Kerrisdale Capital

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Oklo Inc. (OKLO)

Fission Impossible

We are short shares of Oklo Inc., a $3bn nuclear energy company that went public via SPAC six months ago – with no regulator-approved design, no revenue for years, and no proven commercial viability for its planned 15-50 MWe microreactors. A story stock which has seen shares rocket 300% amid retail interest for all things nuclear, Oklo faces massive technical and financial challenges in its quest to become the owner-operator of hundreds of nuclear "powerhouses." In classic SPAC fashion, Oklo has sold the market on inflated unit economics while grossly underestimating the time and capital it will take to commercialize its product. Following a disappointing 3Q business update which saw its stock price collapse 24%, shares have foolishly rebounded on the recent nomination of Chris Wright, an oil services CEO and Oklo board member, for Energy Secretary despite the potential appointment providing little substantive change to Oklo's fundamental outlook.

Virtually every aspect of Oklo's investment case warrants skepticism. Oklo does not currently have regulatory approval from the Nuclear Regulatory Commission (NRC) to build its reactor. Oklo is currently working to submit a license application in 2025, with hopes of a first reactor deployment by late 2027. **A former NRC Commissioner we spoke with dismissed this saying "Oklo is a company that has a lot of hubris," the timeline is "beyond optimistic"** and "**it will probably take at least *4 years to obtain a license.*"** Oklo brags that it has a "leading market position" despite a former employee telling us that senior management is "a team of very inexperienced people" and the company has fewer than a quarter of the employees enjoyed by competitors who have partnered with Big Tech companies.

Oklo believes its small, liquid sodium-cooled reactors will be cheaper, easier to build, and safer than conventional nuclear plants – the same benefits touted by small, modular reactor (SMR) proponents for decades. We believe investors should be wary of unsubstantiated claims spouted by these "Nuclear Bros." Recent SMR projects have experienced dramatic cost escalation, Oklo does not have the long-term supply of enriched uranium fuel it needs (and won't well into the 2030s), and sodium-cooled reactors have well-documented reliability problems.

The lack of commercial fuel supply has not kept Oklo from using outlandish fuel cost assumptions in its unit economics forecasts. Though billed as "for illustrative purposes only," these unit economics are nevertheless used by Street analysts in their formulation of ~$10 price targets (55% below current). Based on a range of expert interviews (and confirmed by a former Oklo employee), **the fuel cost assumption which underpins Oklo projections is lowballed by a factor of *5x*.** If one assumes more realistic costs, the revised overnight capital costs, levelized cost of energy, and cash returns of Oklo's powerhouse reveal a reactor which is not commercially viable. As one industry participant explained, **"If they put real numbers of today in there, this program would be over."**

Not satisfied with merely selling designs of its reactor, Oklo ambitiously wants to build and operate them as well (despite zero experience doing either). One Street analyst estimates *$2.7bn* in additional capital over five years would be needed to execute Oklo's deployment plans. After a parabolic rise in Oklo's share price, we see the risk of new share issuance as significant. As setbacks to overpromised timelines and costs give way to the all-too-predictable need to raise dilutive capital, the unsustainable energy in Oklo's stock will fizzle out.

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Executive Summary

Regulatory approval and deployment timelines are unrealistic. Oklo currently aims to submit a commercial license application in 2025 and deploy its first reactor by late 2027. According to a former NRC Commissioner we interviewed however, it will take at least *4 years* for a commercial license to be granted and Oklo's expectation of a first reactor by 2027 is "beyond optimistic." The recent nomination of oil services company CEO and Oklo board member, Chris Wright as the next Energy Secretary does not change this timeframe (nor any of Oklo's myriad other commercialization challenges). According to Oklo, the nuclear sector already has "overwhelming" bi-partisan government support and the company enjoys a close relationship with the Department of Energy (DOE), an agency which has awarded billions in support of SMRs for decades. Based on numerous conversations with industry experts, regardless of who heads the DOE (a revolving door position few hold over 2-3 years), Oklo suffers from a fundamental lack of design readiness and remains a very tough sell at the NRC.

Oklo's promoted unit economics are not credible. Based on our research, we believe Oklo's assumed fuel cost of $7,000 / kg for high-assay low-enriched uranium (HALEU) is lowballed by a factor of 5x – a massive red flag. We believe this was done because if more near-term realistic fuel cost assumptions were used, Oklo's capital costs would rise far beyond what was promoted in its SPAC presentation and investors would rightfully question the project's commercial viability. Rather than deliver commercially competitive power, we believe Oklo will endure the fate of other SMR projects and watch costs skyrocket above initial estimates.

"Nuclear bros" management team lacks experience and resources. Oklo's senior management have largely academic backgrounds and lack proven nuclear industry experience. This has resulted in significant underestimation of what is necessary to bring the company through the regulatory process to full commercialization. A former employee described the company as a "a team of very inexperienced people, who haven't seen a real product, and don't understand the real world." Oklo has a fraction of the team and resources of SMR competitors which have recently won agreements with Big Tech. While management describes itself as market leading, the former NRC Commissioner characterized Oklo as "back of the pack" and unremarkable "besides a bunch of hubris."

Liquid sodium-cooled reactors have serious reliability problems. Oklo promotes the "inherent" safety of its liquid sodium-cooled design but is not as forthcoming about the technology's history of leaks and fires. Sodium reacts violently with water and burns if exposed to air, resulting in complex safety, maintenance, and reliability issues. A large fraction of liquid sodium-cooled reactors that have been built have been shut down for long periods by fires caused by sodium leaks. Industry experts we spoke with advised there was no reason to assume Oklo's experience would be any different.

Massive amounts of additional capital required to fund rollout. Oklo plans to be the designer, builder, owner, and operator of its power plants, not just sell reactor designs. Citi Research estimated capex requirements of *$2.7bn* to support Oklo's capital intensive business model. After a parabolic rise in share price, we view the risk of a dilutive capital raise as extremely high.

SMRs will not be a major power source for AI data centers. Data centers are generally *not* in the business of experimenting with technologies which lack mature operational records. The vast majority of data centers will not be powered by carbon-free baseload energy, and despite recent hype, SMRs will only play a niche role (at best) in meeting that demand. Due to execution uncertainty, Morgan Stanley estimates only *1%-3%* of all incremental US data center power capacity (~2-5 GWe) through 2035 will be provided by SMRs. OKLO investors are buying into a story driven by current power bottlenecks while ignoring how inadequate unproven SMRs are for solving the problem for another decade plus (by which time access to power and data center power efficiency will likely be improved).

Company Overview

Capitalization and Financial Summary

$ Millions, Balances as of Sept. 30, 2024	
OKLO share price	$22.00
Fully diluted shares [1]	147
Market capitalization	**$3,239**
Cash and marketable securities	288
Debt	-
Total enterprise value	**$2,951**

Financial Summary ($ mm)					
Fiscal year end Dec 31,	**2024E**	**2025E**	**2026E**	**2027E**	**2028E**
Total revenue	$0	$0	$0	$0	$0
Research & development	22	32	35	36	38
General & administrative	22	32	34	36	37
Opex	44	64	69	72	75
Operating income (loss)	(44)	(64)	(69)	(72)	(75)
Capex	(1)	(1)	(1)	(3)	(10)
Free cash flow (FCF)	(45)	(64)	(69)	(75)	(85)

Source: Kerrisdale analysis, Oklo SEC filings.

1. *122m Class A common shares outstanding, plus 14.7m Earnout Shares subject to Triggering Events, and 10.4m shares issuable in connection with legacy Oklo employee options (F-15)*

Founded in 2013 and headquartered in Santa Clara, California, Oklo is a pre-revenue nuclear energy company trying to commercialize small-scale, advanced (non-water-cooled) fission power plants it calls "powerhouses." Named "Aurora," Oklo's reactors are currently being developed in two main configurations, 15 MWe and 50 MWe, with a 100+ MWe reactor in early-design phase (see: Appendix I for design features). At 15-50 MWe, ~20-100x times smaller than ~1 GWe+ conventional nuclear plant, Oklo's reactors are technically microreactors, occupying the lower output end of nuclear reactor technologies known as small, modular reactors (SMRs).

SMRs encompass a wide range of designs, use cases, and fuel types but are broadly defined as reactors having capacity up to 300 MWe which can be fabricated/assembled in a factory before being deployed in modular fashion at the plant site. The basic idea of small nuclear reactors is not new, dating as far back as the 1940s, and their track record has been mixed. Early demonstrations and experiments largely failed due to a combination of construction delays, poor unit economics, and spotty reliability. Nevertheless, interest in the technology's long promised but commercially unproven benefits of simpler, cheaper, safer energy remain. Oklo believes its powerhouses are an ideal fit in decentralized grid use cases for data centers, national defense, industrial customers, and remote sites.

Oklo came public via SPAC earlier this year (see: Appendix II for further background on the transaction). As of 3Q24, Oklo had $288m in cash and marketable securities and has guided to $35-45m in negative cash flow in 2024. Going forward, we project this cash burn will grow increasingly negative as Oklo ramps up R&D efforts while remaining pre-revenue for years.

Oklo is one of the few publicly traded SMR pure plays (for now), but lacks best in class resources and we believe it is falling behind in a crowded field. As of June, Oklo had 88 employees (p.29). For reference, advanced reactor (AR) peers Kairos Power and X-energy which recently won high-profile agreements from Google and AWS, respectively, each have over 450 employees (which is perhaps why no update to the employee count was provided in the 3Q company presentation). According to a Kairos Power executive we interviewed, even with over 450 employees their company barely keeps up with the amount of work across dozens of engineering and technical disciplines needed to commercialize its reactor design. Oklo is currently one of 20 light-water and advanced SMR projects engaged in pre-application activities with the NRC (see: Appendix III for a summary). The OECD Nuclear Energy Agency currently tracks 56 SMR designers and companies worldwide in various stages of development.

NRC Approval and Deployment Timelines Likely to Slip (Further)

Commercial deployment of any advanced fission power plant requires regulatory approval from the NRC for design, construction, and operation. Oklo does not presently have the necessary regulatory approvals from the NRC to build its first reactor. In 2022, in a high profile, virtually unprecedented fashion, Oklo's combined (design, construction, and operation) license application (COLA) for a 1.5 MWe microreactor at Idaho National Laboratory (INL) was denied by the Commission. Following the decision, Oklo's COO said the news was as much "a surprise to us as anyone else", but a former NRC commissioner interviewed said it was the worst "flame out" the commissioner had ever seen. A former Oklo employee we spoke with said the company knew it was taking the risk of damaging its credibility with regulators by not responding to repeated requests for information and submitting analyses that were incomplete.

Oklo is currently in plans to submit a revised COLA in 2025 for a 15 MWe reactor at the INL site and targeting "late 2027" for the first deployment of its Aurora powerhouse (i.e., within two years after submitting its application to the NRC). Late 2027 is a slight delay from deployment in "2026 or 2027" as originally communicated in Oklo's S-4, and 4 years after initial plans to have its first reactor operating "around 2023." Late 2027 is an exceptionally aggressive target.

According to the former NRC Commissioner, "***The 2027 timeline is beyond optimistic***…**it's not credible**. ***It will probably take at least 4 years* for a license to be granted**…especially with Oklo's record of not answering any questions." [emphasis added]. Executives in the nuclear industry generally agree that SMRs won't begin commercialization until the 2030s. Oklo's SPAC presentation contemplates a rapid ramp to ~35-100+ units deployed ~6 years following initial deployment. Citi Research assumes 50 Aurora reactors (30 x 15 MWe units and 20 x 50 MWe units) will be deployed cumulatively between now and 2031. None of the industry participants we spoke with during our research found that forecast to be realistic. Despite recent press releases regarding Department of Energy and INL approvals for site characterization activities acting as positive stock catalysts, we believe these milestones were met as expected given the extensive history of environmental reviews and permitting on INL land and do nothing to change the ultimate timing of approval from the NRC.

Oklo has stated its combined license strategy significantly reduces the timeline for NRC approval, which the former NRC Commissioner advised *might* be true if Oklo had industry leading resources, highly experienced management, and a pristine regulatory track record – but it does not. As a former Oklo employee admitted, "Unfortunately, advanced nuclear has a bad track record of putting out projections of when they think they're going to deploy a reactor versus when they actually do."

As an implicit acknowledgement of the tightness of Oklo's deployment schedule, Citi included in its September note that "Oklo is also assessing how much of the reactor site can be constructed *before the permit is issued* to ensure a first deployment in 2027" [emphasis added]. Beginning construction prior to permit issuance raised concerns among the experts with whom we consulted. Only non-nuclear elements of construction can reasonably begin prior to final approval and proceeding with construction activities before NRC sign-off invites the costly risk of having to redo work if regulators require design changes. In light of the potential risks to Oklo's regulatory approval and first deployment timeline, Citi lowered its price target from $11.00 to $10.00 (-55% below current).

Business Model Requires Billions in Additional Capital

In contrast to traditional nuclear power developers and some advanced fission peers (i.e., NuScale) which typically focus on securing reactor design certifications before selling/licensing the design to a utility which owns and operates the plant, Oklo plans to be the integrated designer, builder, owner, and operator of its powerhouses. Oklo then plans to sell energy to customers via power purchase agreements (PPAs). Oklo also has plans to develop commercial-scale recycling of existing nuclear fuel waste, but this is a longer-term objective which would not be operational until the 2030s.

To finance the considerable capital needs associated with its business model, Oklo plans to use a mixture of new shareholder equity (20-35%), tax equity (a form of project finance common in carbon-free energy), and commercial project debt. Citi Research estimates capex requirements of ***$4.6 billion*** ($2.7bn net of internally generated cash) in the five years following initial reactor deployment to support Oklo's targeted rollout.

Not only is Oklo's cash level insufficient to fund its long-term capital requirements, as typical for a pre-revenue SPAC in a capital-intensive industry, we believe Oklo lacks sufficient cash to complete its first project. Given the sharp increase in Oklo's stock long before any demonstrated commercial success, we see the risk of a dilutive capital raise as significant.

Lack of Long-Term Fuel Supply

The majority of the world's conventional nuclear reactors (and all of the commercial nuclear reactors in the US) are light water cooled reactors fueled by <5% enriched uranium. They generally produce ~1 GWe or more of electricity and require substantial physical footprints (500+ acres). Oklo's much smaller powerhouse will not be fueled by <5% enriched Uranium 235, but rather 5-20% high-assay low-enriched Uranium (HALEU) – a fuel for which there is extremely limited domestic commercial supply.

Oklo's initial 15 MWe Aurora powerhouse will be fueled by 5,000 kg of recovered fuel awarded to the company by INL in 2019. Oklo does not have any access to HALEU beyond this initial award. While the US government has announced billions to develop domestic HALEU, nuclear supply experts believe it will be well into the 2030s before commercial availability improves. In a recent consultant network hosted conference call, a senior executive at another SMR developer stated, "Any fuel producer which says they can have fuel available before 2030 is more of a wishful thinking than anything else, even if the US speeds up that process." Lack of HALEU has already resulted in TerraPower, an advanced fission competitor backed by Bill Gates, to delay the start of its Kemmerer Unit 1 by at least two years from 2028 to 2030. This lack of identifiable long-term fuel supply or observable market-based price for HALEU has not kept Oklo from making what we believe to be wildly unrealistic assumptions for fuel costs in its "illustrative unit economics." More on this shortly.

Customer LOIs are Nothing to Bank On

Growth in Oklo's customer pipeline (now ~2.1 GW) led by data centers has generated investor excitement. SPACs often use attractive sounding "pipelines" to promote themselves (Hyzon Motors, Terran Orbital, Astra, AppHarvest, *et al*.). Investors should discount the significance of this "pipeline" as they are merely non-binding letters of interest (LOI) which contain targets for pricing, duration, and quantity of power but lack the commitments of an actual, finalized PPA. We have no doubt Oklo can find power-hungry data centers in the current environment willing to sign toothless LOIs on unproven economic terms. At a $3bn+ valuation however, the question for shareholders should be whether Oklo can deliver on promises or watch customers simply walk away (as what happened last year with NuScale). As explained by a knowledgeable source we interviewed, Kairos Power's PPA with Google caps Google's risk with multiple "off-ramps" if Kairos fails to deliver against the milestones baked into the agreement.

Even the timing of *when* LOIs translate into signed PPAs is extremely uncertain. Oklo's press releases announcing LOIs do not include start dates. For example, included in Oklo's pipeline is a non-binding LOI with Wyoming Hyperscale (now Prometheus Hyperscale) for 100 MW over 20 years for a planned 1 GW datacenter. As this interview with the datacenter's developers explains (timestamp: 18:50), only *after* abundant wind, solar and natural gas resources provides power for the first gigawatt of capacity and they exhaust *4,000 acres* of Wyoming ranch land, will they then potentially look to Oklo as an additional smaller footprint power source. In other words, Prometheus Hyperscale has nothing to lose by signing an LOI Oklo uses to promote itself, but it will not be paying Oklo for power anytime soon.

Recent Developments – Rising Nuclear Interest

Shares of Oklo have risen as much as 300% since mid-September, part of a broader rally in shares of companies with exposure to nuclear energy, including SMRs like NuScale, services and equipment providers like BWXT Technologies, power producers like Constellation Energy and Vistra, and uranium producers and enrichers like Cameco and Centrus. The rise in investor interest follows several high-profile announcements involving Big Tech and nuclear energy:

- March 4, 2024: Amazon Web Services acquires Talen Energy's 960 MW Cumulus data center campus next to the Susquehanna nuclear power station for $650m.
- September 20, 2024: Constellation signs PPA with Microsoft to power data centers requiring restart of Three Mile Island Unit 1.
- October 15, 2024: Google and privately held SMR developer Kairos Power announce Master Plant Development Agreement to deploy a fleet of advanced nuclear power projects totaling 500 MW by 2035. Under the agreement, Kairos Power will develop, construct, and operate a series of advanced reactor plants and sell energy, ancillary services, and environmental attributes to Google under PPAs.
- October 16, 2024: Amazon announces an agreement with Energy Northwest to fund initial feasibility phase of an SMR project. Under the agreement, Amazon will have the right to purchase electricity from the first project, which is expected to generate 320 MW with four Xe-100 80 MW SMRs from X-energy. X-energy also announced a Series C-1 financing round of $500m, anchored by Amazon. Separately, Amazon and Dominion Energy announce entering into a MOU to help advance potential SMR nuclear

development in Virginia.
- October 16, 2024: DOE announces $900m cost share funding program to support the initial domestic deployment of Gen III+ SMRs on a milestone payment basis. Note, Gen III+ SMRs are reactors that use light water coolant and low-enriched uranium (thus making Oklo ineligible).

Lock-Up Expiry and Earnout Shares Increase Tradeable Float

We believe part of the recent meteoric rise in shares was due to short covering exacerbated by the low tradeable float in the initial months post consummation of the SPAC merger. Up until recently, only ~67m of 122m total Oklo shares outstanding were freely tradeable. This low tradeable float condition has since improved. On November 6th, an additional 13.5m shares held by large VC investors under a 180 day lock-up agreement became freely tradeable (technically, shares unlocked at 11:59 pm Eastern on November 5th, see D-3).

In addition, as of November 12th-13th, 41m shares held/beneficially owned by CEO Jacob DeWitte, COO Caroline Cochran, Chairman Sam Altman, and AltC Sponsor LLC (Michael Klein) were no longer restricted. 15m in earnout shares (F-15) were issued at the same time to legacy Oklo shareholders. Michael Klein immediately took advantage of being unrestricted, selling 13.45m shares on November 14th, the day Oklo reported 3Q earnings after market close. The current Oklo tradeable float has thus doubled in the last two weeks to 137m shares (p.22). In terms of potential dilution, 10.4m shares are issuable in connection with legacy Oklo employee options.

Nuclear Bros.

> *“**You need a bigger team and at least a couple of years of them working together really well to pull together the level of detail that is going to be sufficient**…you’re never going to have full amount of detail, but the question is do you have enough to have the application stand on its legs and be considered fully [operational] as opposed to be rejected for being incomplete? **I don’t think that’s reasonable to hit that [2027] target.”***
>
> — Former Oklo employee
>
> *“**Oklo is in that camp which underestimates what has to be done** to bring this to fruition…I think **they are unconsciously incompetent** on what you need to get thru the NRC.”*
>
> — Former Westinghouse Electric Managing Director, 38-year nuclear industry veteran
>
> *“**They’re clueless** – **they’re operating like a small, tech company and they’re not even close** to being in the playing field of what they have to do.”*
>
> — Project Manager, GE Vernova. 35 years of nuclear industry expertise
>
> *“Build a demonstration reactor and get some data from it. **They [Oklo] want[s] to build a plane that flies and have it licensed for commercial sale without ever***

> ***building a demonstration model and flying the demonstration****. Would you fly in the plane?*
>
> — Former NRC Commissioner
>
> *[emphasis added for all quotes]*

Oklo was co-founded in 2013 by the husband-and-wife team of CEO Jacob DeWitte and COO Caroline Cochran, who met as graduate students in nuclear engineering at MIT. We hold no particular view as to whether their personal relationship is material to investors, but it is noticeably omitted from the biographies and description of management in Oklo's S-4 (p. 287) and investor presentations. A recurring point of concern expressed during our conversations with industry participants was senior management's largely academic backgrounds. Oklo has zero experience building and operating commercial nuclear power plants (p.67). In explaining the 2022 license applications failure, the former Oklo employee quoted above described the company as a "a team of very inexperienced people, who haven't seen a real product, and don't understand the real world." The former NRC Commissioner we interviewed described senior management as "Nuke Bros.," individuals who overhype the benefits of SMRs and possess Silicon Valley mindsets more suited to software development versus the challenges of navigating an uncompromising, capital intensive, highly technical industry.

Oklo is pursuing a commercial license for the construction and operation of a 15 MWe (but possibly up to 50 MWe) nuclear reactor despite management having never built or operated even a smaller-scale or non-nuclear prototype. Oklo's development approach is not in keeping with what experts advised us was industry best practices used by SMR competitors such as Kairos Power and X-energy, both of whom are building prototypes before their planned first-of-its-kind reactors to gather important data and practice construction. The NRC's website states, "In particular, demonstration projects and experimental analogues are needed to generate real world data that can validate assumptions and models, show the technology works as intended, and demonstrate the safe performance of new reactor designs." As explained by a knowledgeable source, Kairos was able to win Google's support, in part because it was able to show Google actual manufacturing facilities and full-scale prototypes of critical components, not just drawings and PowerPoint presentations.

Oklo is aware that "it's difficult to get a reactor license if you don't have data" but believes it can sidestep the "burdensome" process of licensing, building, and testing of a research reactor prior to commercial operations because its design is "inspired by" EBR-II (p. 29) and the "tremendous amount of data" that ~20 MWe experimental reactor provided before it was permanently mothballed in 1994 (when DeWitte was 8 years old). Judging from the comment from the former NRC Commissioner above and Oklo's previous "flame out" with the Commission, regulators are unlikely to persuaded by that line of reasoning.

Nothing New About SMRs or Their Overhyped Benefits

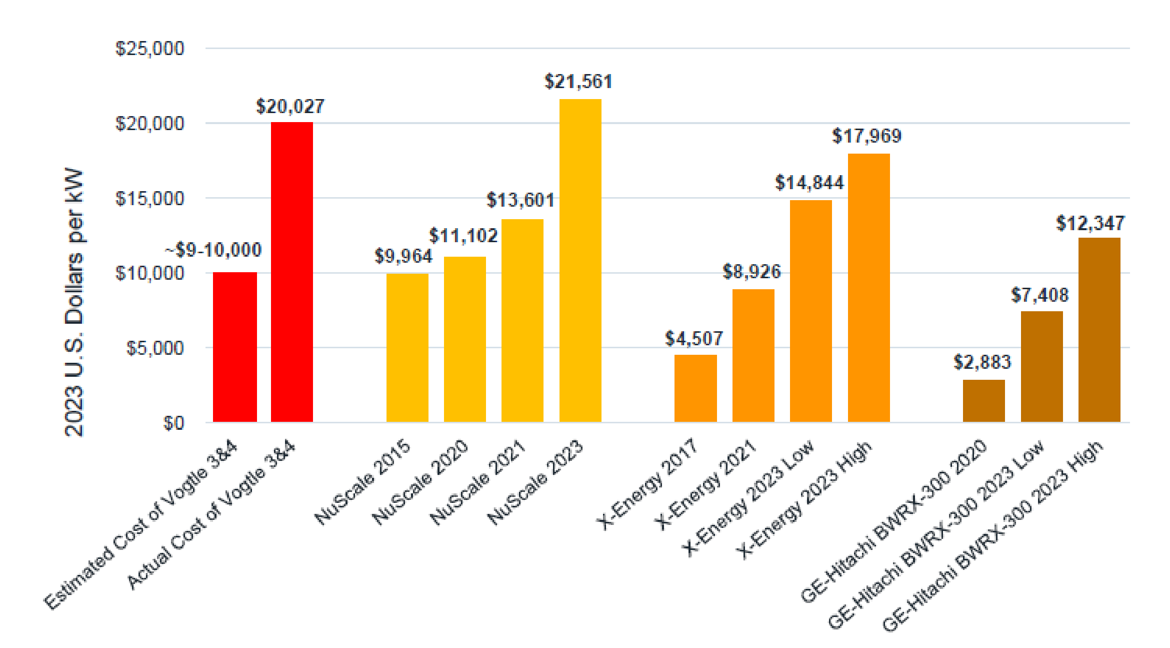
Interest in SMRs has been driven by cost escalation and extensive construction delays associated with legacy nuclear plants, particularly Vogtle in Georgia and EPR in Flamanville, France, both of which endured billions in cost overruns and many years of delay. In the face of these debacles, proponents of SMRs claim their technology will be smaller, simpler, cheaper, depend on non-nuclear supply chains, generate less waste, and be easier to install. They also argue that modular fabrication and installation will be useful to a wide range of industries including datacenters and the petrochemical industry. As the former NRC Commissioner flatly stated to us, “none of those claims have been substantiated.”

Given Oklo’s management’s backgrounds, it should come as little surprise that this list of purported benefits is virtually the same as those skewered by US Navy Admiral Hyman Rickover, “Father of the Nuclear Navy” as indicative of an *academic* reactor designed by “dilettante[s]” lacking real responsibility rather than a *practical* reactor. Tellingly, despite decades of experiments and billions in government support, there are no commercial SMRs in operation in the US and only 2 globally (one each in China and Russia, with a test reactor operational in Japan).

Consistent Cost Escalation and Poor Economics

The primary reason for the lack of SMR traction is poor economics. There is little evidence SMRs can avoid the cost increases which have plagued recent large nuclear projects and construct plants on a more efficient $ / kW basis. In a report titled SMRs: Still Too Expensive, Too Slow and Too Risky from the Institute for Energy Economics and Financial Analysis, researchers found that all of the operating SMRs worldwide experienced massive escalation in construction costs (*300%-700%*) versus original estimates (see chart below).

Proposed US SMRs Have Witnessed the Same Pattern of Skyrocketing Costs as Conventional Nuclear



Source: Small Modular Reactors: Still too Expensive, Too Slow and Too Risky. Institute for Energy Economics and Financial Analysis, May 2024.

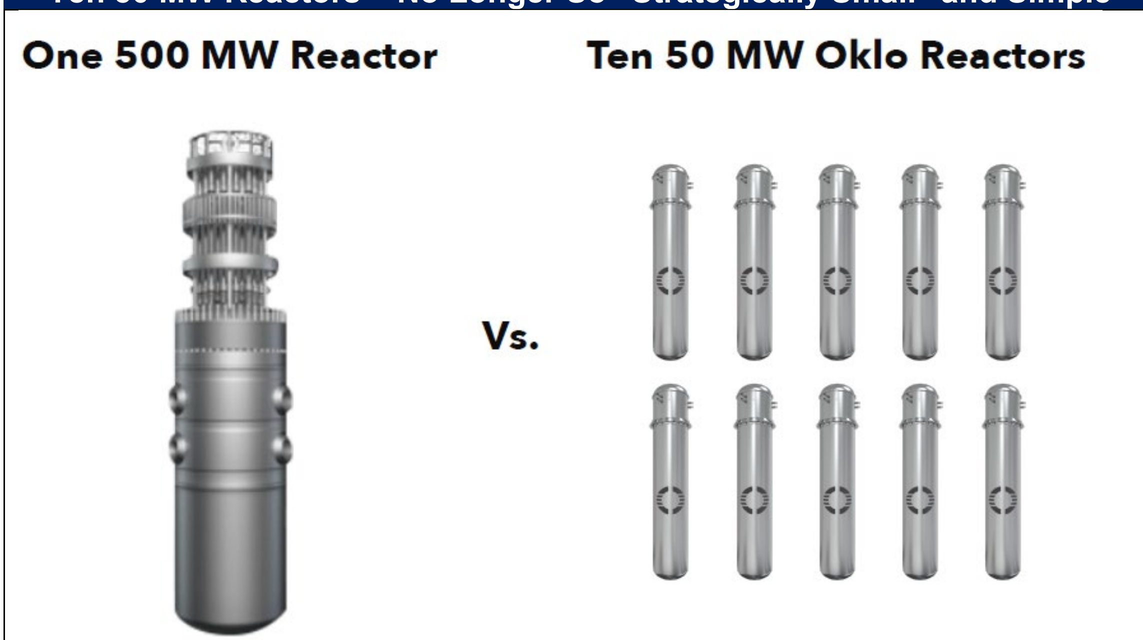
While construction costs for solar, wind and natural gas-fired generators have generally declined over time, the cost of conventional US nuclear power has steadily risen (p.16). A 2014 academic study examined 180 nuclear power projects around the world and found 175 exceeded the initial budget by an average of 117% and took an average 64% longer than projected to complete.

The most recent attempt at a commercial SMR deployment project in the US suffered significant cost escalation which doomed the venture. The Utah Associated Municipal Power Systems' Carbon Free Power Project initially involved 12 NuScale reactor modules capable of generating 600 MW with the aim of starting operations "around 2023." Despite scaling down the output to 462 MW, the estimated cost of the project ballooned from $4.2bn in 2018 to $9.3bn in 2023, causing dramatic increases in the target power price to ratepayers ($119 / MWh excluding subsidies versus $55 / MWh promised at project inception). In the end, years before it even would have a license from the NRC, the estimated cost of the project rose so dramatically it became nearly as expensive on a $ / kW basis as the Vogtle nuclear plant fiasco (an absurd $20,139 / kW, *16x* more expensive than a natural gas CCGT) and the project was terminated.

Based on the economies of scale principle, smaller reactors with lower outputs will generally produce more expensive electricity on a $ / KWh basis than larger ones. The need to increase the size and scale of powerhouses to offset this disadvantage has already appeared to impact Oklo's development path. Oklo originally planned to start development with a 1.5 MWe microreactor aimed at rural villages in Alaska. This later evolved into a 15 MWe initial reactor described as "strategically small." Now, Oklo appears to be shifting focus to meeting demand for a 50 MWe reactor (coincidentally, the same output NuScale found to be inefficient 4 years ago and later scaled to 77 MWe).

CFO Cochran once drew a clear distinction between Oklo's "one reactor, one plant, each one being small" in order to keep plant size small and costs down, versus NuScale's strategy of "up to 12 reactors…each 70 megawatts." Oklo's latest presentation now shows the below, effectively adopting a similar level of modularity and plant size which wrecked NuScale's ability to build a plant cost effectively.

Ten 50 MW Reactors – No Longer So "Strategically Small" and Simple



Source: Oklo 2Q24 investor presentation.

We believe investors in Oklo would be foolish to assume its Aurora powerhouse, with even less design maturity than NuScale and also years away from NRC approval, does not see its cost estimates rise in a comparable manner.

Low Rates of Learning

Proponents of SMRs argue they can make up for the lack of scale using modularized, simple reactor designs and drive down costs through mass manufacturing identical units (i.e., economies of series production). As Oklo's CFO recently described, "Over time, this [Oklo's size and technology] should allow us to reduce cost and asset construction time through purchasing economies of scale, as well as efficiencies that should come from deploying essentially the same asset over time." Oklo ability to lower costs therefore critically rests on a positive production learning curve as designs are built.

However, a mixture of real-world observations and academic studies suggest learning rates in the nuclear industry are modest (if positive at all). A 2004 University of Chicago study on *The Economic Future of Nuclear Power* found "a plausible range for future learnings rates in the Unites States nuclear industry is 3 to 10 percent…a 10 percent learning rate is aggressive. It would necessitate a continuous stream of orders for a dedicated factory that keeps engineering teams and construction crews intact, a highly competitive industry, and streamlined regulation largely eliminating construction delays."

Another study by the University of Chicago in 2011 concluded even at this aggressive learning rate, a company would have to manufacture an SMR unit *every month for over 4 years* before the full benefit of learning would provide levelized costs competitive with the upper end of natural gas-fired generation (~$80 MW/h).

One glance at recent large nuclear power projects in the United States and France, the two countries with the largest nuclear reactor fleets, reveals that reactors constructed most recently cost more than those constructed decades earlier – an implied *negative* rate of learning.

SMR advocates believe manufacturing modules in a factory as opposed to at the reactor site will deliver better unit costs, but establishing nuclear quality supply chains to drive such economies is not straightforward. An industry expert advised us the only example of building a reactor in a factory in the US was when Westinghouse constructed the Vogtle reactor in Georgia. Westinghouse built modules for the Vogtle reactors in a factory in Lake Charles, Louisiana which were then shipped to Georgia where they were supposed to fit together "like pieces of Lego." Unfortunately, the Lake Charles factory failed to build components to nuclear grade specifications properly, shipped faulty modules to the reactor site, and eventually Westinghouse had to build a dedicated rewelding facility to fix problems.

Now consider that Oklo must drive lower costs through iterative learning without in-house manufacturing capabilities in an industry lacking standardization. Oklo is competing against dozens of other SMR and advanced reactors with varying designs. Culling this herd to a subset for fleet deployment will be crucial within the next ten years to enable larger orderbooks and theoretical NOAK cost benefits to be realized. We think the likelihood of an Aurora microreactor emerging as a preferred option to drive the volumes needed for sustained learning and cost reduction is exceedingly slim.

Oklo's Illustrative Unit Economics Are Not Credible

*"**That [fuel] cost is completely made up** from their rear end."*

— Former NRC Commissioner

*"I don't want to slam them, I mean I know these people, they did their best, but I think at the end of the day I think when you get to the top… it was as you said - **they were goal-seeking [costs]**…**otherwise it's not viable at all. If they put real numbers of today in there this program would be over.**"*

— Former nuclear fuel cycle expert, International Atomic Energy Agency

[Kerrisdale researcher: Based on our research, the price per kilogram may be around $30,000-$40,000 for fully fabricated HALEU."]

That sounds right.

— Former Oklo employee

*"**I can't see a scenario where they get to $7,000 / kg** and I've been making fuel for 45 years."*

— Former Managing Director, Westinghouse Electric – UK Fuel Operations

[*emphasis added for all quotes*]

Oklo uses "illustrative unit economics" to promote the anticipated low capital costs and cash returns (12%-25% unlevered returns depending on the unit, p.17) of its powerhouses (p.44-45). These unit economics form the basis of its claimed $40-$90 / MWh levelized cost of energy (LCOE), which compares favorably against alternatives like Renewables + Storage and Natural Gas + Carbon Capture and Storage (p.16). We believe there are several problems with Oklo's unit economics which render them grossly misleading.

First, while the bulk of our diligence on unit economics focused on fuel costs rather than plant costs, Oklo's estimate of ~$61m for a NOAK (nth of a kind) 50 MWe plant was also met with skepticism from experts we interviewed. An executive at an SMR competitor said he believed the estimate was off by as much as *$200m.* He cited Oklo's intent to bury the reactor deep underground, the lack of proven manufacturing supply chain, and the need for specialty components which meet nuclear grade design requirements as all contributing to higher costs than what Oklo is promoting.

While, admittedly, differences in technology and design complicates any comparison of costs, for reference Oklo's 50 MWe NOAK total capital cost of $116m ($61m in plant costs + $55m for initial fuel) equates to $2,312 / kW, meaningfully below DOE estimates of $3,600 / kW for a well-executed NOAK plant that has fully benefited from cost reductions from learning, standardization, and supply chain development. Oklo's cost estimate also pales in comparison to a US Energy Information Administration case study which determined an NOAK facility with six 80 MW SMR modules would cost $8,936 / kW (p.67).

With such scant detail on the breakdown of plant costs, we focused our research on Oklo's assumption for fuel which Oklo states, "[d]oes not assume Oklo recycles fuel for internal supply. Assumes all fuel is newly fabricated HALEU purchased from a third-party supplier at a cost of $7,000 / kg." This is a particularly important claim. Unlike large, conventional, nuclear power plants, where plant costs far outweigh that of fuel, the economics of a 15-50 MWe Aurora powerhouse are *extremely sensitive* to assumed fuel costs.

The illustrative economics for an Aurora 15 MWe unit, for example, anticipates $33m in initial fuel cost ($7,000 / kg X 4,750 kg initial load) which is *higher* than the $24m for construction of a NOAK plant itself (p.44). Oklo's "illustrative unit economics" rests heavily on assumed costs for fuel which doesn't exist commercially at scale in the US and likely won't for another decade. This is encapsulated in the damning quote from the former NRC Commissioner who believes that Oklo is simply making up its fuel cost number. Tellingly, on a slide that includes footnotes for many other key assumptions, there is zero justification for the basis of Oklo's fuel cost assumption.

According to multiple industry experts, a far more reasonable estimate for fully fabricated HALEU would be between $30,000 - $40,000 / kg, *3x-6x higher* than what Oklo has assumed. This range is broadly consistent with an estimate of $32,600 / kg for 19.75% enriched uranium from public policy think tank, Third Way. It is also consistent with a December 2023 figure from the Nuclear Innovation Alliance (a non-profit nuclear energy think tank) which estimated the cost for HALEU in metallic form at $25,725 / kg. Note, neither of these estimates include the cost to fully fabricate raw enriched uranium into fuel elements, like pellets or rods.

A nuclear fuel supply expert we asked to independently estimate HALEU costs stated fabrication itself might cost over $10,000 / kg (based on an IAEA study in 2010 which found the cost of test reactor fuel fabrication can range from $10,000 to $30,000 per kg). For the avoidance of doubt, Oklo claims fuel recycling capabilities (which won't exist until the 2030s and for which there is no domestic market, see: risk factor 19) will lower fuel costs by over 80% (p.15) but its $7,000 / kg fuel cost assumption is clearly stated as being for "newly fabricated HALEU", not recycled spent fuel.

When we asked an executive with direct responsibility for fuel and materials at an SMR competitor about Oklo's INL award and fuel cost estimate, he responded:

> *"The [national research] labs have a terrible track record of successfully executing on building things, and I know INL is trying to demonstrate value by picking a couple vendors, getting something built, and proving that they are good at working with industry and getting something useful accomplished. They have a history of announcing that they will have a reactor built by such-and-such date, and then never actually building anything at all (NGNP / VHTR, Marvel).* ***None of this changes the fact that Oklo's cost estimate for the initial core of fuel for their reactor design is too low by a factor of 5x or more."***

So, what happens to capital costs, IRRs, and LCOE when fuel costs that are low by "5x or more" are replaced with a figure more closely tied to reality? Below we compare Oklo's provided unit economics with what the economics would look like if one assumed $35,000 / kg for HALEU and left all other assumptions (plant costs, capacity factor, variable expense, power prices, etc.) unchanged. Note, all figures shown under "Oklo Provided Illustrative Unit Economics" are taken directly from the company's SPAC investor deck, and the 10-24% IRRs and ~$2,300-$4,600 / kW overnight capital costs precisely match Citi Research's estimates in its June 4, 2024 initiation of coverage report (P. 2).

Unsurprisingly, given sensitivity to such an important input, assuming higher fabricated HALEU fuel costs results in unit economics that are simply uncompetitive. Overnight capital costs now range closer to $13,000 / kW and $7,000 / kW for a 15 MWe and 50 MWe powerhouse, respectively. LCOEs now range from ~$90 / MWh for a NOAK 50 MWe with investment tax credit (ITC) benefit to a whopping *$230 / MWh for a FOAK 15 MWe* without ITC benefit (Oklo's chosen methodology for showing lower/upper limits for LCOE, see footnote 2 on p.16). This contrasts with Oklo's self-provided $40-$90 / MWh based on the lower unrealistic fuel cost. At this higher level of fuel cost, Oklo does not generate attractive returns. To generate a 25% IRR and a 4-year payback period, we estimate Oklo would need to find customers willing to pay an average real power price of $180 / WHh power price, *twice* what it has assumed in its unit economics (p.45). This power price is well above even the premium Microsoft is believed to be paying Constellation Energy for power from Three Misle Island once restarted, estimated at ~$110-$115 / MWh.

Oklo "Illustrative Unit Economics" Adjusted for Higher Fuel Cost

	Oklo Provided "Illustrative Unit Economics" [1]				Economics Assuming $35,000 / kg HALEU [2]			
	Aurora Powerhouse (15 MWe)		Aurora Powerhouse (50 MWe)		Aurora Powerhouse (15 MWe)		Aurora Powerhouse (50 MWe)	
	FOAK	NOAK	FOAK	NOAK	FOAK	NOAK	FOAK	NOAK
Plant capital cost ($m)	$34	$24	$86	$61	$34	$24	$86	$61
Initial fuel load (kg)	5,000	4,750	8,000	7,800	5,000	4,750	8,000	7,800
Fuel cost ($/kg)	$7,000	$7,000	$7,000	$7,000	**$35,000**	**$35,000**	**$35,000**	**$35,000**
Initial fuel cost ($m)	$35	$33	$56	$55	$175	$166	$280	$273
Total capital cost ($m, plant + initial fuel)	$69	$57	$142	$116	$209	$190	$366	$334
Overnight capital cost ($/kW)	$4,600	$3,817	$2,840	$2,312	**$13,933**	**$12,683**	**$7,320**	**$6,680**
IRR (40-year plant life) [3]	10%	15%	18%	24%	-4%	-3%	3%	7%
LCOE ($/MWh) [4]	$95	$75	$57	$45	**$230**	**$177**	**$122**	**$94**

Source: Kerrisdale analysis, Oklo Investor Presentation, July 2023.

1. *All values shown reflect plant capital cost, initial fuel load, fuel cost consistent, average real power price, annual generation, annual fixed expense, and annual variable expense, consistent with illustrative unit economics per p.44-46 of Oklo Investor Presentation, July 2023.*
2. *Kerrisdale analysis assuming $35,000 / kg for fully fabricated HALEU with all other assumptions unchanged.*
3. *IRRs shown for Oklo Provided "Illustrative Unit Economics" in-line with Citi Research estimates.*
4. *LCOE shown for Oklo Provided "Illustrative Unit Economics" compares with $40 / MWh to $90 / MWh as shown on p. 16 on the investor presentation.*

Our estimates of substantially higher overnight capital costs are still likely too low. $7,000 / kW for a 50 MWe Aurora powerhouse would still be less than the observed project costs for NuScale and X-energy as shown earlier in the report. We believe investors should heavily discount all the touted unit economics from Oklo. Unfortunately, rather than questioning the assumptions provided by the company, sellside models that we reviewed use Oklo's illustrative unit economics as the basis for long-term projections and price targets without *any* adjustment (for an example, see: Appendix IV).

Liquid Sodium-Cooled Fast Reactors Have Serious Reliability Problems

> *"Sodium is a very difficult material to work with, it interacts badly with water. Around the world there have been leaks and fires and it has cost a lot of money to repair them.* ***There is no reason to expect Oklo to be any different****."*
>
> — Professor and nuclear physicist, engaged in nuclear energy research for over two decades
>
> *"Looking at this list of 23 versions of the sodium-cooled fast reactor by the US, France, India, Japan, Russia, the UK, Germany, and China… and* ***every single one of them have problems that were encountered.*** *Some of them have multiple problems, serious problems. The problem, in part, is that* ***the coolant, liquid sodium, is highly reactive with air and water, it basically explodes and catches fire****. It's very corrosive so it often leaks and that will of course shut your reactor down, and then it takes a while to get it back up and running –* ***so that's a very common problem."***
>
> *It's a really hard technology to get going. I want to note that it's the same technology that Bill Gates is trying to employ in his TerraPower reactor, and I think Bill Gates has been throwing more money at this than Oklo and* ***I don't think the Oklo people are smarter than the Bill Gates people…so what makes Oklo so special besides a bunch of hubris thinking they are so special?****"*
>
> — Former NRC Commissioner
>
> *"[Sodium-cooled reactors] are expensive to build, susceptible to prolonged shutdown as a result of even minor malfunctions, and difficult and time-consuming to repair."*
>
> — Admiral Hyman Rickover, US Navy
>
> *[emphasis added for all quotes]*

Oklo is quick to tout in investor presentations the "inherent" safety of its liquid sodium-cooled design, and it is true the technology possesses certain safety advantages, particularly in avoiding a meltdown. Sodium's boiling point is higher than the reactor temperature, meaning the coolant cannot boil or vaporize and the system does not need to be pressurized. What Oklo neglects to mention is sodium reacts violently with water and burns if exposed to air, resulting in different but still complex safety, maintenance, and reliability issues.

A large fraction of liquid sodium-cooled reactors that have been built have been shut down for long periods by fires caused by sodium leaks. Some of the more high-profile incidents include a major fire which forced a shutdown at the Monju Nuclear Power Plant in Japan in 1995. The Superphénix reactor in France and its Phénix predecessor suffered multiple sodium leaks throughout their operational lives. A Russian reactor, BN-600, reported 27 sodium leaks in a 17-year period, 14 of which led to sodium fires.

As described in a 2010 International Panel on Fissile Materials report, sodium-cooled reactors have "severe reliability problems." The necessity of keeping air from coming into contact with sodium coolant makes refueling and repairing reactors much more difficult and time-consuming than for water cooled reactors. Fuel must be removed in an atmosphere free of oxygen, the sodium drained, and the entire system flushed carefully to avoid causing an explosion. This complexity has contributed to many sodium reactors sitting idle a large fraction of the time.

The quote from Admiral Rickover above is still apt 70 years later. While Oklo promotes its design as "simple" and "proven" the truth is that sodium-cooled reactors are an unforgiving, difficult technology. The challenges of chemical reactivity and corrosion were well known to the Japanese and French, both experienced nuclear power producing countries, and yet they still encountered serious problems and exceptionally poor uptime (Superphénix had a lifetime capacity factor of less than 7%). Investors should be asking – what is Oklo doing differently (other than merely *thinking* they are "special" as the former NRC Commissioner jabbed) that would avoid a situation like Monju in Japan or the unpredictable behavior that resulted in Phénix shutting down?

SMRs Will Not Have Significant Role in Powering Data Centers for a Long Time

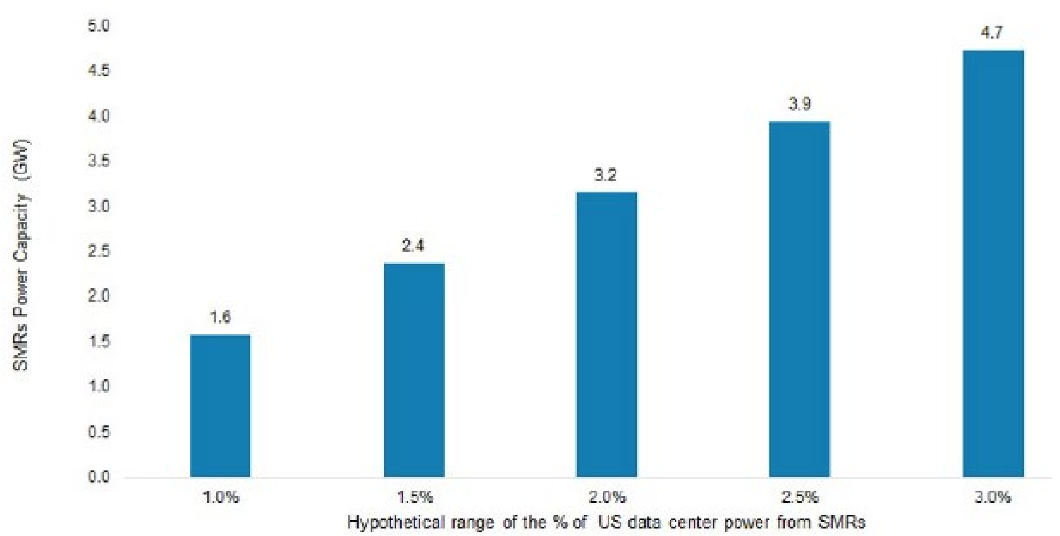
> *"I hate to break it to you...the [power] generation that they're [data center operators] citing is mostly not renewable and* ***mostly not carbon free****…Nuclear SMRs hopefully will be great, but they're not a productionized technology at scale today. Refiring existing nuclear power plants might be actually like the best of the alternatives, and* ***when you're in a situation where refiring Three Mile Island is a really good idea relative to your other choices…like, that's not the world's greatest position to be in*** *from the perspective of scaling really quickly and meeting a very large growing need. Some of the folks putting in data centers are citing renewables and that's going to be typically the ones that have a strong corporate motivation to do so,* ***but the vast majority are putting in combined cycle gas plants…*** *[emphasis added]*
>
> — Astrid Atkinson, CEO Camus Energy at DER Task Force conference.

> *"We are very interested in innovation in data centers…* ***as long as it has a 20-year track record.****"*
>
> — Former SVP Prime Data Centers, a Global Data Center Developer & Operator, 30 years in data center project development

With projections for data center power demand to increase by 160% and the potential need for over 50 GW of additional data center capacity in the US by 2030, it can be easy to lose sight of how long-dated and relatively modest the contribution from SMRs will likely be to meeting this demand. Though it runs counter to recent enthusiasm for nuclear as a power source, as described above by Astrid Atkinson (who spent 15 years at Google leading framework infrastructure engineering), the vast majority of data centers demand is *not* driven by carbon-free baseload needs from Big Tech and will not be supplied by nuclear (conventional or advanced), but rather natural gas fired CCGTs with greater certainty of execution and lower costs.

Given the checkered history of sodium-cooled reactors, we think it is unrealistic to think Oklo switches on an Aurora powerhouse for data center customers, who are generally not in the business of experimenting with new technologies and accustomed to "five 9s" uptime, without first accumulating *years* of operating experience. Any data center operator that would deploy an Aurora unit without such validation would incur the costly risk of unexpected/extended shutdowns. Given the lack of proven performance, we are skeptical Oklo's non-binding LOIs from data centers will convert into meaningful new deployments for the foreseeable future. This view is captured in an October 23rd note from Morgan Stanley which estimated only 1%-3% of all incremental US data center power capacity (~2-5 GWe) through 2035 would be provided by SMRs.

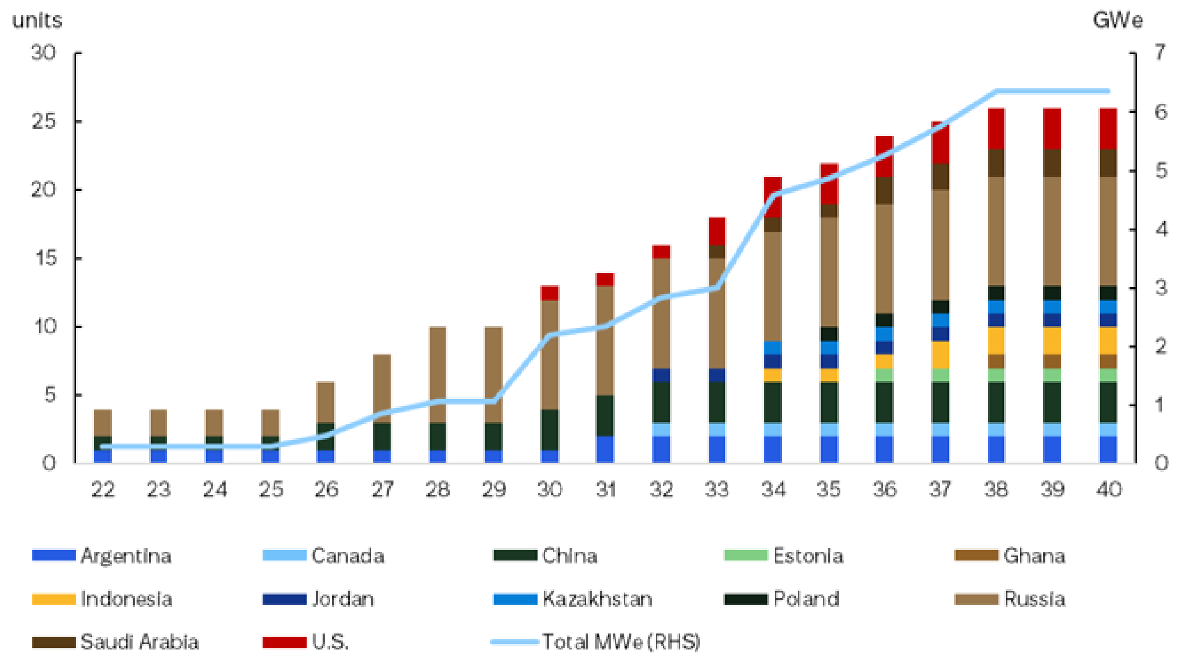
SMR Percent of US Data Center Power Projected for 2035



Source: Morgan Stanley, A Nuclear Renaissance for SMRs, October 23, 2024.

A June 2024 forecast for new advanced reactor / SMR builds from Citi Research arrived at a similar conclusion:

Forecast for New AR / SMR Builds Globally



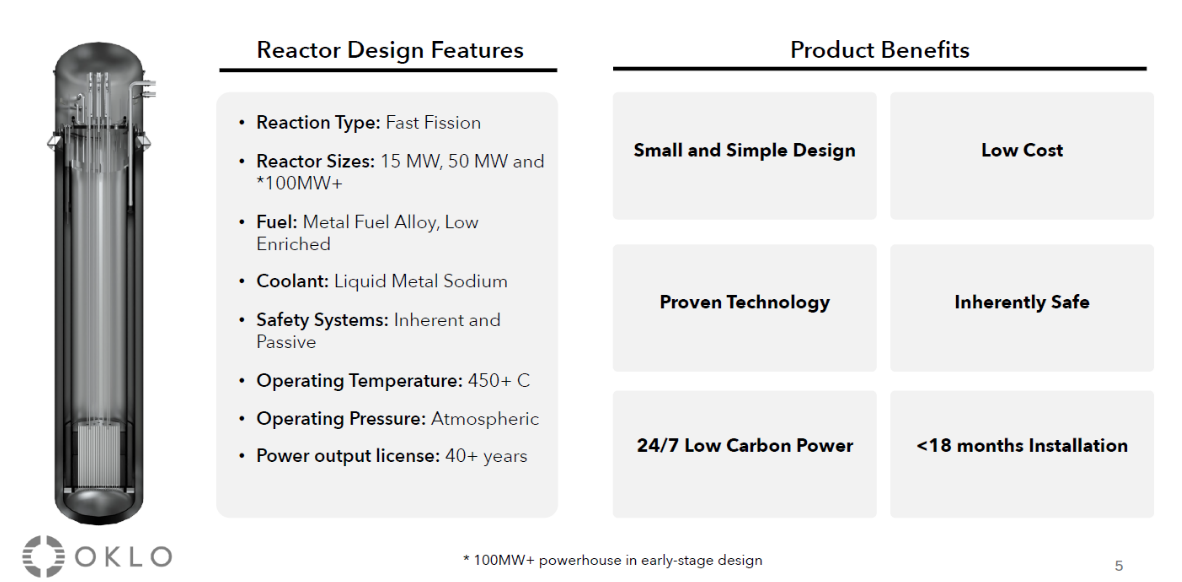
Source: Citi Research, [Inside Nuclear Energy Trends in the US, June 2024](). Note, this forecast does not align with Citi Research's forecast for Oklo unit deployments or installed capacity. X-axis represents year of deployment, i.e., "22" is 2022.

Conclusion

Whether it is micro-rockets for satellites like Astra or micro-reactors for data centers like Oklo, investors in pre-revenue companies trying to disrupt capital intensive, highly technical industries have seen this movie before. The need to overcome such structurally high challenges creates a catch-22: either provide realistic outlooks, in which case investors will fail to be impressed, or paint an overly rosy picture with often misleading information, sell stock, and try to turn dreams into reality before the cash runs out. Oklo falls squarely in the second camp, which is a shame because rather than changing the narrative of a technology that has never lived up to promises, its eventual struggles and losses will only cement the technology's negative historical perception. Many of the expert views shared in this report were pointed and critical of Oklo precisely because SMRs may play a role in meeting our energy goals, but promoting unrealistic timelines and benefits only does a disservice to the industry's cause.

Appendix I: Design Features and Product Benefits

Forecast for New AR / SMR Builds Globally



Source: Oklo 2Q24 investor presentation.

Appendix II: SPAC Transaction Background

In May 2024, Oklo came public via merger with blank check company, AltC Acquisition Corp (AltC), which valued Oklo at $850m (pre-money). AltC was founded and led by Sam Altman, best known as co-founder and CEO of OpenAI. Altman had been an investor in Oklo long prior to AltC's involvement. Altman first became involved with Oklo while president of the startup incubator Y Combinator, with Altman investing and becoming Chair of Oklo's board in 2015.

AltC completed its IPO on July 12, 2021. In October 2022 (p.175), nine months after the NRC denied Oklo's combined license for a 1.5 MWe reactor, Altman raised the idea of having the SPAC he was CEO and board member of, and had an economic interest in, pursue a business combination with Oklo, which he was also invested in and Chairman.

Prior to the consumption of the merger, Altman recused himself from deliberations and diligence discussions from both boards given the inherent conflicts of interest. The merger agreement between AltC and Oklo was signed July 11, 2023, one day prior to the close of the 24 month "completion window" by which AltC was required to complete an initial business combination or redeem investors. AltC stockholders subsequently extended the consummation deadline to July 12, 2024.

Appendix III: SMR Projects in NRC Pre-Application Phase

SMR Projects in Pre-Application; None Currently in Licensing Review

Applicant	Project Name / Design	Reactor	Application Stage	Status
Deep Fission, Inc.	Deep Borehole Pressurized Water Reactor	LWR	Pre-Application Activities	In-progress
Duke Energy	Duke Energy Belews Creek	LWR	Pre-application for Early Site Permit	In-progress
GE-Hitachi Nuclear Energy (GEH)	BWRX-300	LWR	Pre-Application	In-progress
JAEA Consortium	Japan Atomic Energy Agency (JAEA) Floating Seismic Isolation System (FSIS)	LWR	Pre-Application	In-progress
SMR, LLC, a subsidiary of Holtec International	SMR, LLC (Holtec) Designs	LWR	Pre-Application	In-progress
Tennessee Valley Authority (TVA)	Clinch River Nuclear Site	LWR	Pre-Application for a Construction Permit	In-progress
Utah Associated Municipal Power Systems (UAMPS)	Carbon Free Power Project / NuScale US460 SDA	LWR	Pre-Application for a Combined License	Withdrawn
Westinghouse Electric Company (WEC)	AP300	LWR	Pre-Application for a Design Certification	In-progress
Aalo Atomics - Idaho Nuclear Project	Aalo-1	Non-LWR / Advanced	Pre-Application	In Progress
ARC Clean Technology	ARC-100 Sodium-Cooled Fast Reactor	Non-LWR / Advanced	Pre-Application	In Progress
General Atomics	Energy Multiplier Module	Non-LWR / Advanced	Pre-Application	In-progress
General Atomics Electromagnetic Systems	Fast Modular Reactor	Non-LWR / Advanced	Pre-Application	In Progress
Kairos Power	Fluoride Salt-Cooled, High Temperature Reactor	Non-LWR / Advanced	Pre-Application	In-progress
Oklo	Oklo Aurora Powerhouse	Non-LWR / Advanced	Pre-Application	In Progress
Radiant Industries	Kaleidos Microreactor	Non-LWR / Advanced	Pre-Application	In Progress
TerraPower	Molten Chloride Fast Reactor	Non-LWR / Advanced	Pre-Application	In Progress
TerraPower & GE Hitachi	Natrium Reactor	Non-LWR / Advanced	Pre-Application	In-progress
Terrestrial Energy USA	Integral Molten Salt Reactor	Non-LWR / Advanced	Pre-Application	In-progress
University of Illinois at Urbana-Champaign & USNC	High-Temperature Gas-Cooled Test Reactor	Non-LWR / Advanced	Pre-Application	In Progress
Westinghouse Electric Company (WEC)	eVinci Micro Reactor	Non-LWR / Advanced	Pre-Application	In-progress
X-Energy	XE-100	Non-LWR / Advanced	Pre-Application	In Progress

Source: Morgan Stanley table, Unites States Regulatory Commission.

Appendix IV: Oklo Illustrative Unit Economics

Oklo Illustrative Economics for 15 MWe Aurora Powerhouse

Aurora 15 MWe Illustrative Unit Economics[(1)(2)]

($ in Millions)	T+0	T+1	T+2	T+3	T+4	T+5	T+10	40-Yr Life of Plant
Capital Expenditures	($57)						($17)	($107)
Plant Cost	($24)							($24)
Initial Fuel Cost	($33)							($33)
Refueling Cost							($17)	($50)
Revenue		$13	$13	$13	$13	$13	$13	$508
Revenue from Power Sales		$13	$13	$13	$13	$13	$13	$508
Expenses		($3)	($3)	($3)	($3)	($3)	($3)	($120)
Fixed Plant		($2)	($2)	($2)	($2)	($2)	($2)	($96)
Variable Plant		($1)	($1)	($1)	($1)	($1)	($1)	($24)
Annual Plant Cash Flow	($57)	$10	$10	$10	$10	$10	($7)	$281
Cash Margin	*NA*	*76.4%*	*76.4%*	*76.4%*	*76.4%*	*76.4%*	*(54.4%)*	*55.4%*

Source: Oklo Investor Presentation, July 2023.

Citi Research Model

Aurora 15MW w/ Nth-of-a-Kind (NOAK) Economics

Look Up Year	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**
Capex									
Plant Cost	(24)								
Initial Fuel Load Costs	(33)								
Refueling Cost									
Fuel Capex	(33)	-	-	-	-	-	-	-	-
Total Capex	**(57)**	-	-	-	-	-	-	-	-
Revenue									
Revenue from Power Sales		13	13	13	13	13	13	13	13
Total Revenue		**13**	**13**	**13**	**13**	**13**	**13**	**13**	**13**
Sold MWh		120,971	120,971	120,971	120,971	120,971	120,971	120,971	120,971
ASP/MWh (average real price $)		105	105	105	105	105	105	105	105
Capacity MWh		131,490	131,490	131,490	131,490	131,490	131,490	131,490	131,490
Capacity Factor %		92%	92%	92%	92%	92%	92%	92%	92%
Expenses									
Fixed Plant		(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Variable Plant		(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Total Expenses		**(3)**	**(3)**	**(3)**	**(3)**	**(3)**	**(3)**	**(3)**	**(3)**
Variable Expenses/MWh ($)		5	5	5	5	5	5	5	5
Total Expenses/MWh ($)		25	25	25	25	25	25	25	25
Annual Plant Cash Flow	**(57)**	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**
Cash Margin		76%	76%	76%	76%	76%	76%	76%	76%
IRR	15%								

Source: Citi Research model for Oklo Inc., dated September 24, 2024.

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On July 26, 2024, the Securities and Exchange Commission ("SEC") brought a complaint against Andrew Left, who runs Citron Research. In that complaint, the SEC effectively alleged that (i) by making public communications arguing that certain securities are longs or shorts, and (ii) then very soon after those communications were made public, trading in the opposite direction of those communications (selling a security that he expressed was a long, or buying to cover a short position in a security that he expressed was a short), that Left was committing securities fraud.

Prior to this complaint, Kerrisdale's understanding of securities law was that by not releasing false or misleading information in one's communications and by disclosing to the public that one is long or short a given security, and therefore biased, that there needed to be no restrictions on one's trading of the covered security. Furthermore, as can be seen in the disclaimers above, Kerrisdale discloses that it will transact in the securities covered herein following any communication (i.e. we will buy or sell the security post publication), and may be long, short or neutral at any time after any communication. Kerrisdale also discloses that it is not making any recommendations to anyone to do any transactions whatsoever with regard to a security – we are only explaining why we are long or short a stock, at a given point of time.

But, in light of this complaint, and following its logic, perhaps it would help investors to just assume the following: assume we have shorted lots and lots of the stock of the Covered Issuer immediately prior to publication, and assume we will buy lots and lots of the stock of the Covered Issuer to cover our short position immediately subsequent to publication.

To us, providing a hypothetical but potentially inaccurate trading intention, upon each communication of opinion about a security, doesn't make much sense. Rather, we think the longstanding standard of disclosing our directional bias, and avoiding false or misleading information in our fundamental arguments, is the appropriate standard, as opposed to communicating to readers a future trading intention that may not turn out to be accurate. But the SEC complaint implies that we either do know or ought to know how we will trade a security subsequent to publication, and that if the trading involves closing out a lot of the position shortly after publication, then we'd be committing securities fraud if readers didn't know that. Certainly, we assume that we can't be expected to provide trading updates on each trade subsequent to publication as we make them, which seems like quite an unreasonable demand of us for expressing our own views on why we ourselves are long or short a stock (to reiterate, we are not making a recommendation – do your own research and make your own opinion). So in the absence of second-by-second trading updates and so that investors don't feel wronged or defrauded that we may close out of a lot of a position very quickly after publishing, just assume that that is exactly what we'll do – or it seems to us that we should advise you to assume this based on the new legal norm that the SEC complaint appears to us to be trying to implement. Since the SEC has not published an advisory on this matter, we're simply trying our best to put the pieces together of what the SEC is trying to tell us that it wants us to do, based on its complaint.

Furthermore, the complaint also indicated that it was securities fraud when Left communicated price targets, but closed parts or all of his positions well before these price targets were reached. We also communicate prices that we think some securities are worth, in our reports. They're not "price targets". The market can stay irrational far longer than one can stay solvent and thus Kerrisdale doesn't target any price in its reports. Rather, we estimate a security's or company's "fair value", using some valuation methodologies. For instance, we believe that certain stocks are worth zero and are worthless. But Kerrisdale has never held a short until it reaches $0. The fair value of a stock may be zero in our opinion but the prices at which we target covering the short position will vary based on a wide variety of reasons, many of which are not fundamental in nature and most of which relate to Kerrisdale trying to fulfill its fiduciary duties to its client accounts, a key component of which is to maximize financial returns. Again, note that we're not recommending readers of our communications to buy, sell, short or otherwise transact in any securities; we are just explaining our own reasons for having a long or short position in a given security. Given that no recommendations are being made, since we're not our readers' financial advisors, we are certainly not recommending that you, or anyone, hold a security until our estimated fair value of the security is reached. But, again following the logic of the complaint, it seems that we should ask you to please assume that we will buy to cover shares of the Covered Issuer long before any estimate of fair value of the share price that we discuss in the report is reached. From our perspective, it doesn't feel right to tell you to assume some future trading intention when we ourselves don't know when we'll cover a short relative to our estimate of the fair value of the stock, but, again, based on our reading of the SEC complaint, it seems that this is what the SEC wants us to advise you.