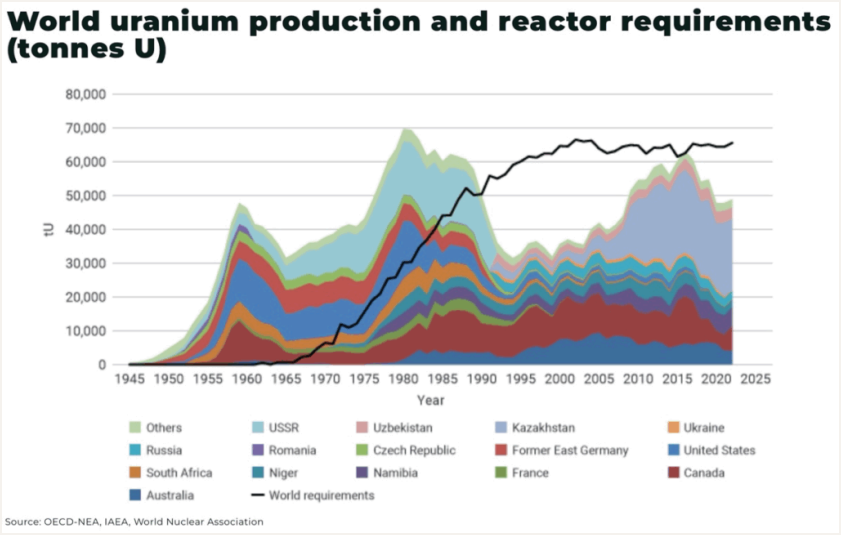

Image: The Oregon Group, May 2025

Can nuclear make cents?

Nuclear's next test: Economics 101

Advanced reactors can compete, but only at the right price. New modeling shows fast reactors can win market share if they hit around $5 per watt installed. Another study found nuclear's role in a renewable-heavy grid depends on flexibility, not just scale.

The bottom line: if nuclear is going to work long term, it has to get faster, cheaper, and easier to plug in.

Cheat sheet for infrastructure teams:

A nuclear resurgence means new opportunities for grid upgrades, construction projects, and energy infrastructure investments.

- **AEC:** Look out for modular builds, international JV projects, and tight timelines. If you're in nuclear, be ready to explain cost control and risk strategies.
- **Grid and utility planners:** Focus on transmission that can handle constant, high-output generation. Think about how new plants integrate, not just where they sit.
- **Investors and owners:** New projects are attracting attention, but old cost problems still apply. Flexibility and storage might tip the balance.
- **Transport and logistics:** Nuclear isn't portable, but its components are. Heavy modules, fuel transport, and long-lead items are becoming bigger parts of the equation.
- **Cooling systems:** Ramp up your ability to utilize nuclear power and support data centers.

- **Safety technologies:** Learn how to safety install and maintain nuclear power systems.

Wonderstruct News

Proposal Bootcamps

Welcome to our first quarter of proposal boot camps! On the team that writes proposals? Learn the basics, workshop an actual proposal, and learn to use tools that make the process efficient (like AI). Our proposal team has a winning track record. Learn their best practices!

Learn how to create a proposal focused on construction and design. Align your design and construction teams, eliminate last-minute stress, and strengthen your next submission. Each attendee also receives a 1:1 prep workshop with our proposal experts to apply what they've learned.

Seats are limited — reserve yours on Eventbrite

Design Firm Proposal Bootcamp: Build a Stronger Submission Process
Learn how to break down RFPs, strengthen your proposed design and engineering approach, and use AI responsibly to streamline your workflow. Each attendee also receives a 1:1 follow-up consultation to apply what they've learned to a real RFP.

Seats are limited — reserve yours on Eventbrite

Developer Proposal Bootcamp: Bring Strategy to Every Submission
Write proposals that sell your team's value to the overall development, collaborate with multiple stakeholders, and efficiently work from start to finish. Each attendee also receives a 1:1 follow-up consultation to apply what they've learned to a real RFP.

Seats are limited — reserve yours on Eventbrite

Our Writers

Alyce Anderson

President / CEO

Alyce started Wonderstruct in 2019. In her 16-year construction experience, she recognized a lack of strong communication and communication tools in building construction. Wonderstruct has grown to support the AEC industry, transportation, and energy clients in marketing and telling the world what they build and how they build it in clear, visual ways. Alyce is based in Chicago and Denver.

Jenna Neary

COO

Jenna keeps our operations running smoothly. With a background in project management and content strategy, she brings a smart, creative approach to solving problems and helping clients grow. Jenna's storytelling skills and eye for detail continue to shape how we work and what we deliver. Jenna is based in Atlanta.