

Compute

Institutional Equity Research
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Justifying the Insatiable Demand for Compute

Following OpenAI's compute commitments over the past few months, we outline why current demand levels are justified and why, despite investor concern, fears of overbuilding miss the point.

All we've got is not all we need. We're not here to dispute price tags, though we get it. Eye-watering commitments that'll require trillions in capex, and the obvious point that OpenAI can't self-fund their needs with near-term revenues. The more relevant question we should be asking, independent of financing, is whether the current compute commitments made by OpenAI are even sufficient for the goals they have set. If the target is AGI, the answer is simply no. The more interesting claim that we'd use as a sanity check is that even these insane commitments over the past few months are readily justified by a narrower goal that we're defining as job-competent AI (we'd refer the reader to our [past note](#) on the capabilities of these models in response to Andrej Karpathy's appearance on the Dwarkesh Podcast). Because even a lower bar than AGI would justify building ahead as partial competence across large slices of knowledge work sits inside markets that in aggregate can be measured in the trillions. And even that, might be a stretch, which sounds just as ridiculous writing as it probably does reading it.

Let's just run some quick napkin math. Of the 33GW of compute that has recently been committed, we can safely assume that 16GW is strictly for inference, provided by the AMD and Broadcom deals. Then, for the sake of the argument, let's assume that of the remaining compute, 10 additional GWs are also for inference, leaving us with 7GW for both training and R&D. That gives OpenAI likely a $2e27$ FLOPs budget for a single training run and $\sim 3.4e15$ tokens-per-month ceiling on inference. That gives OpenAI the capability to train a model at least an order of magnitude larger than GPT-5 while allowing them to serve a few quadrillion tokens per month which we think is largely doable under the scenario where models can reliably augment a non-trivial amount of white-collar work. That being said, none of this proves sufficiency for AGI, and it doesn't need to, but it does show that present commitments are rational as a base case while remaining small relative to what AGI, and later, ASI will ultimately absorb.

This logic only holds if scaling keeps working, which brings us to the Bitter Lesson. In plain terms, [Richard Sutton's Bitter Lesson](#) says that the approaches which keep improving as you add computation win in the long run, even as the specific approach changes. We've watched the pattern repeat across various areas where handbuilt tricks look good for a while, then a learnable, scale-friendly method overtakes them in areas like games, vision, and now language. The takeaway for our argument isn't to worship today's architecture, but rather to back the property that keeps paying off. Right now, scaling the current paradigm of LLMs is working, even though we agree that it's likely not the architecture to take us all the way. But if this curve eventually bends, we'll shift to the next viable scaling vector because the Bitter Lesson travels across paradigms. Either way, if increasing network size, FLOPs budget, and pre-training data is buying performance, then the rational move is to provision compute so we can do more of exactly that.

Nobody ever said that research labs made for a good business model. "Big Token" labs like OpenAI are structurally poor businesses if you expect neat value capture at the model layer. These companies, and more specifically the researchers who comprise them, are primarily motivated by accelerating technological progress and making novel discoveries in areas like material sciences and physics. The best researchers in the world join labs like OpenAI because they're passionate about pushing the frontier of the space and finding solutions to difficult problems in material sciences and physics, not because they're passionate about improving gross margins on the API business. The problem this creates is that the issues these labs want to solve, when solved, will not accrue value back to the model layer. So value will then accrue to the beneficiaries in those respective industries, which may be the better bets if one knows where to look.

INDUSTRY UPDATE

Price (10/24/25)

Industry:

TECHNOLOGY

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Amazon.com, Inc.	AMZN	BUY	\$224.21
CoreWeave, Inc.	CRWV	UNDERPERFORM	\$132.55
Alphabet Inc.	GOOGL	NEUTRAL	\$259.92
Meta Platforms, Inc.	META	BUY	\$738.36



Company Name	Ticker	Rating	Price
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