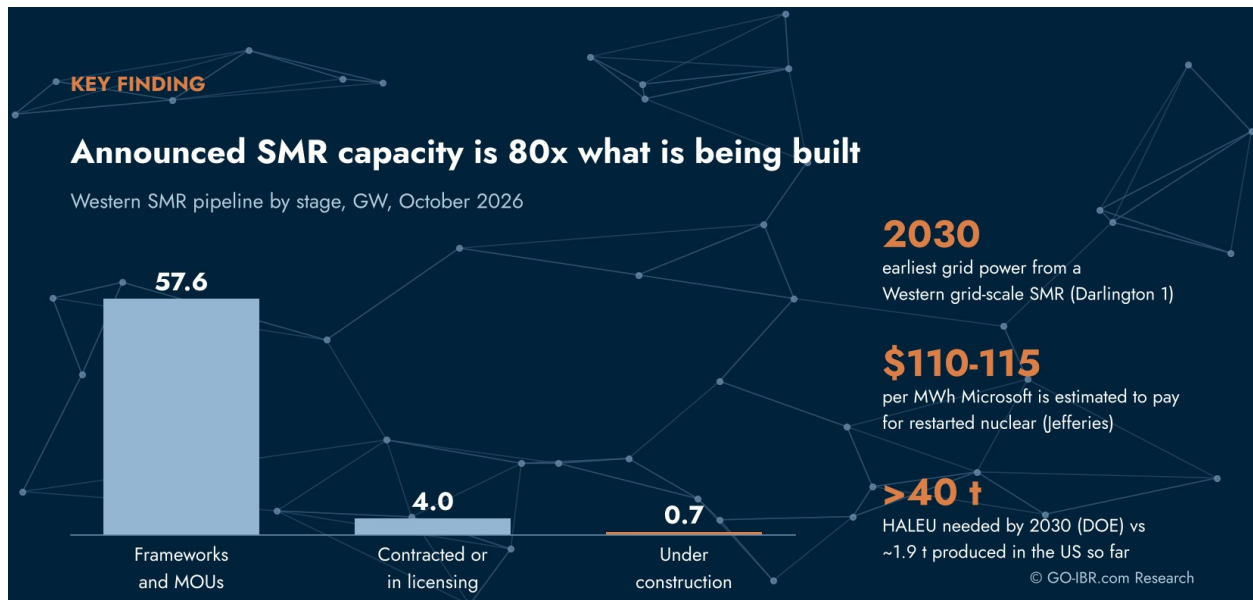


SMR Trends 2026

Eight trends shaping small modular reactors, and what they mean for investors, utilities and data center builders



October 2026

DEMAND IS SOLVED. DELIVERY IS NOT.

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In this paper we test eight trends in small modular reactors against the evidence available on 20 October 2026, rank them by momentum and strength of evidence, and translate them into practical guidance for three readers: investors, utilities and independent power producers, and the technology companies building data centers that need far more firm power than the grid can deliver on their timetable. We close with nine dated, checkable calls and the evidence that would change our mind.

EXECUTIVE SUMMARY

Two years ago the question about small modular reactors (SMRs) was whether anyone would buy them. That question is answered. Meta, Amazon, Google and Microsoft have announced nuclear agreements totaling more than 18 GW, utilities on both sides of the Atlantic have picked designs, and governments are writing checks. The question now is whether anyone can **deliver** them, on what schedule, and at what price. Our answer, as of 20 October 2026: demand is ahead of delivery by a factor of about 80, and the gap will close slowly.

Key findings

1. Demand is solved; delivery is not.

About 57.6 GW of Western SMR capacity sits in frameworks and memoranda of understanding (MOUs), 4.0 GW is contracted, permitted or in licensing, and only 0.7 GW is under construction. Our base case is about 4 GW operating in North America and Europe by 2035.

2. The order book, not the technology, is the binding constraint.

At a 15% learning rate a single design needs about 28 units and \$12 billion of extra first-of-a-kind cost to reach \$5,500/kW. Designs with a real multi-unit order book (BWRX-300, Rolls-Royce SMR) are pulling ahead.

3. Fuel is the quiet chokepoint.

The US Department of Energy estimated more than 40 tonnes of high-assay low-enriched uranium (HALEU) would be needed by 2030. US output to mid-2026 was about 1.9 tonnes. Light-water SMRs that burn ordinary fuel have a timing advantage.

4. Brownfield sites are the fastest route.

Kemmerer, Doicești, Palisades, Clinch River, Darlington and Wylfa are all former coal or existing nuclear sites. Grid connections, water, workforce and local consent come with the land.

5. Money is moving from MOUs to binding contracts, slowly.

Ontario, the UK, Czechia and Sweden have signed or selected; the largest US framework (TVA and ENTRA1, 6 GW) is still non-binding more than a year after signing.

6. Regulators are no longer the bottleneck.

The NRC issued construction permits for Kemmerer (March 2026) and Clinch River (29 September 2026), and its new Part 53 rule took effect in April 2026. Risk has moved from the regulator to the construction site.

7. Cost is the trend still to be proven.

Our first-of-a-kind estimate is \$164/MWh unsubsidized, against \$53 to \$62 for new gas. But buyers already pay an estimated \$110 to \$115/MWh for restarted nuclear, close to our early-fleet cost of \$120. The gap is closing from the buyer side.

8. The sustainability case is stronger than the cost case.

Nuclear uses about 7 hectares per TWh a year against about 2,000 for solar, and its lifecycle carbon is among the lowest of any source. That matters to buyers with 24/7 carbon-free targets.

Who should read this

- **Investors** get a scorecard that separates announced capacity from binding money, and nine dated calls they can check us against.
- **Utilities and independent power producers** get the siting, financing and contracting patterns that are working, and the ones that are not.
- **Data center builders** get a realistic time-to-power map: what firm power is available in 2027, 2030 and 2035, what it costs, and which SMR contracts are worth signing now. Look for the "For data center builders" panels in each section and the dedicated chapter near the end.

The trend scorecard

The table summarizes each trend, the direction it is moving, the strongest evidence for it as of 20 October 2026, and our confidence. We separate what has been **announced** from what is **binding**, because the difference is where most SMR forecasts go wrong.

Trend	Direction	Strongest evidence (as of October 2026)	Confidence
1. Demand outruns delivery	Widening	Hyperscaler deals of more than 18 GW vs. 0.7 GW under construction in the West	High
2. Order book binds	Tightening	BWRX-300 and Rolls-Royce SMR are the only Western designs with multi-unit, multi-country commitments	High
3. HALEU chokepoint	Easing slowly	Centrus \$900M DOE task order; first new commercial HALEU capacity not before 2029	High

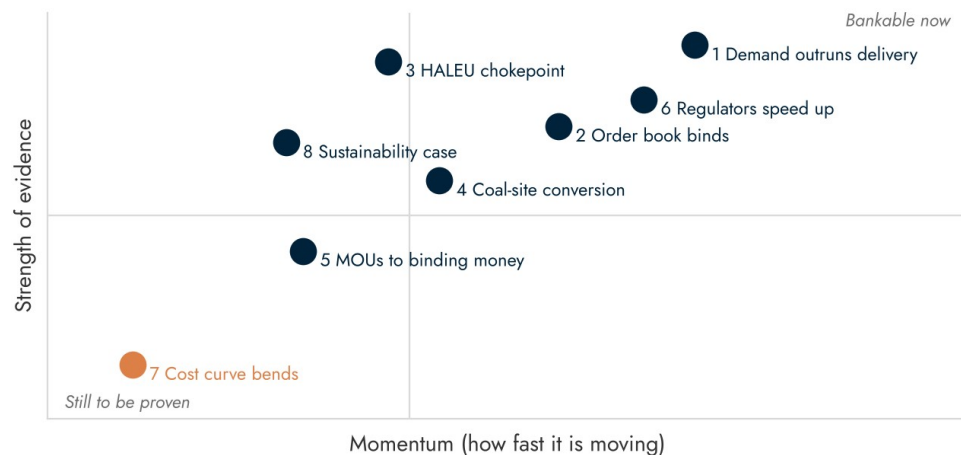
Trend	Direction	Strongest evidence (as of October 2026)	Confidence
4. Brownfield siting	Strengthening	Most projects with permits are on coal or existing nuclear sites; 10% bonus credit for energy communities	Medium-high
5. MOUs to binding money	Mixed	Darlington, Wylfa, Temelín binding; TVA-ENTRA1 and Doicești pre-EPC still conditional	Medium
6. Regulators accelerate	Strengthening	Two NRC construction permits in 2026; Part 53 in force; UK GDA Step 3 due to conclude about December 2026	High
7. Cost curve bends	Unproven	No Western grid-scale SMR has finished; Kemmerer lost its lead contractor in September 2026	Low
8. Sustainability case	Strengthening	Land and lifecycle-carbon data favor nuclear; back-end waste for advanced fuels still unresolved	Medium-high

Table 1. SMR trend scorecard. Confidence is GO-IBR.com Research's assessment of the evidence, not of the outcome.

* Throughout this paper, an asterisk marks information that was being verified at the time of writing but is not 100% certain.

Eight trends, ranked by momentum and evidence

Our assessment of each trend's direction and the strength of evidence behind it



Source: GO-IBR.com Research assessment, October 2026.

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Figure 1. The eight trends plotted by momentum and strength of evidence. Only the cost trend sits in the "still to be proven" corner.

PART 1: DEMAND AND DELIVERY

Trend 1. Demand is solved, delivery is not

The demand side of the SMR story changed in 2024 and 2025, when the largest technology companies began buying nuclear power to run AI data centers. S&P Global's 451 Research projects US data center power demand rising from about 62 GW in 2025 to about 134 GW by 2030. Hyperscalers want that power to be firm, available around the clock, and low-carbon. Few sources meet all three, and nuclear does.

The result is a wave of agreements. Meta announced up to 6.6 GW of nuclear in January 2026, including funding for two TerraPower Natrium units with rights to six more, and early procurement for an Oklo campus of up to 1.2 GW in Ohio. Amazon backs X-energy for up to 5 GW by 2039; on 19 October 2026 X-energy and AEP announced a joint development agreement to assess a 12-unit, 960 MW Xe-100 plant in Indiana, with Amazon funding some development work. Google has a 500 MW master agreement with Kairos Power and a 50 MW power purchase agreement (PPA) through TVA from the Hermes 2 reactor.

Big Tech buys today's nuclear now and SMRs for later

Selected hyperscaler nuclear deals by type, GW (announced capacity, not all binding)

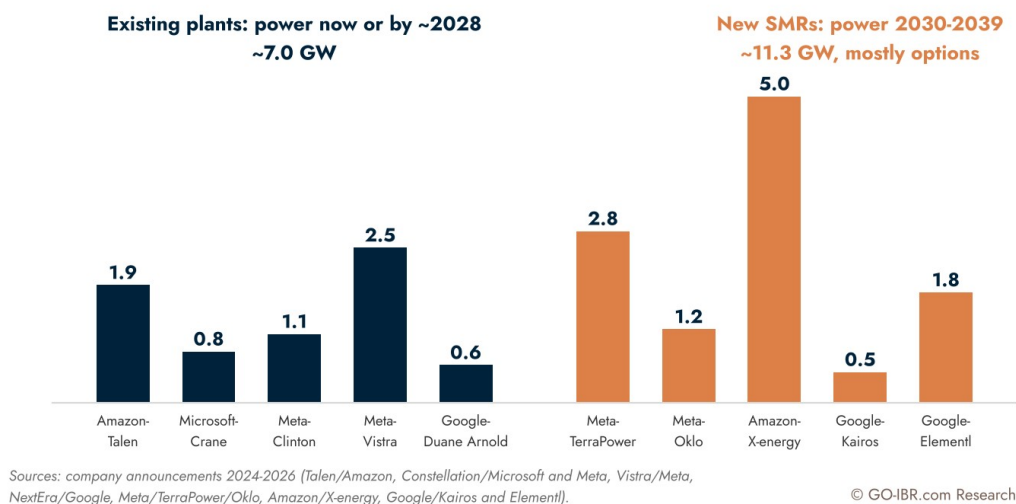


Figure 2. Hyperscalers are buying existing nuclear for power now and SMRs for power later. SMR volumes are mostly options and frameworks, not firm orders.

Delivery has not kept pace. Of the Western pipeline we track, only three projects are physically under construction: OPG's BWRX-300 at Darlington (300 MWe, grid by end-2030), TerraPower's

Natrium plant at Kemmerer, Wyoming (345 MWe, construction began April 2026), and Kairos Power's Hermes 2 (50 MWe). Together that is about 0.7 GW.

Demand is solved. Delivery is not.

Western SMR pipeline by stage, GW (North America and Europe, October 2026)



Source: GO-IBR.com Research SMR contracts ledger (Market Guide v1.1), updated October 2026. Base case is our assessment.

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Figure 3. Western SMR pipeline by stage. Frameworks and MOUs outnumber capacity under construction by about 80 to 1.

Our assessment: Big Tech has de-risked SMR demand, but not SMR delivery. Hyperscaler deals are staged: they fund development and reserve capacity, and they are written so the buyer can walk away if cost or schedule slips. Read the headline gigawatts as options, not orders.

FOR DATA CENTER BUILDERS

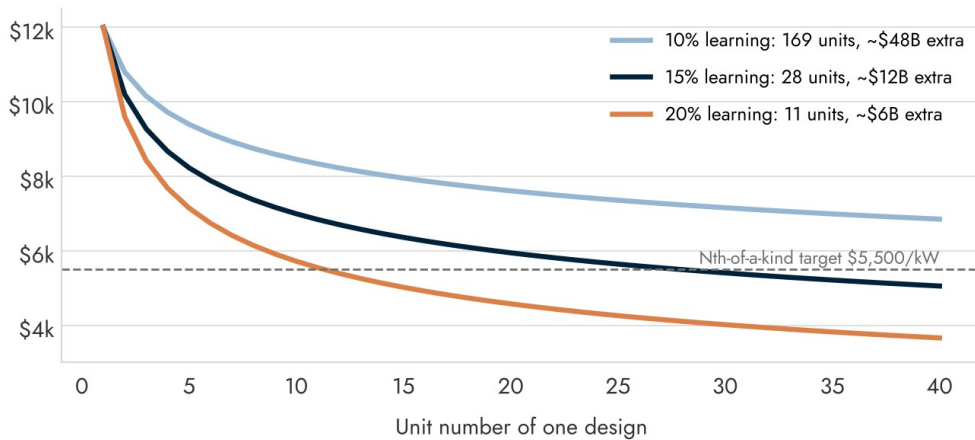
Existing nuclear is almost fully spoken for. The restarts (Palisades, Crane, Duane Arnold) and the largest co-location deals are signed. If you need firm, low-carbon power before 2030, the nuclear option is mostly gone; plan on SMR power from about 2031 at the earliest, and only if you help fund it.

Trend 2. The order book, not the technology, is the binding constraint

Every manufactured product gets cheaper the more of it you build. For SMRs the problem is that the first units are expensive, and nobody wants to pay for unit one. Our companion paper, **The Order-Book Bottleneck**, sizes this "valley of death". From a first-of-a-kind cost of \$12,000/kW, a design learning at 20% per doubling reaches our \$5,500/kW Nth-of-a-kind target after about 11 units and \$6 billion of extra cost. At 15% it takes 28 units and \$12 billion. At 10% it takes 169 units and \$48 billion, which no order book will fund.

The learning rate decides whether the valley is fundable

Overnight cost per kW by unit number, 300 MWe units, from \$12,000/kW



Source: GO-IBR.com Research, The Order-Book Bottleneck (October 2026). Excludes financing; illustrative.

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Figure 4. The learning rate decides whether the first-of-a-kind valley is fundable. Assumes 300 MWe units and excludes financing.

The designs pulling ahead are the ones with real order books. **GE Vernova Hitachi's BWRX-300** has four units approved in principle at Darlington (C\$20.9 billion), a construction permit at TVA's Clinch River, and selections in Poland, Sweden, Saskatchewan and elsewhere. OPG expects Units 2 to 4 to cost about C\$5 billion each, falling toward C\$4 billion, against C\$6.1 billion for Unit 1. If that holds, it is the first hard evidence of SMR learning in the West. **Rolls-Royce SMR** signed for three units at Wylfa in April 2026, has early works at Temelín in Czechia, and was selected in June 2026 for three units in Sweden: about nine units across three countries, not all yet binding.

Contractor risk is part of the order-book story. In September 2026 Bechtel and TerraPower decided to "move forward separately" on the Kemmerer construction contract; TerraPower is rebidding it and says its 2030 completion target stands. Hyundai E&C, meanwhile, has agreed to build up to eight future Sodium plants with performance guarantees, a sign that some contractors will share risk if the order book is long enough.

Our assessment: A design without a ten-unit order book in sight is a science project, however good its engineering. Investors should value SMR developers on binding, multi-unit commitments, not on design maturity alone.

PART 2: FUEL, SITES AND MONEY

Trend 3. Fuel: HALEU is the quiet chokepoint

Most advanced, non-light-water reactors need high-assay low-enriched uranium (HALEU), enriched to between 5% and 20%. The NEA's SMR Dashboard found that 30 of the 74 designs it analyzed need HALEU, and 47 rely on fuel that is not yet commercially available. Russia was the only commercial seller, and US imports of Russian enriched uranium are banned, with waivers ending on 1 January 2028.

Fuel is the quiet chokepoint

HALEU: DOE's estimated need by 2030 vs. US output so far, metric tons



NEA: 30 of 74 designs analyzed need HALEU; 47 use fuel not yet commercially available.

Sources: US DOE (2021 estimate, >40 t by 2030); Centrus Energy (>1.9 t cumulative from Piketon demo, mid-2026); NEA SMR Dashboard (2025).

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Figure 5. HALEU need versus supply. The DOE estimate dates from 2021; demand will track how many advanced reactors actually reach construction.

Supply is building but late. Centrus Energy has produced more than 1.9 tonnes of HALEU from its demonstration cascade in Piketon, Ohio, and in July 2026 finalized a \$900 million DOE task order (up to \$1.07 billion with options). Its first new commercial capacity is not expected before 2029. General Matter filed an NRC license application for an enrichment plant at Paducah in September 2026. TerraPower's Kemmerer schedule already slipped from 2028 to 2030 because Russian fuel was no longer an option.

The fuel question splits the industry in two. The table below, adapted from the research literature, shows why.

Feature	Generation III+ (water-cooled SMRs)	Generation IV (advanced coolants)
Examples	BWRX-300, Rolls-Royce SMR, NuScale, Holtec SMR-300	TerraPower Natrium, X-energy Xe-100, Kairos, Oklo
Fuel	Standard low-enriched uranium, available today	Mostly HALEU or TRISO, supply chain still being built
Main application	Grid power and data center supply	Grid power plus high-temperature industrial heat
Key bottleneck	First-of-a-kind capital cost	Fuel supply and non-standard waste streams
Timing advantage	Earlier: proven fuel, familiar licensing	Later, but higher temperatures widen the market

Table 2. Two SMR generations, two timetables. Adapted from academic and industry reviews; GO-IBR.com Research classification.

Our assessment: Through 2032, fuel favors light-water SMRs. Advanced designs with secured HALEU (TerraPower, X-energy, Kairos and Oklo all have supply agreements in place) are investable; designs without a named fuel source should be discounted. Recycling, as newcleo proposes with mixed-oxide fuel, is a 2030s answer, not a 2020s one.

Trend 4. Brownfield and coal sites are the fastest route

Look at where the permitted projects are. Kemmerer sits next to a retiring coal plant. Romania's Doicești project replaces a coal station. Palisades, Darlington, Clinch River and Wylfa are existing or former nuclear sites. AEP's proposed Indiana Xe-100 plant is near the former Breed Generating Station. These sites bring grid connections, cooling water, a skilled workforce and, often, a community that already knows what a power station is.

Policy reinforces the pattern. The US One Big Beautiful Bill Act (July 2025) kept full investment and production credits for new nuclear and added a 10% bonus for advanced nuclear in nuclear energy communities. Our paid paper **Coal-to-Nuclear** quantifies the savings from reusing coal-site infrastructure.

FOR DATA CENTER BUILDERS

The best SMR sites for data centers are the same brownfield sites, because the transmission is already there. Watch utilities that own retiring coal plants near your target load; they are the natural partners for a "bridge gas now, SMR later" campus.

Trend 5. Money is moving from MOUs to binding contracts, slowly

A memorandum of understanding is a press release with signatures. What matters is binding money: equity, deposits, a final investment decision (FID), an engineering, procurement and construction (EPC) contract with guarantees, or a government backstop. On that test, the picture is mixed.

Project	What has been signed	Binding?
Darlington 1 (Ontario)	FID May 2025; C\$7.7B released; basemat placed April 2026	Yes
Wylfa (UK)	Contract with Great British Energy - Nuclear for 3 units, April 2026; FID expected 2029	Partly
Temelín (Czechia)	Rolls-Royce SMR early works contract with ČEZ, April 2026	Partly
Clinch River (US)	NRC construction permit 29 September 2026; DOE award up to \$400M	Partly; no FID
Doicești (Romania)	Conditional FID February 2026; pre-EPC waits on risk-sharing and module-purchase terms	Conditional
TVA-ENTRA1 (US, 6 GW)	Collaborative agreement September 2025; definitive PPA still under discussion	No
Meta-TerraPower / Oklo	Development funding and capacity rights	Partly

Table 3. From announced to binding: selected SMR commitments as of 20 October 2026.

Governments are filling the gap. Sweden's state will hold a majority in Videberg Kraft; the UK pairs a state developer with National Wealth Fund lending; the US Department of Energy awarded up to \$400 million each to TVA and Holtec in December 2025. The missing piece in the US is cost-overrun insurance. The bipartisan ARC Act (S. 3814), introduced by Senators Risch and Gallego on 10 February 2026, would add such protections, but we find no committee action since introduction.

Our assessment: Count binding money, not announced gigawatts. A federal cost-overrun backstop would do more to unlock US SMR orders than any further licensing reform, and its absence is the main reason the US leads in designs but trails Canada and the UK in binding first units.

PART 3: RULES, COST AND SUSTAINABILITY

Trend 6. Regulators are no longer the bottleneck

For decades, licensing was the reason new nuclear took so long. That is changing fast in North America and the UK.

- **US NRC:** construction permits for TerraPower's Kemmerer (4 March 2026, under two years after the application was docketed) and TVA's Clinch River BWRX-300 (29 September 2026). Dow and X-energy's Long Mott project at Seadrift received an environmental finding of no significant impact in May 2026, with a permit decision expected in the first half of 2027.
- **New rules:** the NRC's risk-informed, technology-inclusive Part 53 took effect on 29 April 2026, alongside the ADVANCE Act (2024) and an executive order setting 18-month maximum decision times.
- **DOE pilot program:** four test reactors reached zero-power criticality by 4 July 2026. These are experiments, not power plants, but they show the federal system can move quickly.
- **UK and Canada:** Rolls-Royce SMR's Generic Design Assessment is in its final step, due to conclude around December 2026, and the design received regulatory justification in March 2026. Canada licensed Darlington construction in April 2025.

Not every timetable has held. China's Linglong One (ACP100), the world's first land-based commercial SMR, missed its first-half 2026 target; trackers show hot functional testing since March 2026 but no fuel load as of mid-September, with commercial operation now expected in 2027*. We found no public confirmation, as of 20 October 2026, that Radiant's Kaleidos microreactor has started its planned DOME tests at Idaho National Laboratory, which were targeted for the third quarter*.

Our assessment: Regulatory risk has largely moved to construction and financing risk. Investors should stop pricing licensing delay as the main SMR risk in the US, UK and Canada, and start pricing construction execution.

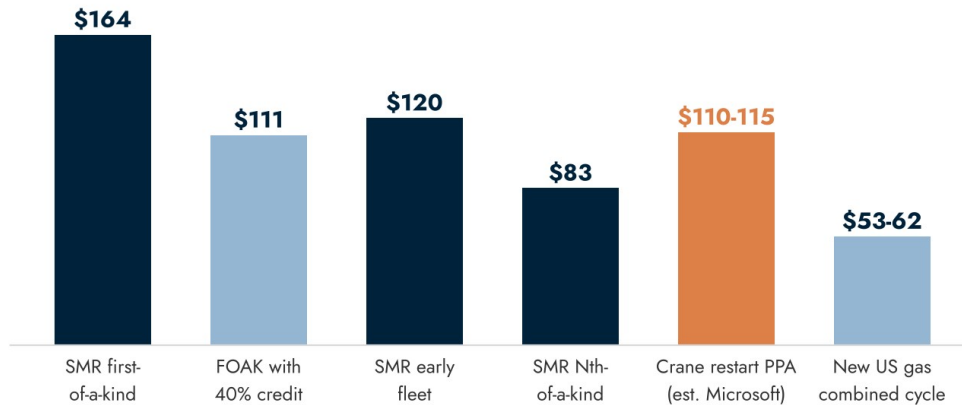
Trend 7. Cost: watching for the curve to bend

Cost is the trend we are least sure of, because no Western grid-scale SMR has yet been finished. Our levelized cost model (7% weighted average cost of capital, unsubsidized, 2026 dollars) gives \$164/MWh for a first-of-a-kind plant, \$120 for an early fleet and \$83 at Nth-of-a-kind. New US gas combined-cycle power costs about \$53 to \$62/MWh, although gas plant construction costs rose

about 66% between 2023 and 2025 according to BNEF, and turbine delivery slots now run to 2031.

The price gap is closing from the buyer's side

Unsubsidized SMR cost at 7% WACC vs. what buyers already pay, \$/MWh



Sources: GO-IBR.com Research LCOE model (2026 \$); Jefferies estimate for Crane PPA (analyst estimate, terms undisclosed); Lazard LCOE+ 2026; EIA/BNEF gas costs.

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Figure 6. SMR cost versus what buyers already pay. The Crane figure is an analyst estimate; contract terms are not public.

The important change is on the buyer side. Jefferies estimated that Microsoft agreed to pay \$110 to \$115/MWh for power from the restarted Crane plant (Three Mile Island Unit 1). That is close to our early-fleet cost, and with a 40% US investment credit even a first-of-a-kind SMR falls to about \$111/MWh. In 2023, the UAMPS project with NuScale was canceled when its target price rose to \$89/MWh. Three years later, the buyers that matter are paying more than that for firm nuclear power.

SIGNPOSTS THAT THE CURVE IS BENDING

Signpost	What we see now	What would confirm learning
Darlington Units 2-4	OPG estimates about C\$5B each, falling toward C\$4B*, vs. C\$6.1B for Unit 1	Contracts signed at or below those levels by 2028
Darlington Unit 1	Budget implies about C\$20,000/kW including financing (about US\$14,800/kW)	Grid connection by end-2030 within budget
Kemmerer EPC rebid	\$4B project (about \$11,600/kW incl. storage); new EPC not yet named	Fixed or target-price EPC with guarantees
Doicești	Reported up to about \$7B for 462 MWe (about \$15,000/kW)*	Pre-EPC price that falls, not rises

Table 4. Cost signposts. Conversions approximate (C\$1 = US\$0.73). Project costs are as reported and are not like-for-like.

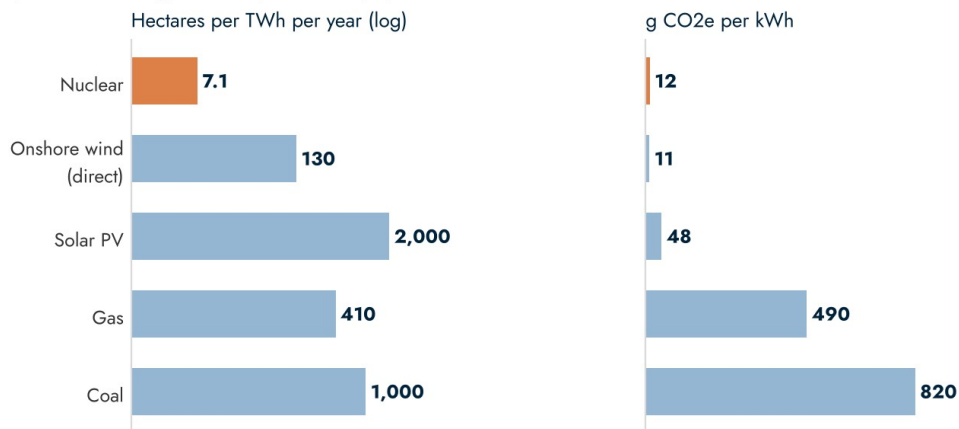
Our assessment: The cost gap is real but narrowing from the demand side faster than from the supply side. The decisive evidence will be Darlington Units 2 to 4 contract prices; until then, treat any Nth-of-a-kind cost claim below \$90/MWh as aspirational.

Trend 8. Land, carbon and waste: the sustainability case

The environmental case for SMRs is stronger than the cost case. Nuclear has the smallest land footprint of any major source: a median of about 7.1 hectares per terawatt-hour per year, against about 2,000 for ground-mounted solar and about 130 for onshore wind turbines themselves (about 12,000 including turbine spacing), according to Lovering and colleagues in PLOS ONE (2022). Lifecycle emissions are a median of about 12 g CO₂e/kWh in the IPCC's assessment, similar to wind; a 2021 UNECE study put nuclear at about 5 to 6 g*, the lowest of any source.

The sustainability case is stronger than the cost case

Land per unit of energy and lifecycle carbon, by source



Sources: Lovering et al., PLOS ONE (2022), median land-use intensity; IPCC AR5 WGIII Annex III lifecycle medians.

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Figure 7. Land and lifecycle carbon by source. Land is shown on a logarithmic scale.

Two caveats keep this from being a clean win. First, many advanced designs produce non-standard waste, such as TRISO pebbles and irradiated salts, that existing disposal plans were not designed for; the NEA's Radioactive Waste Management Committee flagged "extended timelines for back-end management" in 2025. Second, siting SMRs close to cities and industry raises fairness questions. Kojo and colleagues (Politics and Governance, September 2026) show from Finnish cities that SMR promises must be both legitimate and credible to win local consent.

FOR DATA CENTER BUILDERS

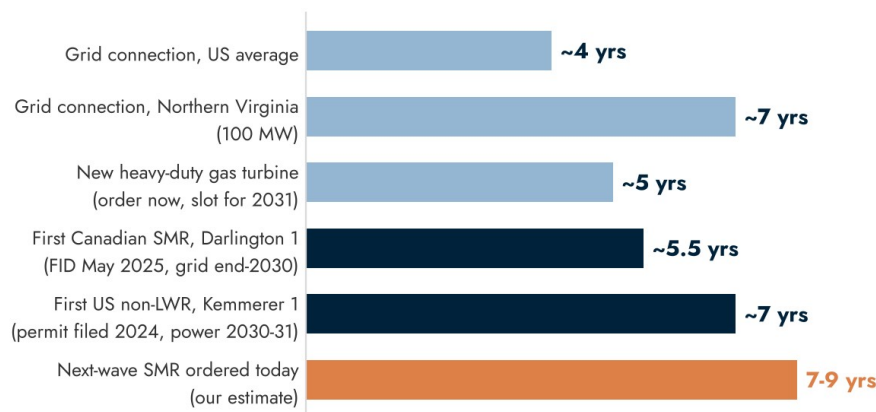
For buyers with 24/7 carbon-free energy targets, nuclear is one of very few sources that match load every hour. That is why hyperscalers pay a premium for it, and why a small land footprint matters for campuses that want generation inside the fence.

WHAT THIS MEANS FOR DATA CENTER BUILDERS

If you are building AI or cloud capacity, your binding constraint is not chips or buildings. It is power. JLL's 2026 outlook puts the average US grid connection for a large load at about four years, and about seven years for a 100 MW connection in Northern Virginia. Large transformers take two to four years. GE Vernova's gas turbine backlog reached 116 GW in mid-2026, and it is now booking slots for 2031.

For a data center, every route to firm power is slow

Years from decision to power, typical or reported (October 2026)



Sources: JLL 2026 Global Data Center Outlook (grid); GE Vernova Q2 2026 (turbine slots for 2031); OPG; NRC; TerraPower. GO-IBR.com Research analysis.

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Figure 8. Years from decision to power for each route. SMRs are not slower than the alternatives; they are just as slow, and more expensive at first.

A realistic firm-power timeline

Window	Realistic firm-power options	Indicative cost
2026 to 2029	Grid where available; on-site gas engines and aeroderivative turbines; batteries for ride-through	Market price plus on-site premium
2028 to 2031	New combined-cycle gas (if you hold a turbine slot); remaining existing-nuclear PPAs, now scarce	About \$55-65/MWh gas; about \$110-115 nuclear
2030 to 2035	First SMR units at Darlington, Kemmerer, Clinch River, Hermes 2 and Palisades, if schedules hold	About \$110-165/MWh first units
After 2035	Fleet SMRs, if order books form and learning shows up	About \$80-120/MWh

Table 5. Firm power for a new data center campus by delivery window. GO-IBR.com Research assessment; costs are levelized and unsubsidized.

The arithmetic of the premium is simple. A 100 MW campus running at 95% load uses about 830 GWh a year. Paying \$164/MWh instead of \$60 costs about \$86 million a year more. For a campus whose compute earns far more than that, a premium is acceptable. Waiting four years for grid power is not.

Grid rules for co-location are now clearer

On 18 June 2026, FERC accepted in part PJM's framework for co-located and behind-the-meter loads, requiring new firm and non-firm transmission services and penalties for loads that draw more than they reserve. PJM proposed starting on 1 June 2029, and FERC asked for more support for that date. The direction is clear: plugging a data center into a power plant is allowed, but the data center will pay for the grid services it uses.

Large-load tariffs are raising the cost of a place in the queue

Utilities and regulators are rewriting tariffs so that data centers, not households, pay for the grid built to serve them. In the US, large-load tariffs increasingly put data centers in their own customer class, require ten-year-plus contracts with minimum monthly charges, and make the customer pay for the substations and lines it needs. In Great Britain, Ofgem consulted from 29 July to 16 September 2026 on a refundable Data Center Commitment Fee of 2.5% to 7.5% of typical build cost, about £237,500 to £712,500 per MW, held from acceptance of a connection offer until energization and forfeited if the project drops out. Some tariffs also offer cheaper rates to sites that agree to curtail load or run on-site batteries at times of grid stress.

Our assessment: Holding grid capacity now costs real money, which changes the comparison with on-site generation. A developer that has to post security and sign a ten-year minimum bill for grid power should price an SMR option against that, not against a cheap tariff that no longer exists.

Europe: bring your own power

Europe's main data center hubs have gone further than the US in making data centers supply or match their own power. For developers with European projects, these rules make on-site generation, and eventually SMRs, part of the connection application itself.

Market	Rule (as of October 2026)	What it means
Ireland	Data centers used 23% of metered electricity in 2025 (CSO). The CRU decision of 12 December 2025 requires new data centers to provide generation or storage, on site or nearby, matching their maximum import capacity, operating in the wholesale market, and to match at least 80% of annual demand with new renewables in Ireland over six years	Connection depends on bringing firm capacity and new renewables
Germany	Energy Efficiency Act: 50% renewable electricity from 2024 and 100% from 2027; new sites from July 2026 must reuse at least 10% of waste heat, rising to 20% from July 2028	Low-carbon firm supply and heat reuse become design requirements
Netherlands	National rules restrict new hyperscale sites (over 10 hectares or 70 MW) outside a few locations in Het Hogeland and Hollands Kroon; Amsterdam's draft plan caps total data center connection capacity at 350 MVA until 2030	Large campuses move away from the core hubs
France	A nuclear-heavy grid with comparatively spare capacity has made the Paris region a magnet for AI capacity*	Existing nuclear is the draw, as in the US

Table 6. European data center connection rules. Sources: CRU; CSO via The Irish Times; White & Case on the German Energy Efficiency Act; DC Byte. Summaries are ours; check the current rules before relying on them.

FOR DATA CENTER BUILDERS

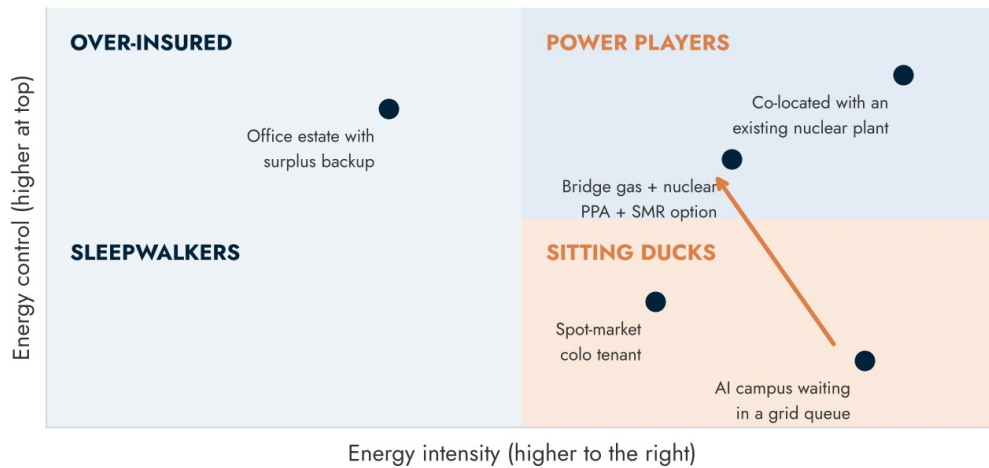
Ireland's rule is the clearest preview of where large-load policy is heading: the grid connects you only if you bring dispatchable capacity of your own. Today that means gas engines and batteries. Within a decade, a small reactor on or near the campus could be how developers meet the same test with zero-carbon power.

Where are you on the Power Position Matrix?

Fas Mosleh's **Power Position Matrix**, the core framework of **Energy for Executives: Your Power Position**, plots energy intensity against energy control. Four positions result: Sleepwalkers, Sitting Ducks, Over-Insured and Power Players. Data center developers are, by definition, at the high-intensity end. The question is whether they are Sitting Ducks, waiting in a grid queue with no control over supply, or Power Players with contracted, firm supply. AI and electrification are pushing every company toward higher intensity, whether it acts or not.

Where data center builders sit on the Power Position Matrix

Energy intensity vs. energy control (framework from Energy for Executives: Your Power Position)



Framework: Fas Mosleh, Energy for Executives: Your Power Position. Placement of strategies is GO-IBR.com Research's illustration.

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Figure 9. Data center strategies placed on the Power Position Matrix. The move that matters is upward: from waiting in a queue to controlling supply.

Seven questions to ask any SMR developer before you sign

- Is the order binding? Who has put in equity or a deposit, and how much?
- What is the regulatory status: pre-application, docketed, permitted or licensed to operate?
- Is first-core and reload fuel contracted, and is it HALEU?
- Who is the EPC contractor, and does it give a fixed or target price with guarantees?
- What happens to your PPA if commercial operation slips by two or four years? Is there a delay remedy or a step-in right?
- Is the site a brownfield with an existing interconnection, or a greenfield that needs new transmission?
- Is the price indexed, capped or fixed, and who carries the first dollar of cost overrun?

FOR DATA CENTER BUILDERS

Our recommendation: treat SMRs as the third leg of a bridge strategy, not the first. Secure grid and on-site capacity for 2027 to 2030, take an equity-light option on SMR capacity for the early 2030s from a developer with a permitted brownfield site and contracted fuel, and write delay remedies into every agreement.

OUR CALLS: DATED AND CHECKABLE

We publish specific, dated calls so readers can hold us to account. Confidence levels are our subjective probabilities. We will report against them in future editions and correct ourselves in the open.

#	Call	Check by	Confidence
1	Darlington Unit 1 is the first Western grid-scale SMR to deliver power to the grid	Mid-2031	70%
2	Linglong One reaches first criticality	30 June 2027	70%
3	TVA and ENTRA1 do not sign a binding PPA for more than 1 GW	31 December 2027	60%
4	Kemmerer commercial operation slips beyond 2031	Announced by end-2028	55%
5	At least one hyperscaler commits construction capital (not only development funding) to a specific SMR unit	31 December 2027	60%
6	Western SMR capacity under construction reaches at least 2 GW	31 December 2028	55%
7	No federal SMR cost-overflow backstop (ARC Act or equivalent) is enacted	31 December 2027	65%
8	US commercial HALEU production stays below 10 tonnes a year	Through 2028	75%
9	About 4 GW of SMRs operating in North America and Europe (range 2 to 7 GW)	2035	50%

Table 7. GO-IBR.com Research SMR calls, made 20 October 2026.

What would change our mind

We would turn more optimistic if: (1) a single design wins ten or more binding orders backed by deposits; (2) Darlington Units 2 to 4 are contracted at or below C\$4 to 5 billion each; (3) a US federal overrun backstop is enacted; or (4) a hyperscaler takes construction risk on a specific unit. We would turn more pessimistic if: (1) any first-of-a-kind Western SMR overruns its budget by more than 50%; (2) HALEU capacity slips beyond 2030; (3) AI data center spending is cut sharply; or (4) gas turbine supply eases enough to make new gas available within two years.

Watch list: fast-moving items

These items were re-checked on 20 October 2026. Each could move within weeks; check the latest position before relying on it.

Item	Status as of 20 October 2026	What to watch
TVA-ENTRA1 (NuScale)	Non-binding 6 GW framework (September 2025); NuScale reported on 5 August 2026 that talks toward a definitive PPA continue	A signed PPA and its size
Kemmerer EPC	Bechtel exit announced 22 September 2026; contract being rebid; no replacement named by mid-October; 2030 target kept	New EPC, price and terms
Linglong One	Hot functional testing since March 2026; no fuel load reported as of mid-September; COD now expected 2027*	Fuel load and criticality
Seadrift (Long Mott)	Permit application docketed May 2025; environmental assessment with no significant impact May 2026	NRC permit, expected H1 2027
ARC Act (S. 3814)	Introduced 10 February 2026; no further action recorded	Committee markup
Radiant Kaleidos	Shipped to INL DOME in August 2026, fuel delivered; tests targeted for Q3 2026; no criticality confirmed publicly*	First criticality and full-power run
Doicești	Conditional FID February 2026; shareholders rejected a review of alternatives on 15 July 2026; pre-EPC waits on conditions	Framework agreement and pre-EPC start
Clinch River	NRC construction permit issued 29 September 2026	TVA FID and cost estimate

Table 8. Watch list. Sources are listed at the end of this paper.

THE BOTTOM LINE

The SMR market has crossed one line and not yet the next. Demand is real, regulators are moving, and the first plants are being built. But announced capacity outnumbers capacity under construction by about 80 to 1, fuel for advanced designs is scarce, and no Western grid-scale SMR has yet proved its cost. The winners over the next five years will be the designs with binding multi-unit order books, secure fuel and brownfield sites, and the buyers who lock in options now while writing protection against delay into every contract.

For data center builders, the lesson is to plan in layers: grid and gas for this decade, nuclear options for the next. For investors, it is to count binding money, not gigawatts. The memorable line is the one on our cover: **demand is solved; delivery is not.**

Further reading

FROM THE GO-IBR SMR SERIES (GO-IBR.COM)

- **Understanding Small Modular Reactors** (free primer, 27 pages): how reactors work, fuel, safety, waste and land use.
- **The Order-Book Bottleneck** (free white paper): sizing the first-of-a-kind valley and five ways to cross it.
- **SMRs: Market Guide** (paid, 69 pages): the full contracts ledger, cost model and company profiles.
- **SMR Data Center Co-location** and **Coal-to-Nuclear** (paid): the economics of putting SMRs next to data centers and on coal sites.

ENERGY FOR EXECUTIVES, BY FAS MOSLEH

- **Energy for Executives: Your Power Position** (condensed field guide for CXOs, boards and investors): <https://lnkd.in/eGWWh5Gx>
- **Energy for Executives: the complete guide**, for readers who want to go deeper: <https://lnkd.in/exfKp24k>

For more analysis, please contact us.

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CITATIONS AND DATA

* An asterisk marks information that was being verified at the time of writing but is not 100% certain: the UNECE carbon figure (checked only through secondary reporting), the Linglong One and Kaleidos schedules, OPG's cost estimates for Darlington Units 2 to 4, the reported Doicești cost, and our characterization of the Paris market.

Figures marked as estimates are ours or a named third party's. Company figures (pipelines, costs, schedules) are self-reported and labeled as such. The Jefferies Crane price is an analyst estimate; the contract terms are not public. The Lucid Catalyst study for Urenco and the IDTechEx market forecast (\$53.8 billion SMR market by 2036) come from interested or commercial parties and are not used in our numbers. Research-literature summaries were checked against the original publication pages where available.

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