

LESSON 001 THE FULL MAP

THE AI POWER MAP

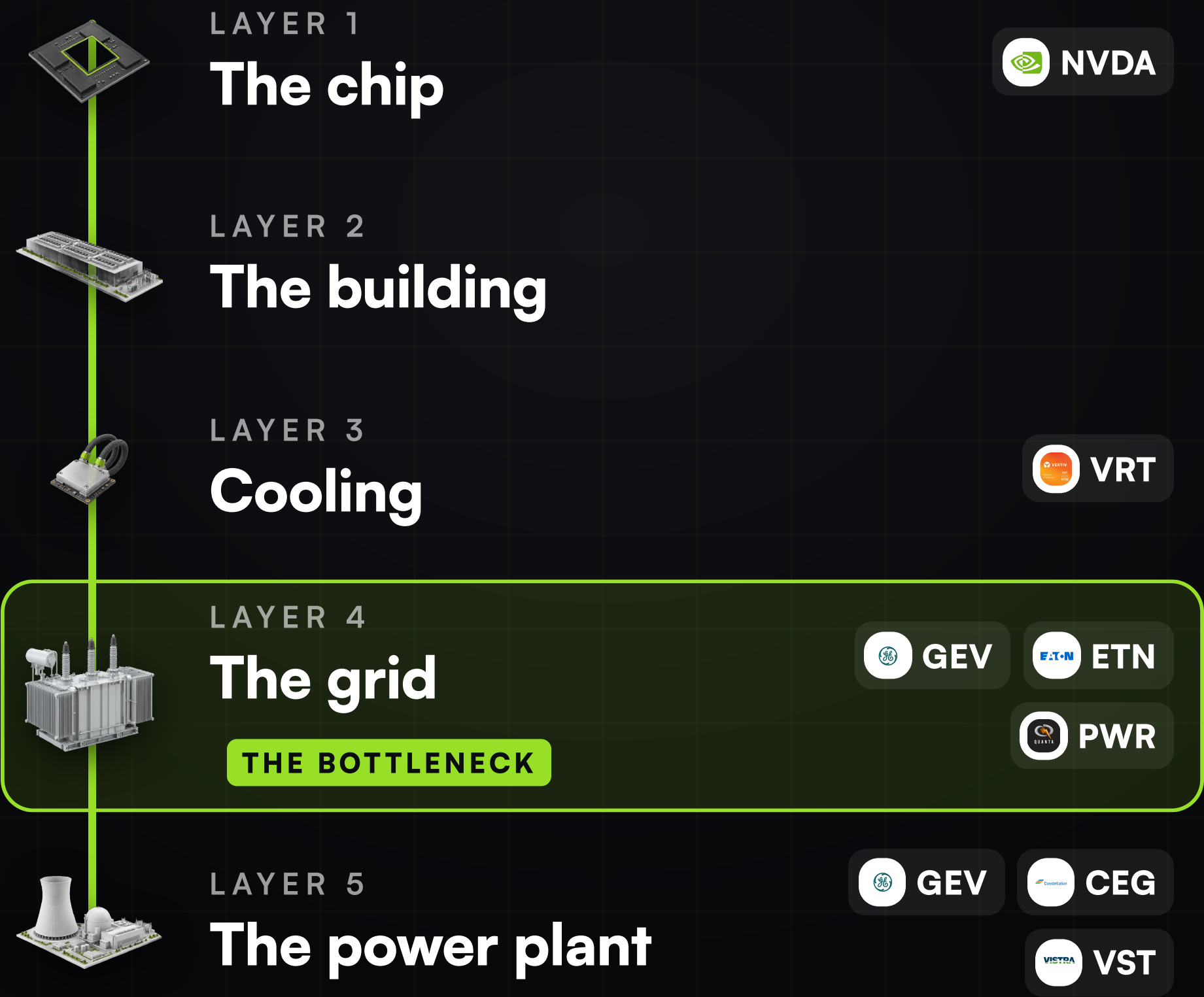
Five layers from the chip to the power plant,
and the public companies in each one.



THE MAP

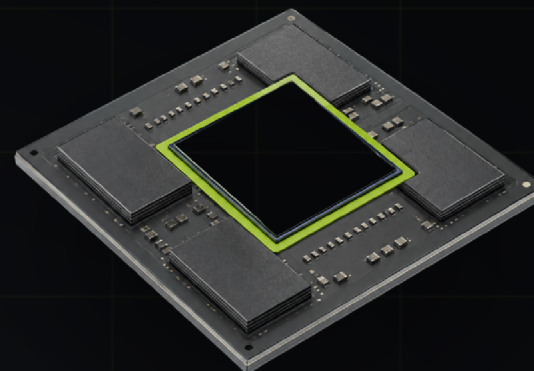
Follow the plug

AI's real bottleneck isn't chips. It's electricity. Here is the whole chain on one page.



LAYER 1

The chip



125_{kW}

one rack of NVIDIA's AI chips

7.8_{kW}

an average server rack

That's why AI deals are counted in gigawatts now: OpenAI and NVIDIA announced plans for at least 10 GW of NVIDIA systems.

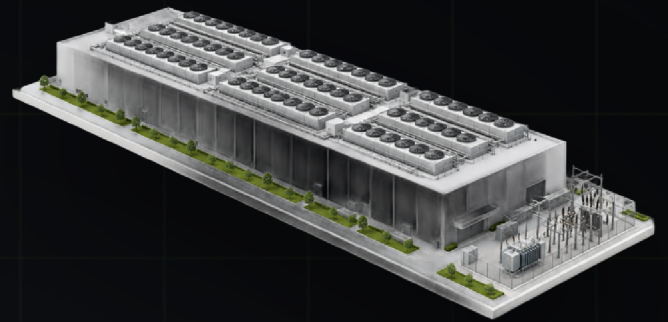


NVIDIA NVDA

Makes the AI chips and the racks they ship in.

LAYER 2

The building



100K

homes' worth of power for a typical AI data centre (IEA)

20×

that for the biggest ones being built

US data centres used 4.7% of US electricity in 2024, projected 11.8% by 2030 (Berkeley Lab).

LAYER 3

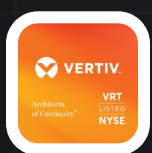
Cooling



\$15B

Vertiv's backlog, up 109% in a year (its last reported figure)

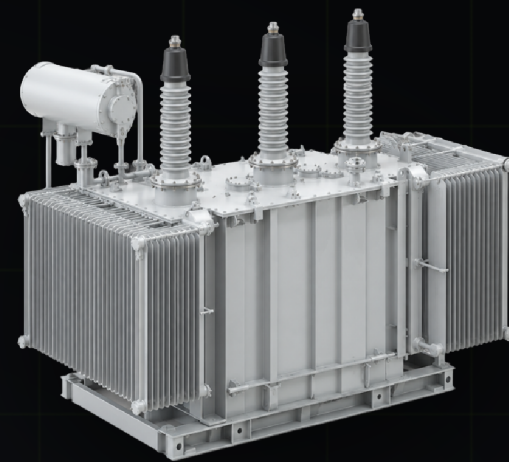
Nearly all the power a chip draws turns into heat, so NVIDIA's newest racks are cooled with liquid, not air.



Vertiv VRT

Liquid cooling and power gear for AI data centres.

The grid



128 weeks

average wait for a large power transformer (Wood Mackenzie)

80%

of US transformer supply is imported

Oncor (owned by Sempra, SRE) has about 282 GW of data centre connection requests in Texas.

Also building capacity: Hitachi Energy (a \$457M large-transformer plant in Virginia), Siemens Energy and HD Hyundai Electric (not US-listed).



GE Vernova **GEV**

Bought transformer maker Prolec GE.



Eaton **ETN**

Americas electrical orders up 41% (rolling twelve months).

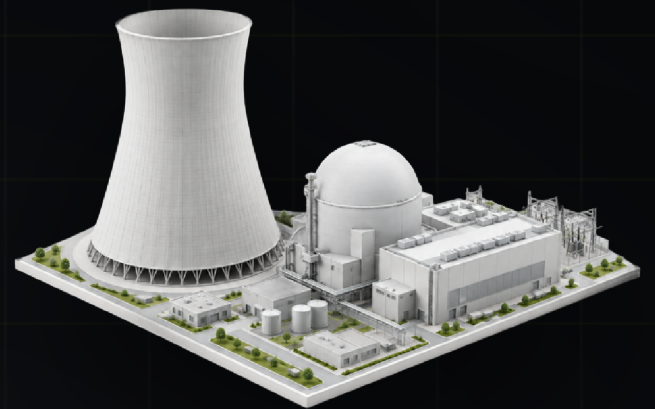


Quanta Services **PWR**

Builds the power lines. Record \$53.4B backlog.

LAYER 5

The power plant



116_{GW}

of GE Vernova gas turbines booked or reserved, with slots for 2031

Big tech went nuclear: Meta and Amazon signed 20-year nuclear deals with Constellation and Vistra.



GE Vernova **GEV**

Gas turbines for new power plants.



Constellation **CEG**

Restarting Three Mile Island for Microsoft (target 2027); 55 GW after buying Calpine.



Vistra **VST**

Nuclear and gas fleet with long-term deals with Meta and AWS.

RISK

The honest part

Everyone knows this story, and that's a risk. When DeepSeek showed cheaper AI in January 2025, power stocks fell hard in one day:



Vistra

-28.3%

IN ONE DAY



Constellation

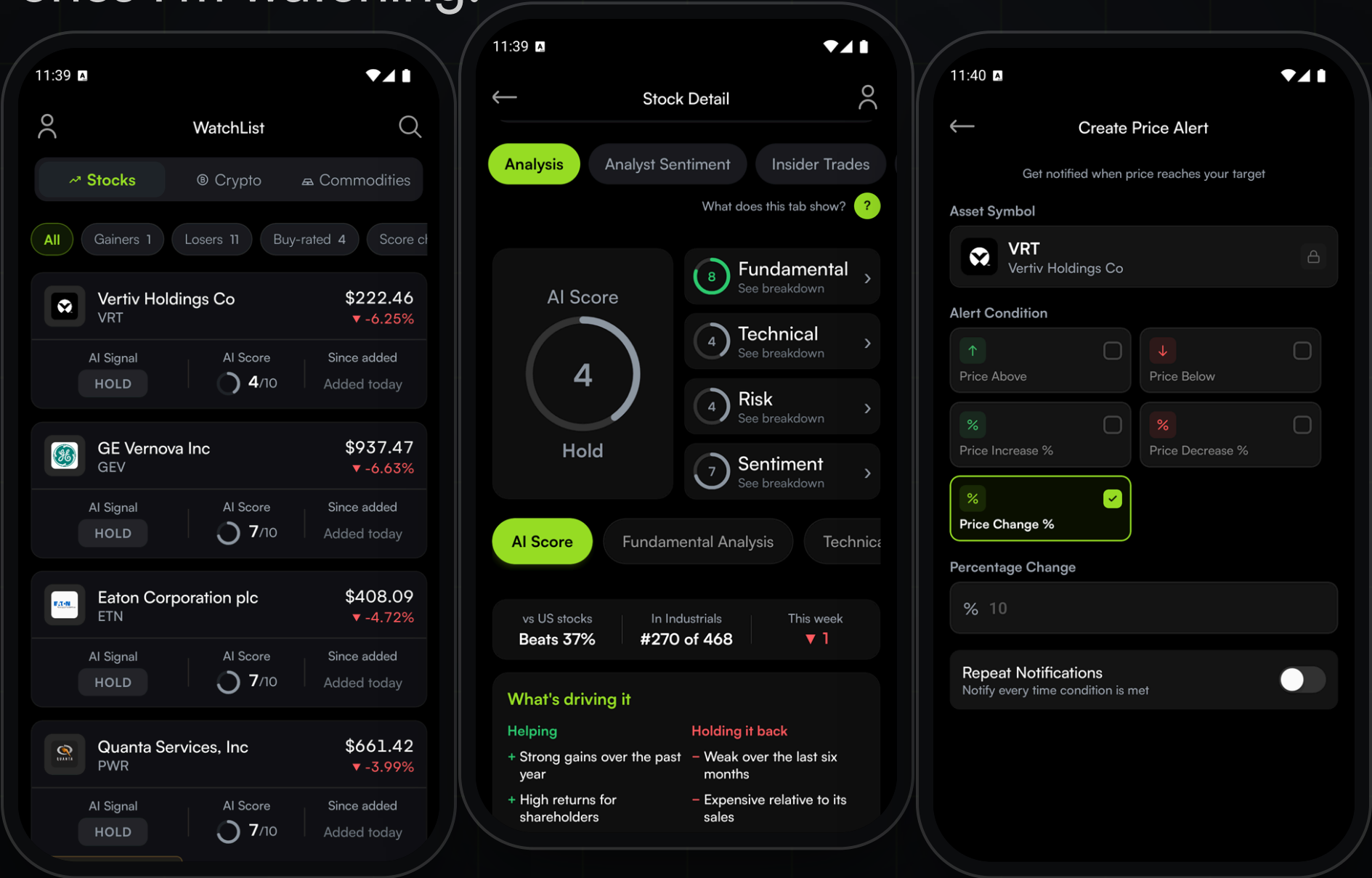
-20.8%

IN ONE DAY

A great story can already be in the price. That's why I track the news, not just the theme.

How I keep track

I keep all of these on one AssetWisp watchlist, each with its AI Score and news, and price alerts on the ones I'm watching.



Watchlist

AI Score

Price alerts

App Store

Google Play

assetwisp.com

SOURCES

Where the numbers come from

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Next lesson: the fuel behind the nuclear comeback.

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