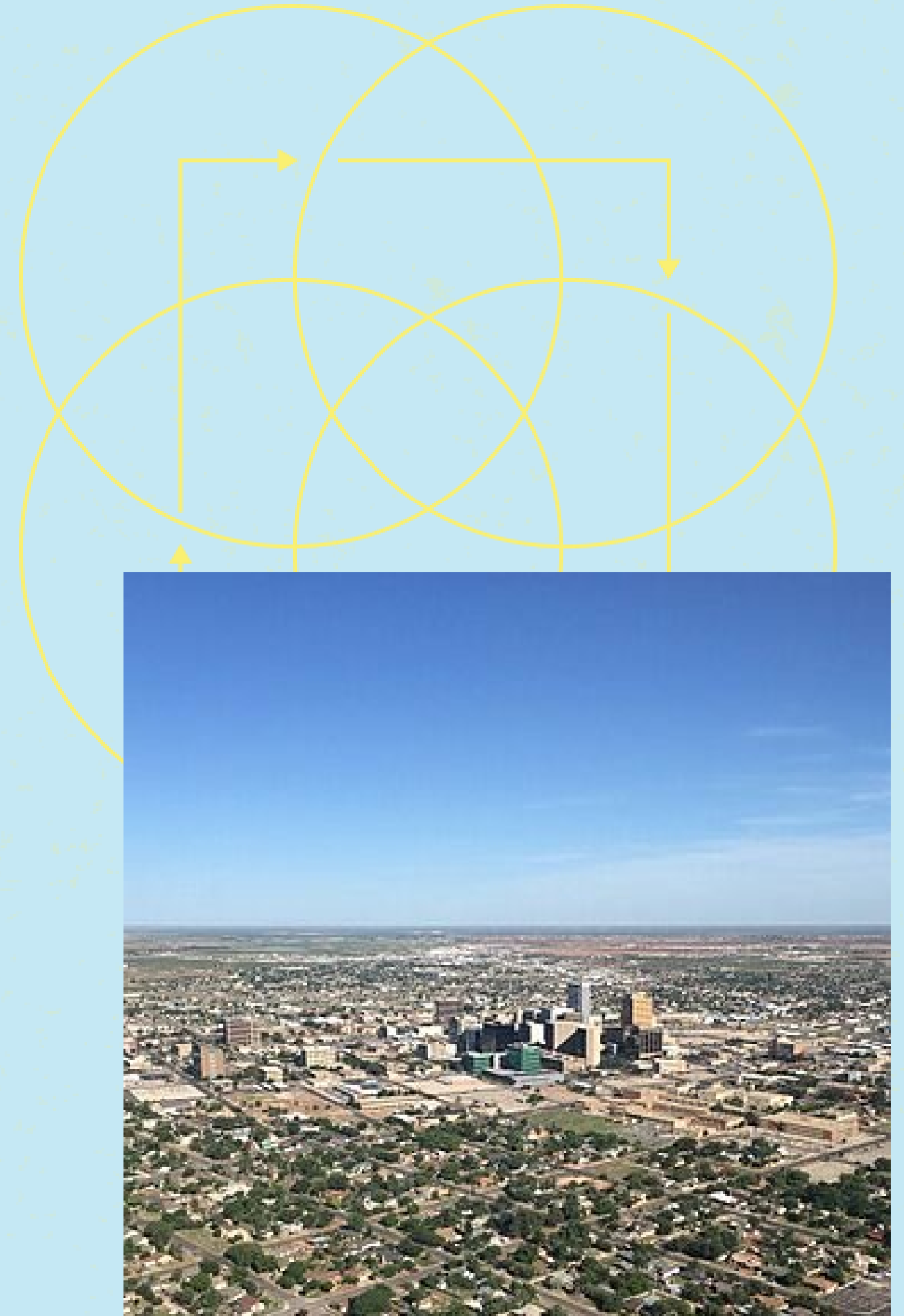
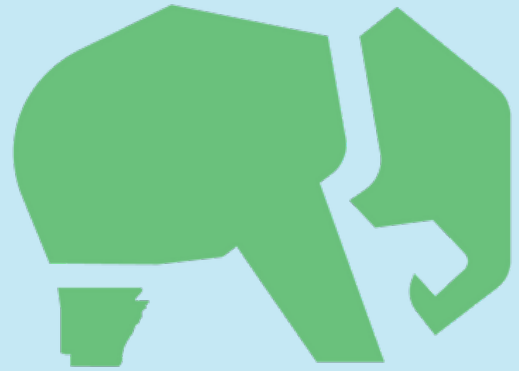


The Electrification of Everything

The Role of Real Property in
Responsibly and Efficiently Powering
the Future

Presented by Kyle Reynolds, JD, CPL





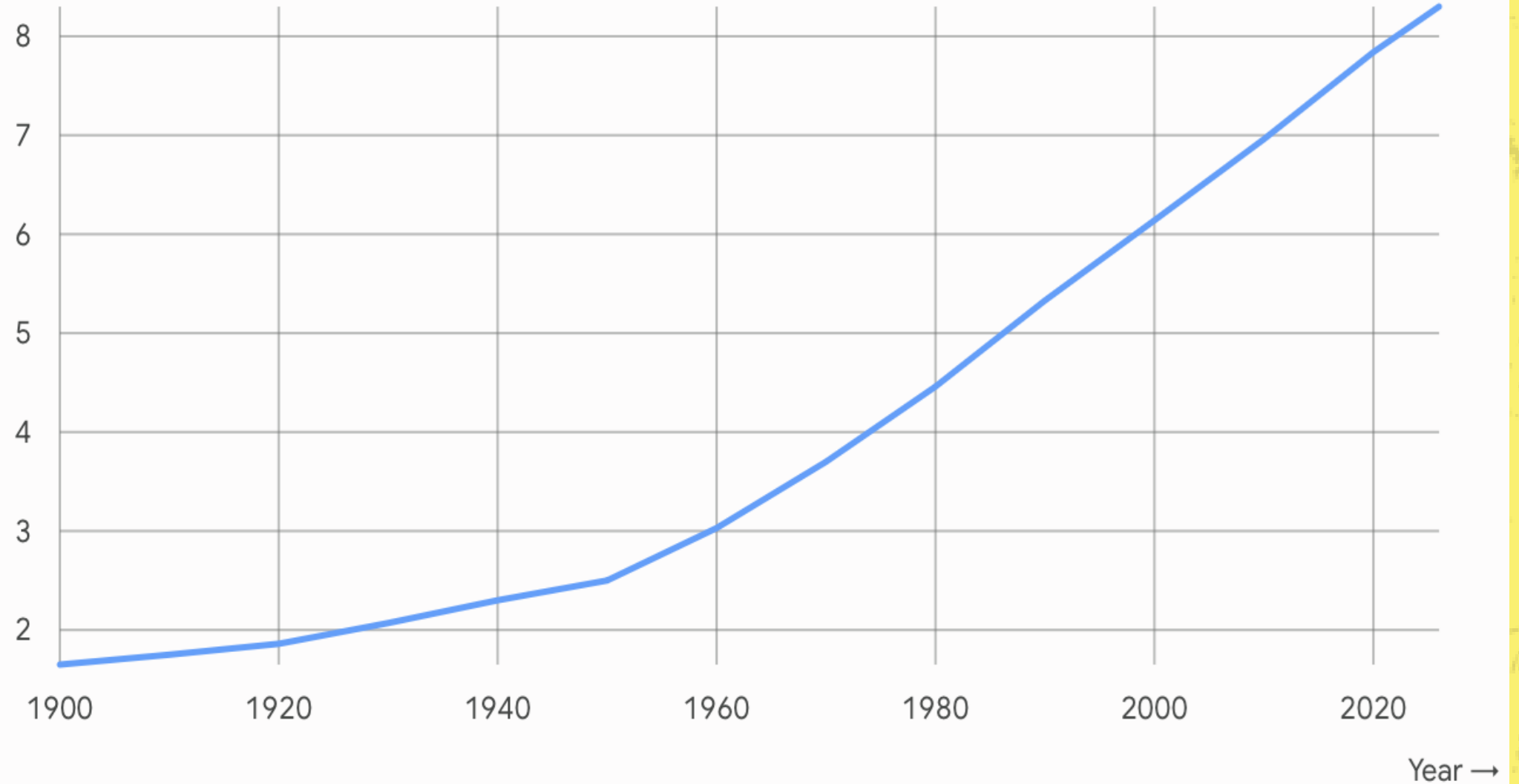
BRYANT & MOORE, PLLC



Global Population is Growing

Global Population Trends

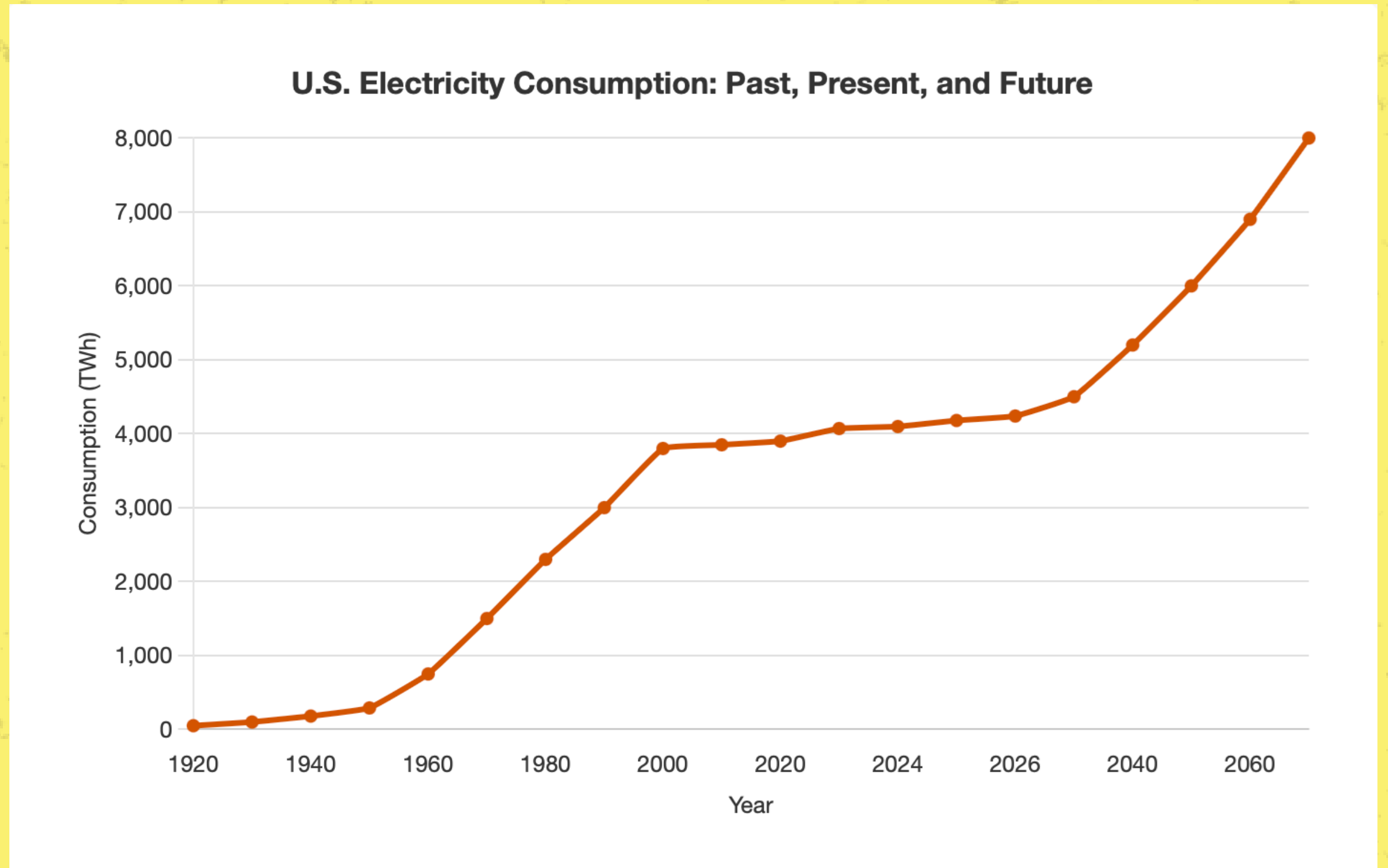
Population (Billions) ↑



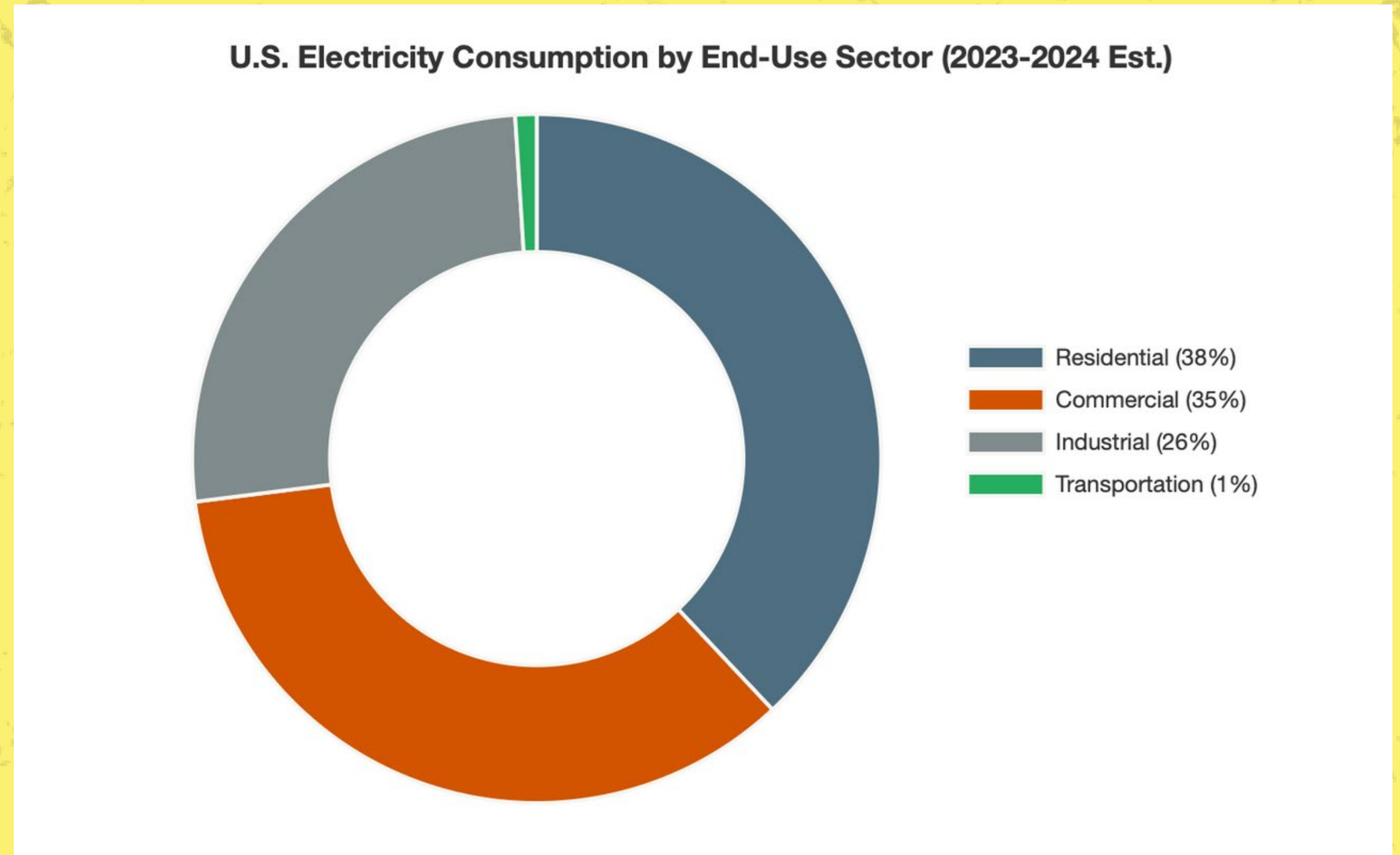
YEAR
2026

POPULATION
8.30B

Using More Electricity



What do we use it for?



What is
driving all of
the new
demand?



Data Centers

Key Statistics at a Glance

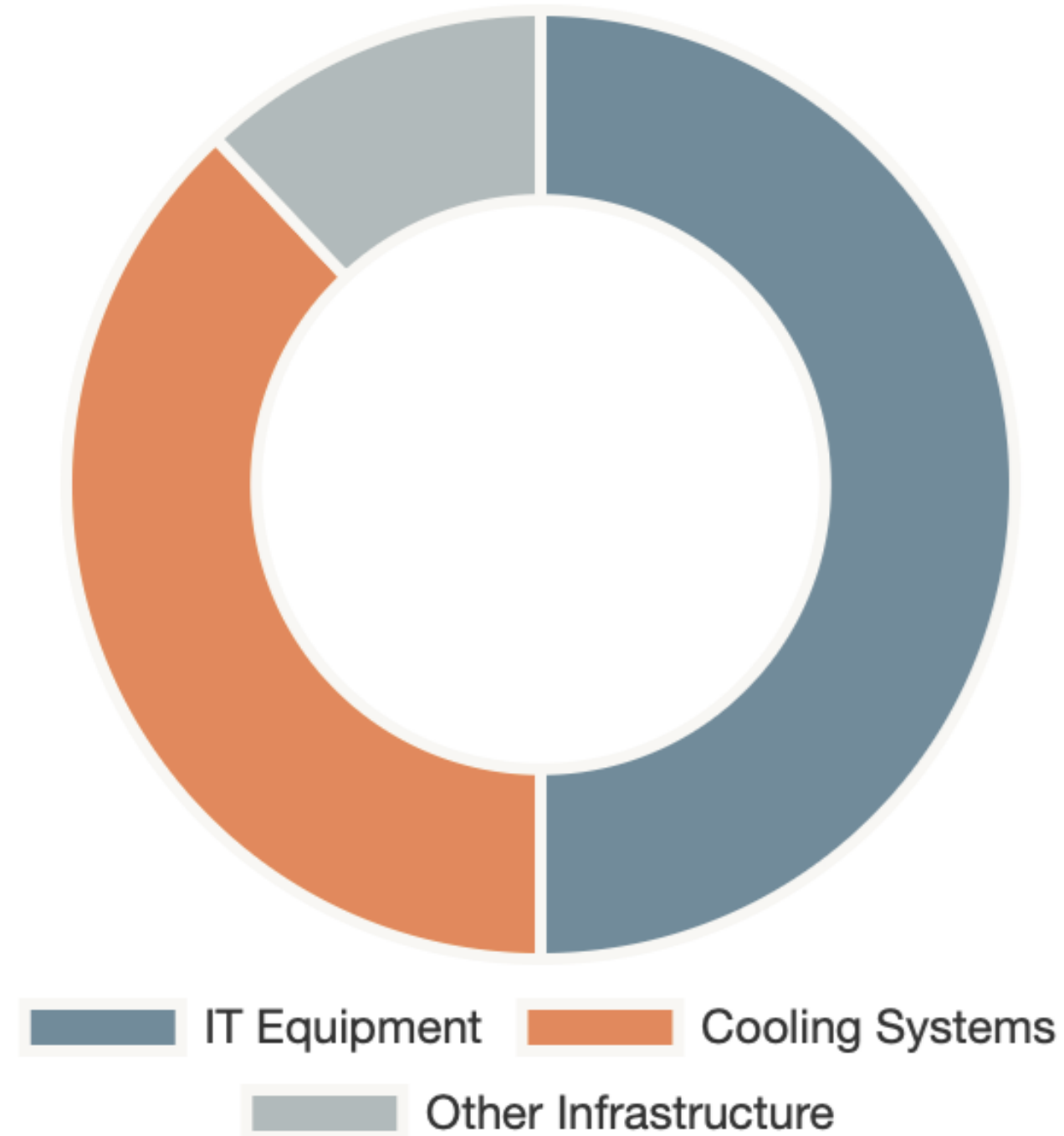
4x

Projected growth in electricity demand from AI-optimized data centers by 2030.

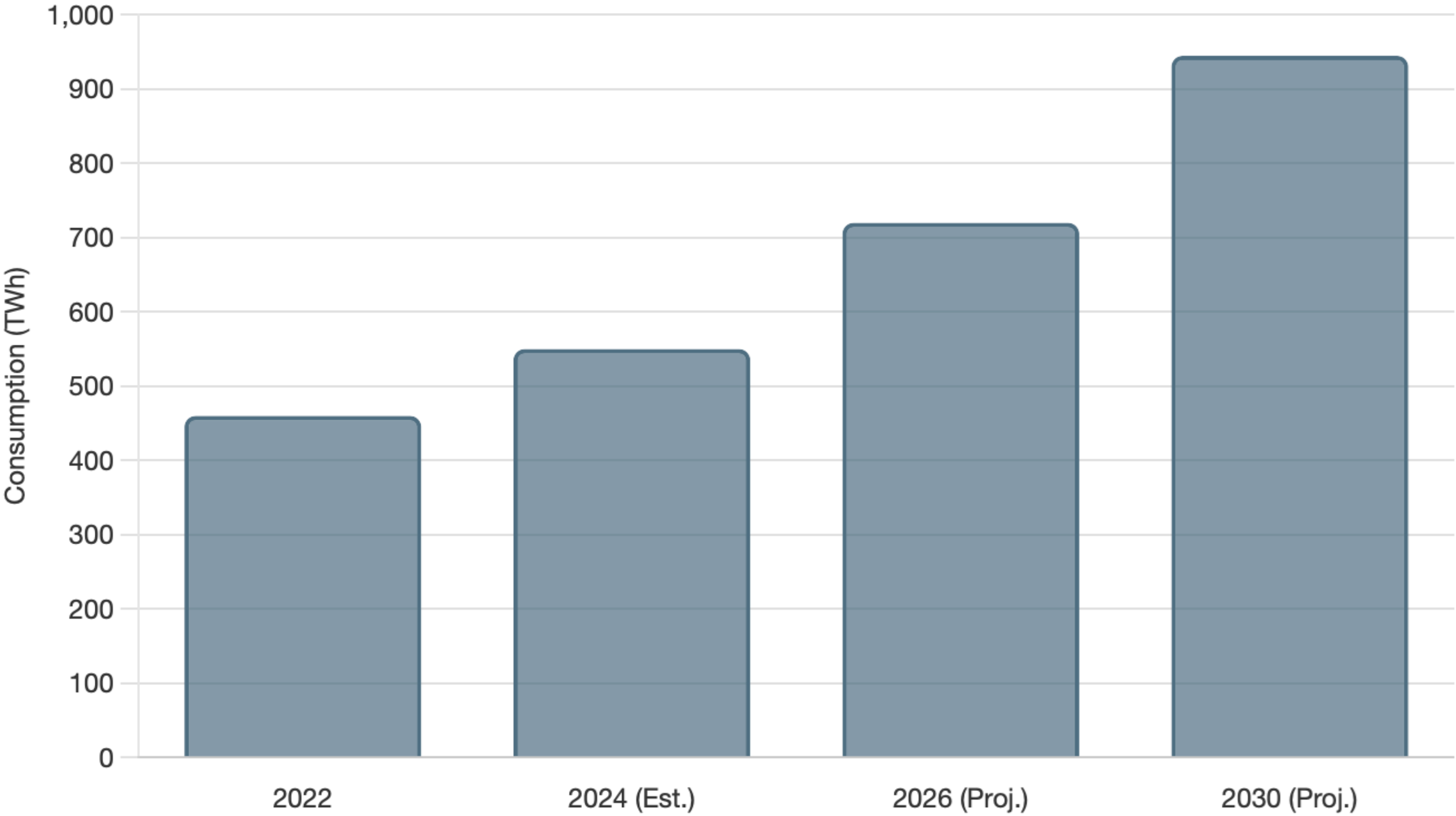
~50%

Share of U.S. electricity demand growth by 2030 expected to come from data centers.

Data Center Energy Breakdown

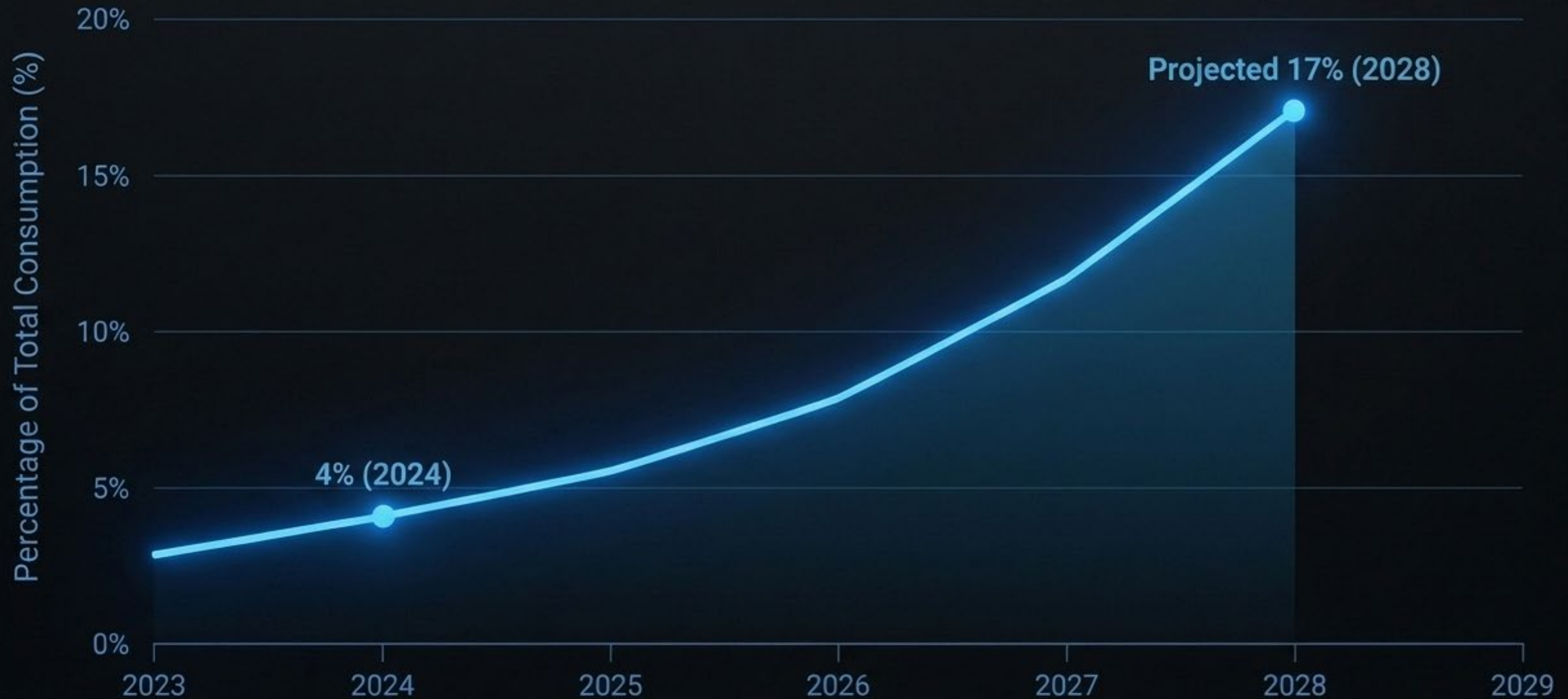


Global Data Center Power Demand is Set to Double

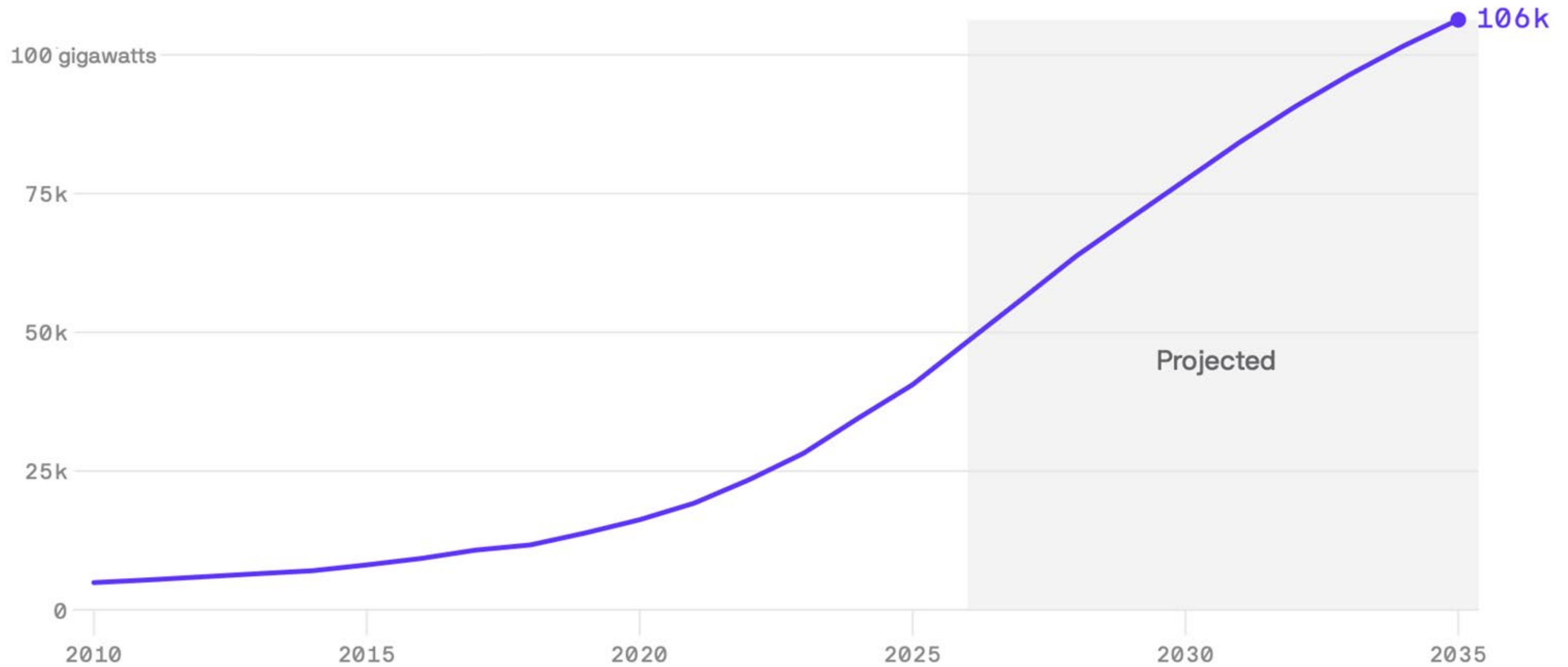


Source: International Energy Agency (IEA), 2025

Data Center Electricity Consumption



U.S. data center power demand, 2010-2035



Data: [BloombergNEF](#); Chart: Alex Fitzpatrick / Axios

Why are data centers using so much electricity?



How Much Juice Does it Take?



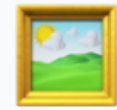
Single Google Search

~0.3 Wh



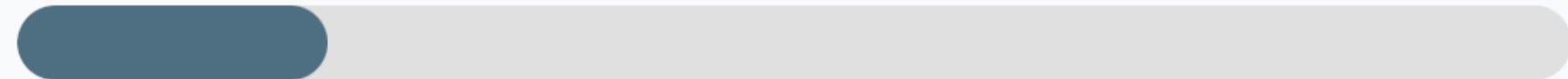
Full Smartphone Charge

~10 Wh



Generating One AI Image

~10 Wh



Single AI Search (Large Language Model Query)

~30 Wh (10-100x a Google search)



Running a 60W Lightbulb for 1 Hour

60 Wh



How Big Are Data Centers?



American Football Field (Playing Surface)

~57,600 sq ft
(Baseline for comparison)



Average Large Data Center (Typical Facility)

~100,000 sq ft
Power Capacity: ~20-100 MW

The Stargate Project Campus

Abilene, TX

Immense Scale

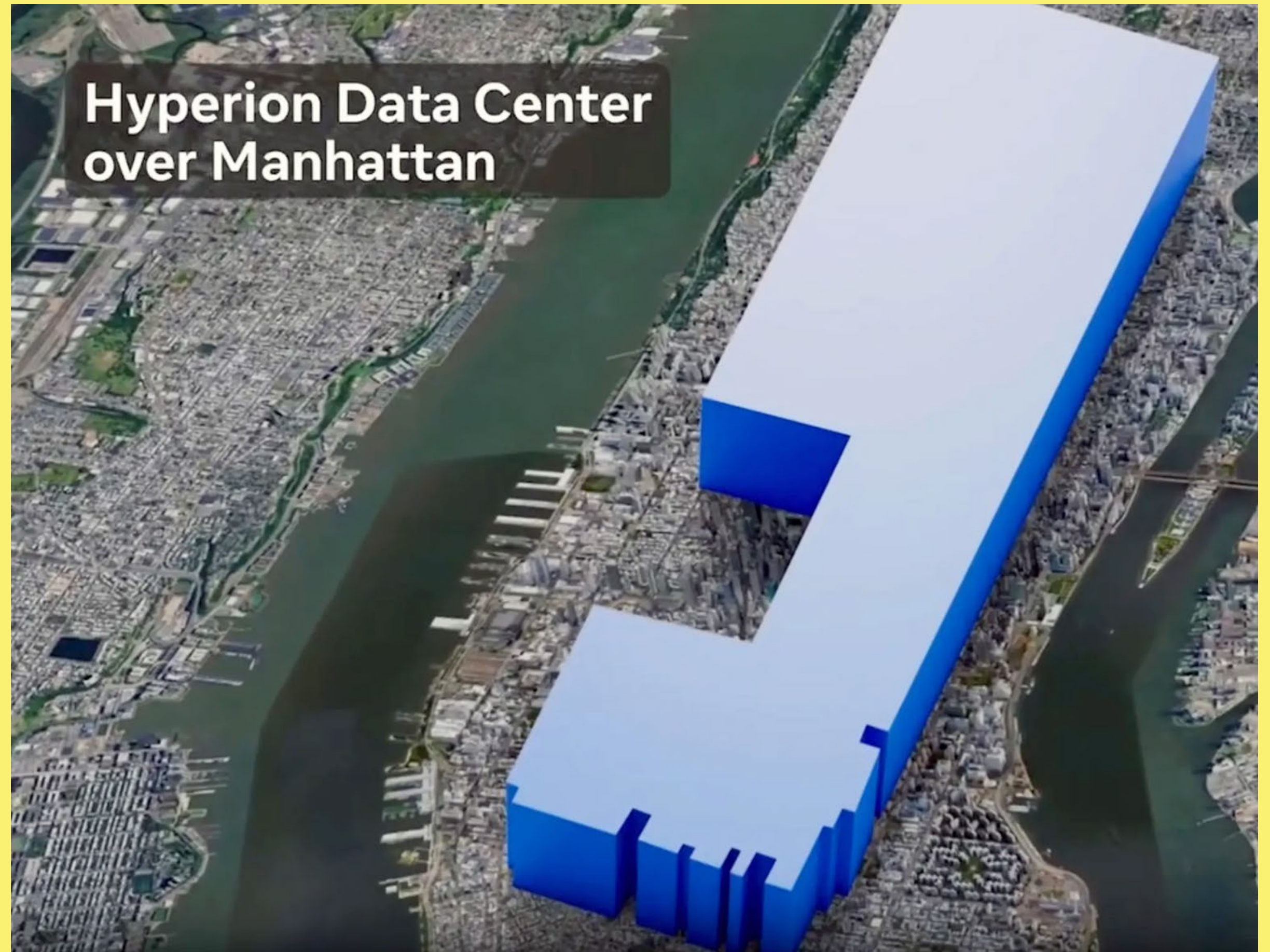
Campus Footprint: ~4 Million sq ft

Equivalent to ~70 American Football Fields

Total Power Capacity: 1.2 Gigawatts (1,200 MW)

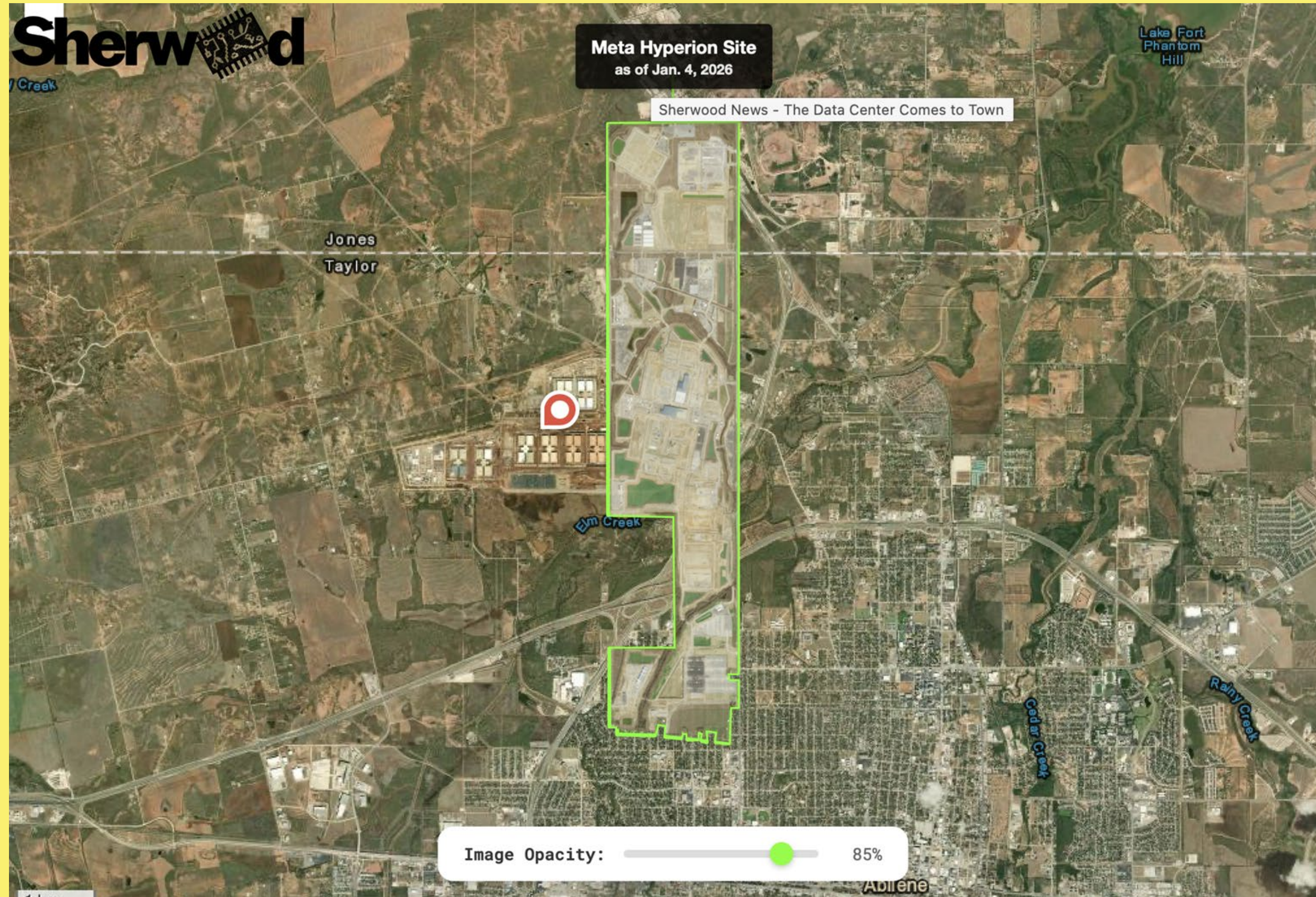
Enough to power hundreds of thousands of homes.

How Big Are Data Centers?



More Hyperion:

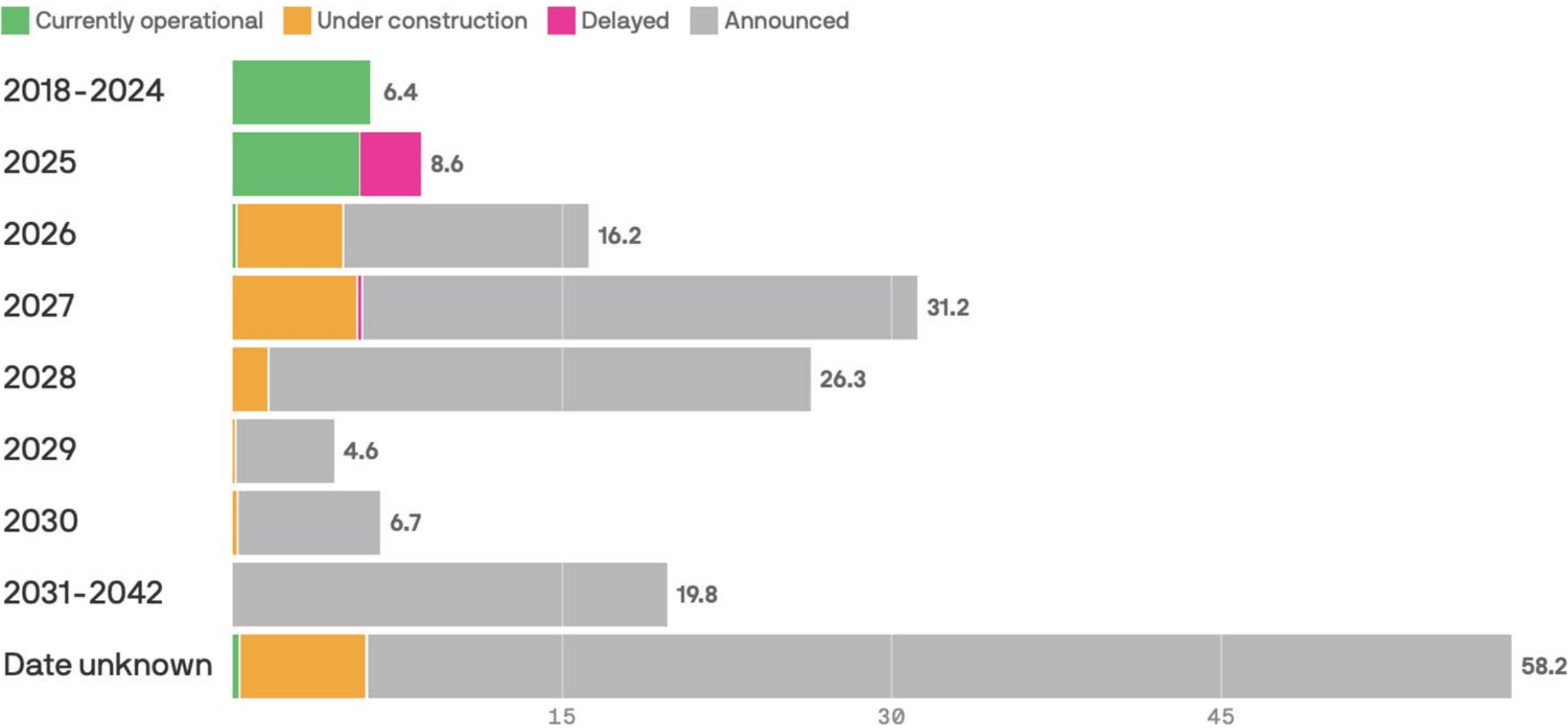
<https://sherwood.news/tech/see-for-yourself-just-how-massive-metas-hyperion-data-center-is/>



But what if they
don't all get
built?

Global data center capacity additions, by operation date

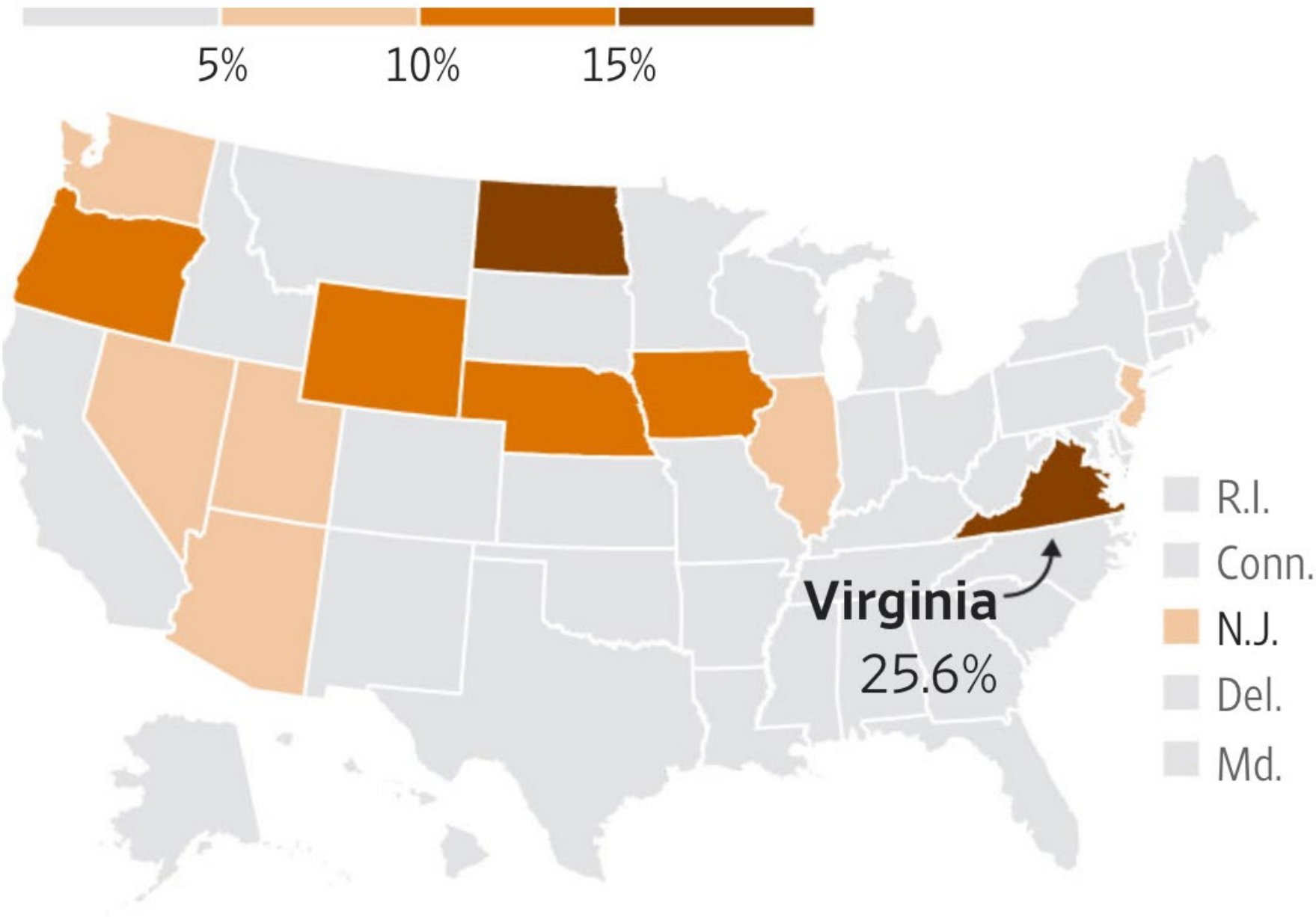
In gigawatts; As of Jan. 31, 2026



Data: Sightline Climate; Note: Includes 529 large data center projects announced since 2024 that have disclosed capacity; Chart: Kavya Beheraj/ Axios

“More than a year later, the Stargate joint venture has not staffed up and is not developing any of OpenAI’s data centers, according to three people involved in the shelved idea. In the weeks following the announcement, Stargate floundered, lacking leadership and coordination, these people said. Stargate’s three members—AI model developer OpenAI, cloud provider Oracle and Japanese conglomerate SoftBank—disagreed over who would do what and how the partnership would be structured.”

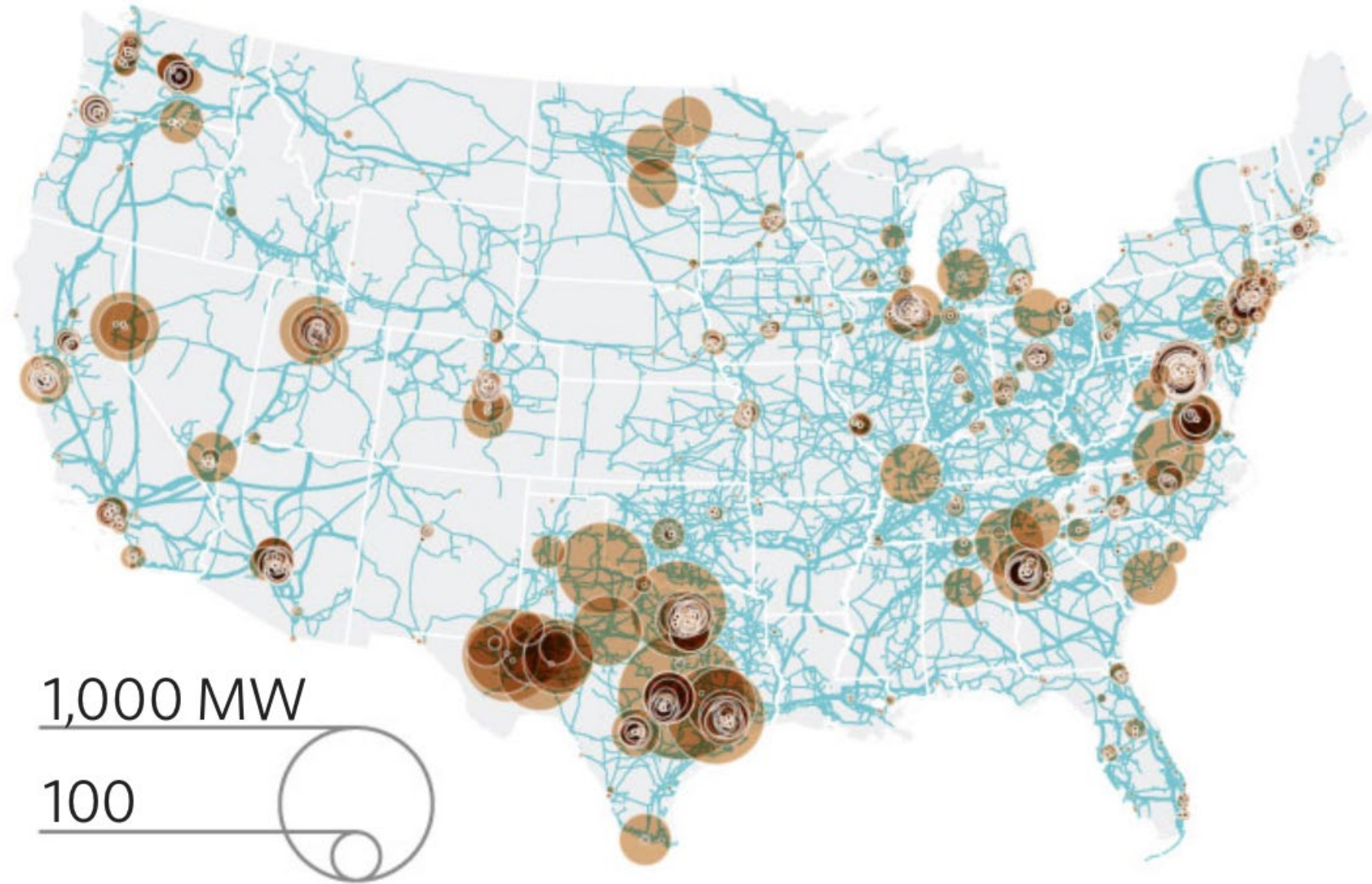
Share of electricity consumed by data centers in 2023, for each state



Source: Electric Power Research Institute
Danny Dougherty/THE WALL STREET JOURNAL

Data centers and high-voltage transmission lines in the continental U.S.

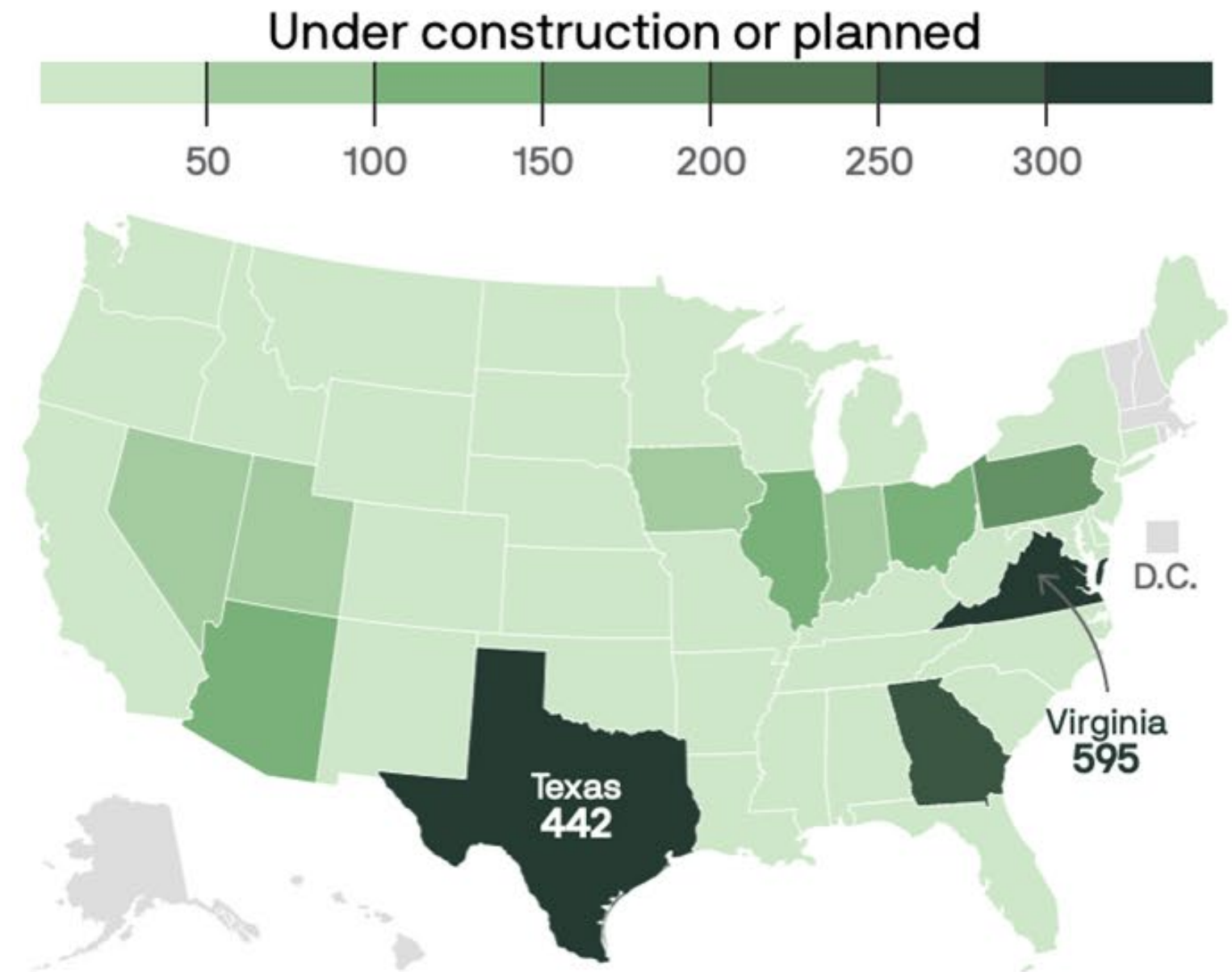
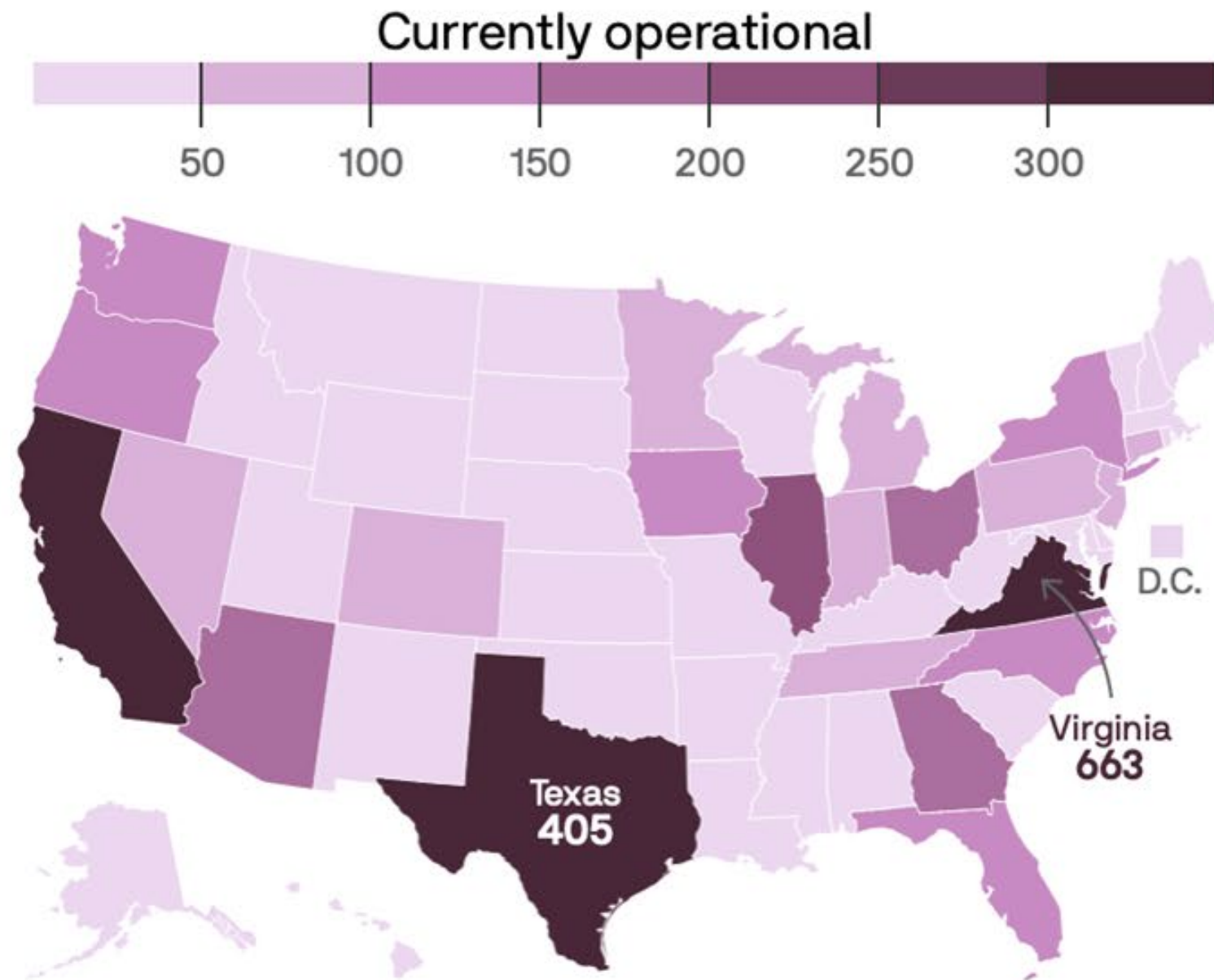
● Data centers / Transmission lines



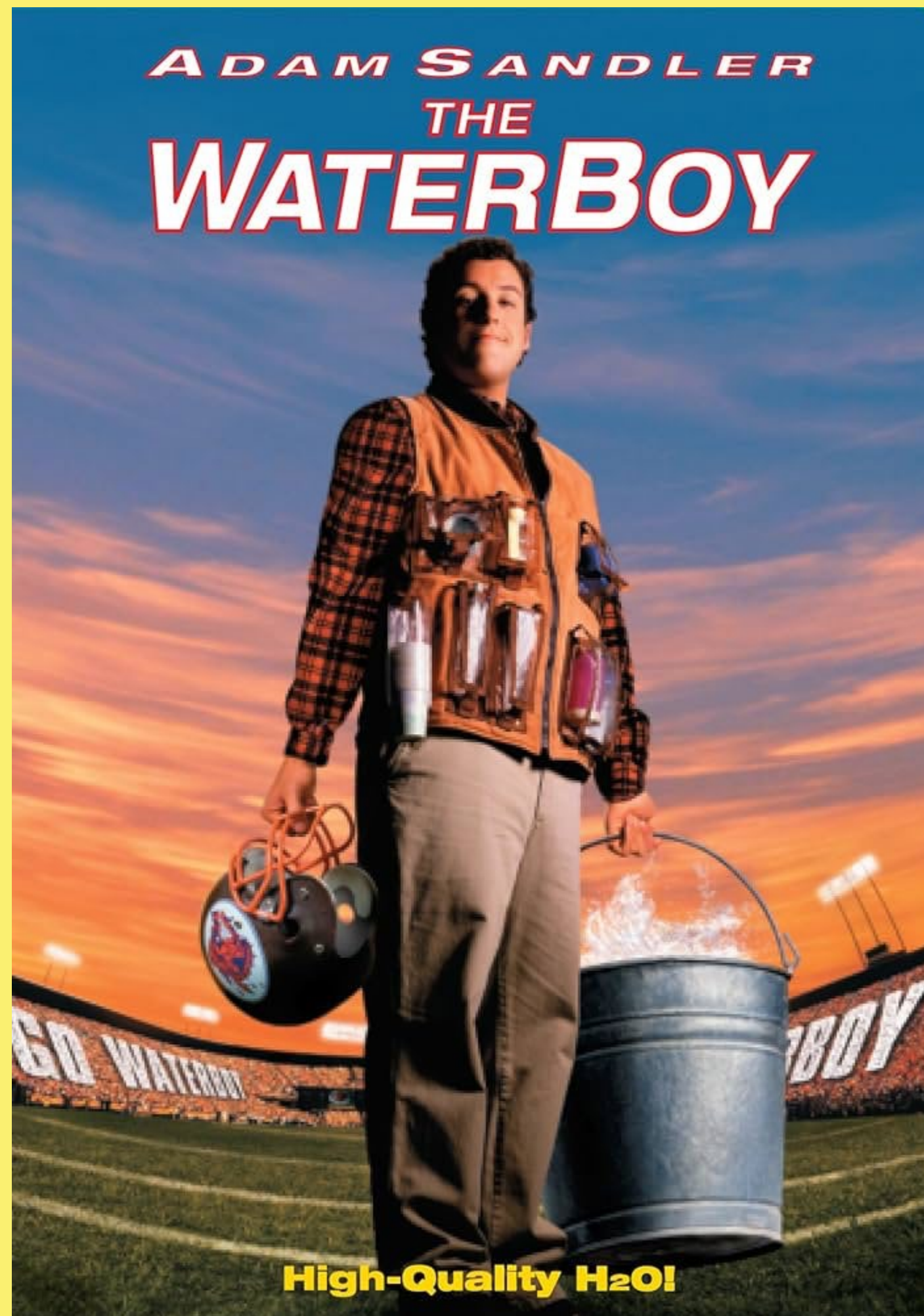
Sources: Energy Department (data centers); OpenStreetMap (transmission lines)
Danny Dougherty/THE WALL STREET JOURNAL

Current and planned data centers

As of Oct. 29, 2025



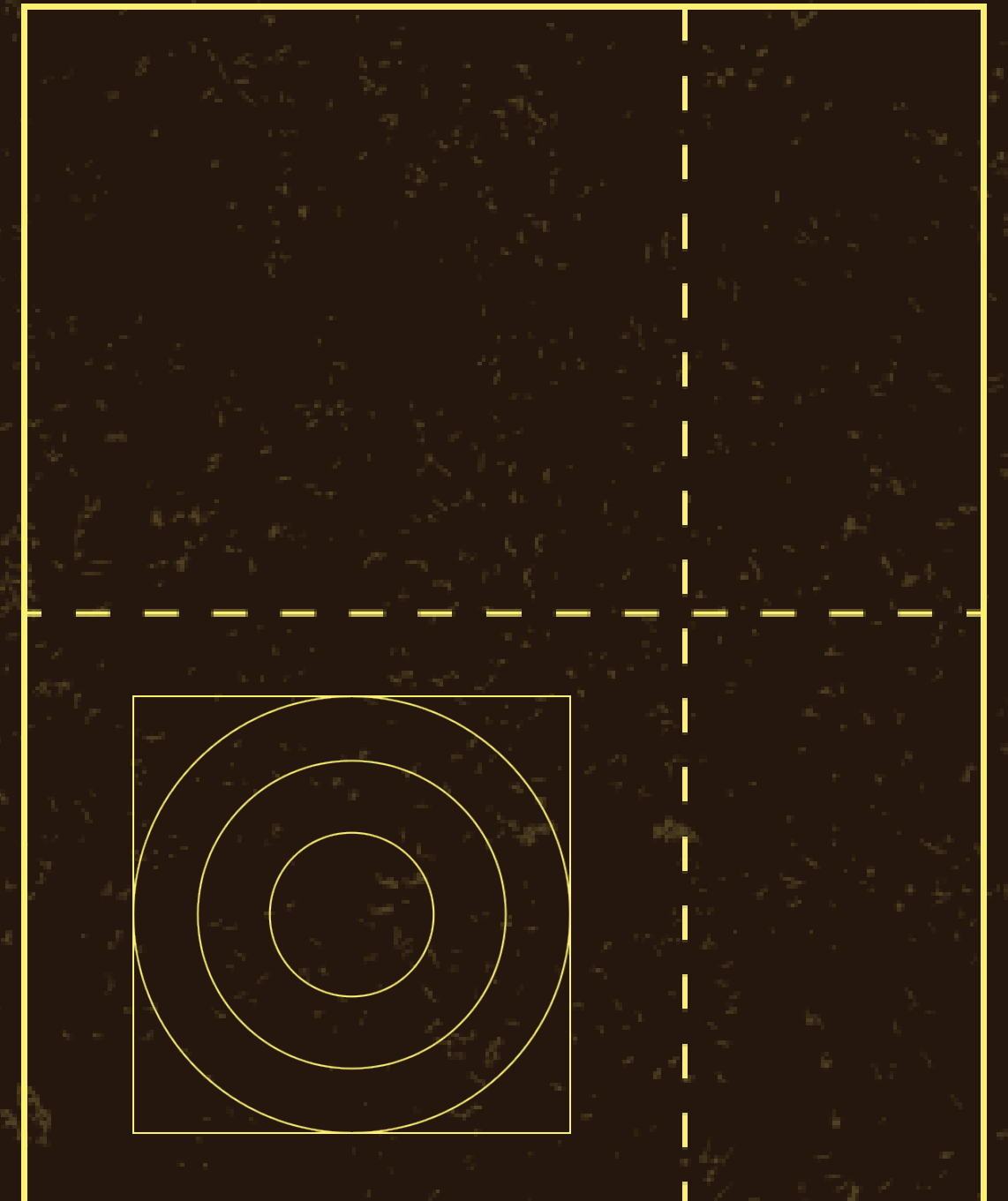
Data: [American Edge Project and Technology Councils of North America](#); Map: Axios Visuals



200mm gallons or 4.75mm barrels of water
per year per data center

pint of water per 10 AI searches

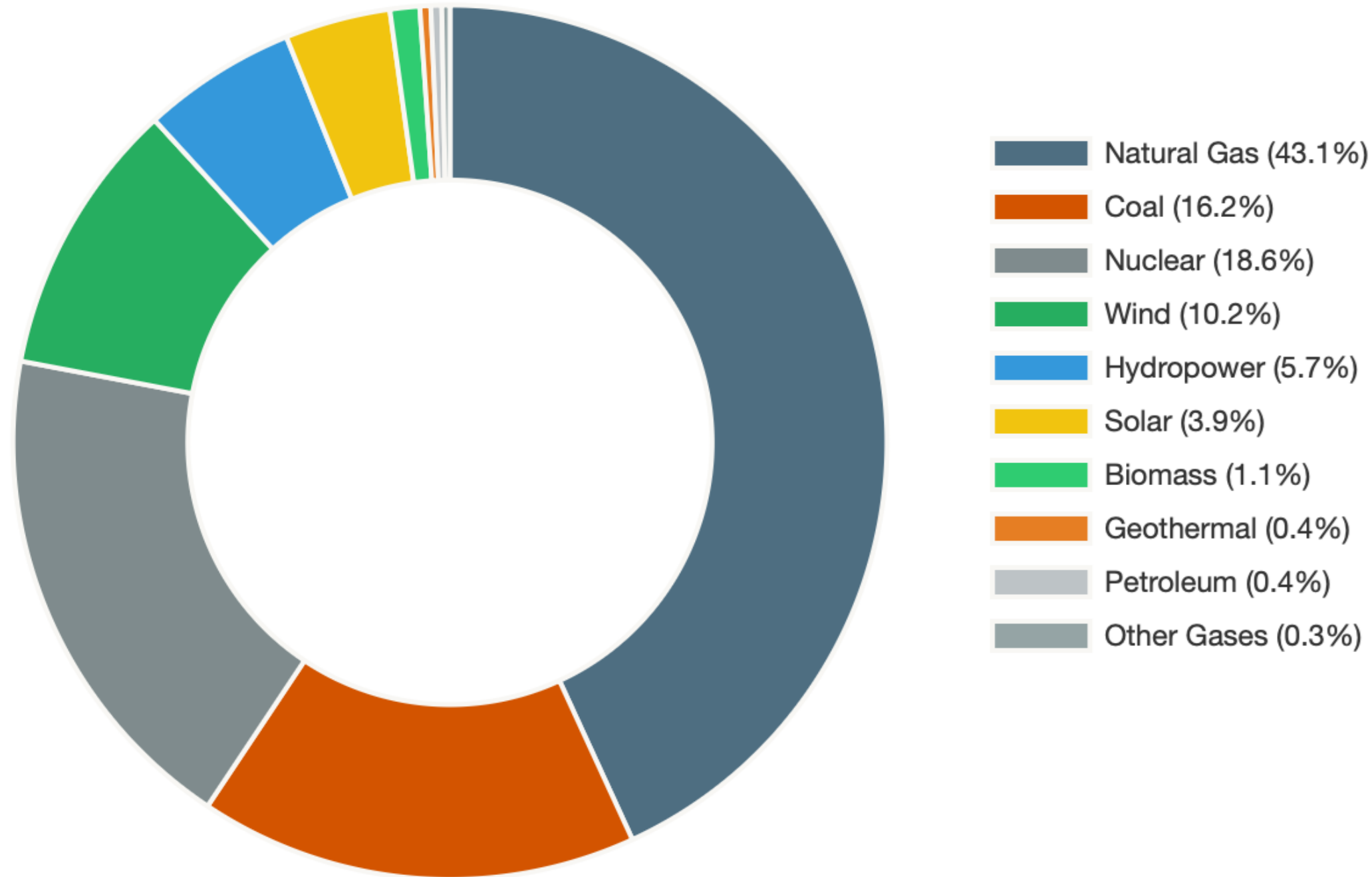
What does any of this have to do with landmen
and/ or AAPL?



"Artificial intelligence is going to be
the next fracking boom." - Mike
Sommers - American Petroleum
Institute

Sources of Electricity

U.S. Electricity Generation by Source (2023)



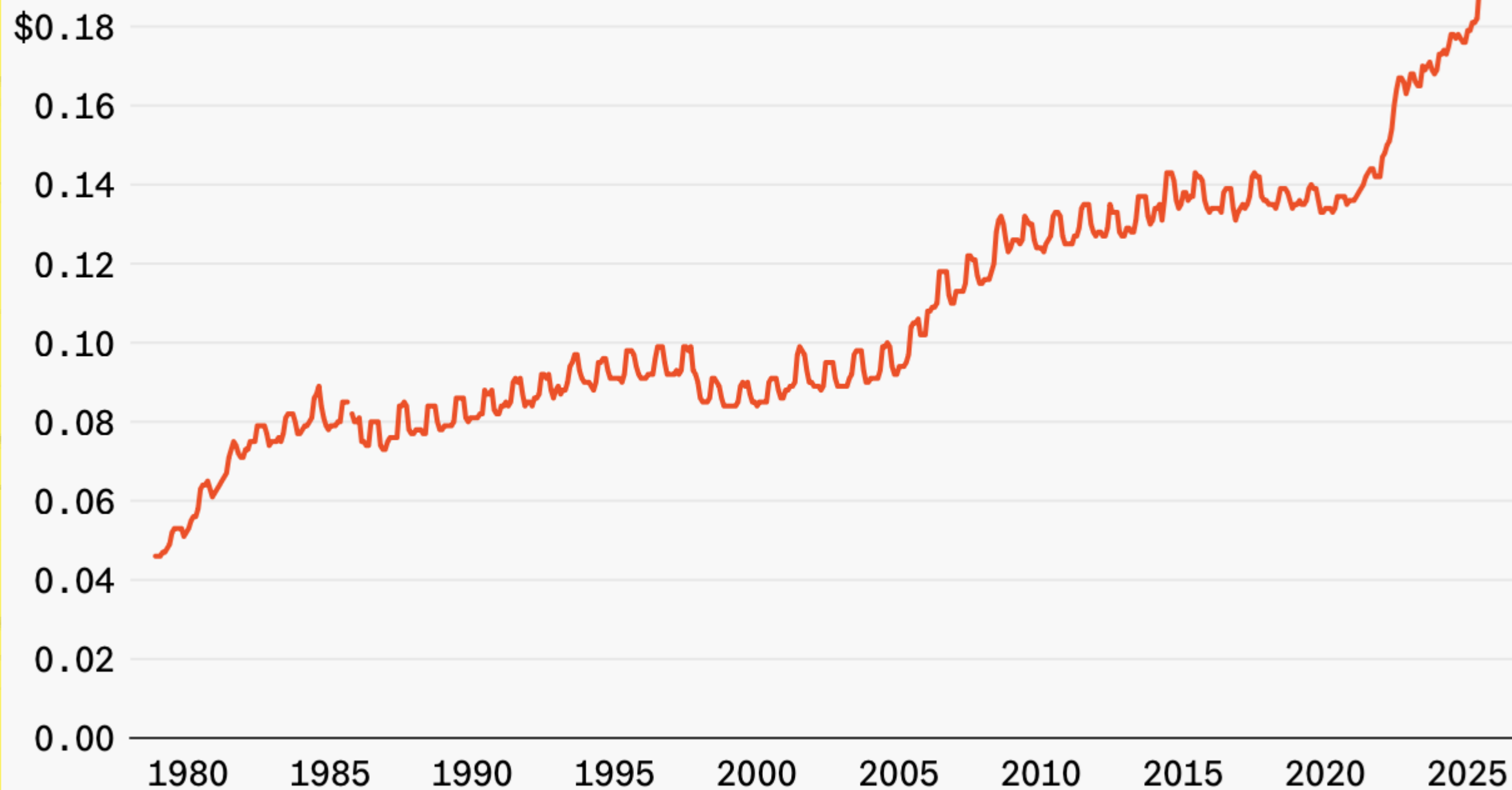
BYONCE



Rate Payer Protection Pledges

Hey ChatGPT, why is electricity so expensive?

Electricity per Kilowatt-Hour in U.S. City Average [USD, monthly]



State - by - State Concentration: Announced & Operational Projects

VIRGINIA (400+ PROJECTS)

25.6%

Loudoun & Prince William Counties form the world's largest data center hub, consuming over a quarter of state power.

TEXAS (250+ PROJECTS)

442 Planned

Leads in new gigawatt announcements due to ERCOT grid independence, abundant gas, and available land.

TIER 2 MARKETS (100+ PROJECTS)

AZ, OH, IL

Arizona (100+), Ohio (100+), and Illinois (100+) experiencing massive midwestern and sunbelt hyperscale buildouts.

State	Announced Projects	Primary Grid / Market Type	Key Growth Driver
Pennsylvania	75+ Projects	PJM / Restructured Retail	Nuclear colocation (Talen/PJM) & shale gas access
Georgia	75+ Projects	SERC / Vertically Integrated	Vogtle nuclear baseload & utility tariffs
Indiana / Iowa	75+ / 40+ Projects	MISO / Vertically Integrated	Broad flat acreage & wind energy access
North Carolina	50+ Projects	SERC / Vertically Integrated	Research Triangle technology corridor expansion

The Real Estate Broker License Trap for Non-Hydrocarbon Landwork

THE LEGAL DILEMMA

Statutory Scope Realignment

Traditional oil & gas landmen are protected by specific statutory exemptions in key energy states. However, landwork for data centers, power lines, and fiber ROW often falls directly into real estate broker licensing definitions.

NARROW MINERAL EXEMPTIONS

Oil & Gas Only Statutes

In states like Ohio, New Mexico, Oklahoma, and Mississippi, landman exemptions specifically mention "oil, gas, and mineral leases." Negotiating surface fee acquisitions or solar/substation leases can expose unlicensed landmen to penalties.

BROADER ENERGY EXCEPTIONS

Energy Source Protections

States like Texas, Colorado, and West Virginia provide broader exceptions covering rights-of-way, energy sources (solar, wind, nuclear, geothermal), and utility easements acquired for power facilities.

State Licensing Breakdown: Data Center Landwork Requirements

State	License Needed?	Key Statutory Landman / Energy Exemption Details
Texas	Exempt / Exception	Exceptions under TRELA for "minerals" and "energy sources" (geothermal, solar, nuclear, wind), and landowner entities.
Virginia	License Required	Falls under real estate licensing; limited exceptions only for landowners and regular in-house employees.
Ohio	License Required	Specific statutory landman exemption is strictly limited to oil & gas; data center landwork requires RE license.
Oklahoma	Limited Exemption	Landman exemption applies only to oil, gas, and mineral interests. Surface ROW/data center site work requires license.
Colorado	Exempt / Exception	Broad exception for oil, gas, minerals AND utility rights-of-way/easements acquired for electric generation & transmission lines.
West Virginia	Exempt / Exception	Statutory exceptions exist for minerals, easements, and utility rights-of-way (W. Va. Code § 5B-2-21b).
New York / Illinois	License Required	Strict real estate licensing requirement with no specific landman exemption for data center site acquisition.

State Legislative Shift: Ratepayer Protection Acts & Cost- Shifting Bans

OKLAHOMA 17 O.S. § 900 (2026)

Data Center Ratepayer Protection Act

Requires large load data centers to pay 100% of dedicated electrical infrastructure upgrades and mandates collateral guarantees to protect retail ratepayers.

FLORIDA SB 484 (JULY 2026)

Large Load Utility Considerations

Establishes special large-load utility tariffs (Fla. Stat. § 366.043) and integrates water management agency permitting into land use approvals.

MARYLAND UTILITY RELIEF ACT

Direct Capacity Payment Mandate

Mandates data centers directly fund transmission, distribution, and interconnection capacity upgrades, requiring PSC registration.

TENNESSEE HB 1847 / SB 2128

Infrastructure Cost Prohibition

Prohibits municipalities or electric utilities from absorbing electrical infrastructure costs incurred to serve data centers (eff. Jan 2027).

WEST VIRGINIA HB 2014

Power Generation & Consumption Act

Creates certified microgrid districts and high-impact data center zones with specific PSC rate structures and local regulation exemptions.

VIRGINIA HB 153 / HB 284

High Energy Use Permitting

Establishes state permit process for High Energy Facilities and enacts Data Center Electricity Consumption Tax in 2026 budget.

Executive Orders: Governors Halt Incentives and Enact Moratoria

NEW YORK EXECUTIVE ORDER 62

Statewide 50 MW Moratorium

Enacted July 2026 temporary statewide moratorium for data centers consuming ≥50 MW, directing a comprehensive Environmental Impact Statement.

OHIO (GOV. DEWINE – MAY 2026)

Tax Exemption Pause

Announced an immediate pause on consideration of all new data center tax exemption requests under ORC 122.175 pending energy review.

ILLINOIS (GOV. PRITZKER – JULY 2026)

Incentive Program Halt

Halted state tax incentives under the Data Center Investment Program effective July 1, 2026, due to grid strain concerns.

UTAH EXECUTIVE ORDER 2026-03

Higher Bar for Development

Issued May 2026 establishing stringent water use disclosures, grid capacity vetting, and local community benefit requirements.

NEBRASKA EXECUTIVE ORDER 26-17

Tax Incentive Freeze

Signed July 2026 halting ImagiNE Nebraska Act tax incentives for new data centers and establishing a multi-agency vetting task force.

WYOMING EXECUTIVE ORDER 2026-03

"Data Centers the Wyoming Way"

Framework guiding data center siting while protecting coal/gas baseload producers and state water rights.

Gov. Abbott calls for audits of new data centers in Texas

Governor Greg Abbott is putting a stop to all new data center projects until they are audited.

Fox - 4 News Fox - 4 News

Aug. 11, 2026, 10:24 a.m. ET

Local Zoning Friction: NIMBYism & Municipal Moratoria Surges

ALABAMA LOCAL WAVE (2026)

8 Municipal Moratoria

Leeds, Chelsea, Homewood, Springville, Cullman, Fort Payne, Fairfield, and Birmingham enacted 6–12 month moratoria or hyperscale zoning halts.

VIRGINIA LOCAL TIGHTENING

Special Exception Mandates

Loudoun County requires special exception approval; Prince William County ended by-right overlay; Fairfax County restricted noise/setbacks.

IOWA & COLORADO COUNTIES

County-Level Halts

9 Iowa counties (Linn, Dubuque, Johnson, etc.) and Colorado counties (Denver, Jefferson) enacted moratoria or banned facilities over 100 MW.

Preemption Analysis: Local Land Use Controls Prevail

Across 48 of 50 states (excluding West Virginia's certified microgrid districts under W. Va. Code § 5B–2–21b), state preemption does NOT exist for data center zoning. Municipal and county land use boards hold absolute authority over site plan approval, conditional use permits, and noise/water overlays.

Navigating the Toughpoint: Water Scarcity & Cooling Bans

ANNUAL WATER DEMAND

200 MGal

Equals ~4.75 million barrels of water annually per 100MW evaporative facility.

IDAHO CODE § 42-252

Cooling Ban

Prohibits new data centers starting after July 2026 from consumptive evaporative cooling unless municipal-supplied.

OKLAHOMA 82 O.S. 1020.15

Groundwater Limit

Imposes strict statutory bans on using groundwater for data center cooling without closed-loop zero-liquid tech.

UTAH CODE § 73-5-8.3

Mandatory Disclosure

Mandates annual water usage estimates & reporting for any "large data center facility."

Region	Legal Water Doctrine	Data Center Impact & Landman Execution Strategy
Western U.S.	Prior Appropriation ("First in time, first in right")	Must purchase/sever existing senior water rights or secure municipal effluent agreements.
Eastern U.S.	Riparian Rights (Surface adjacency)	Requires state withdrawal permits (e.g., VA VWP, GA EPD >100k GPD) and local watershed review.

Power Market Dynamics: Grid Interconnection vs Self-Generation

MARKET MODEL A: DEREGULATED

ERCOT, PJM, Ohio, Illinois

- Retail choice available; competitive power purchase agreements (PPAs).
- Allows direct colocation with power plants ("behind-the-meter").
- Subject to regional transmission operator (RTO) queue delays.

MARKET MODEL B: REGULATED

Georgia, Carolinas, Indiana, Florida

- Vertically integrated utilities control generation & distribution.
- Must negotiate specialized large-load tariffs with state PSCs.
- Utilities build dedicated infrastructure (e.g., Vogtle nuclear power).

BEHIND-THE-METER (BTM)

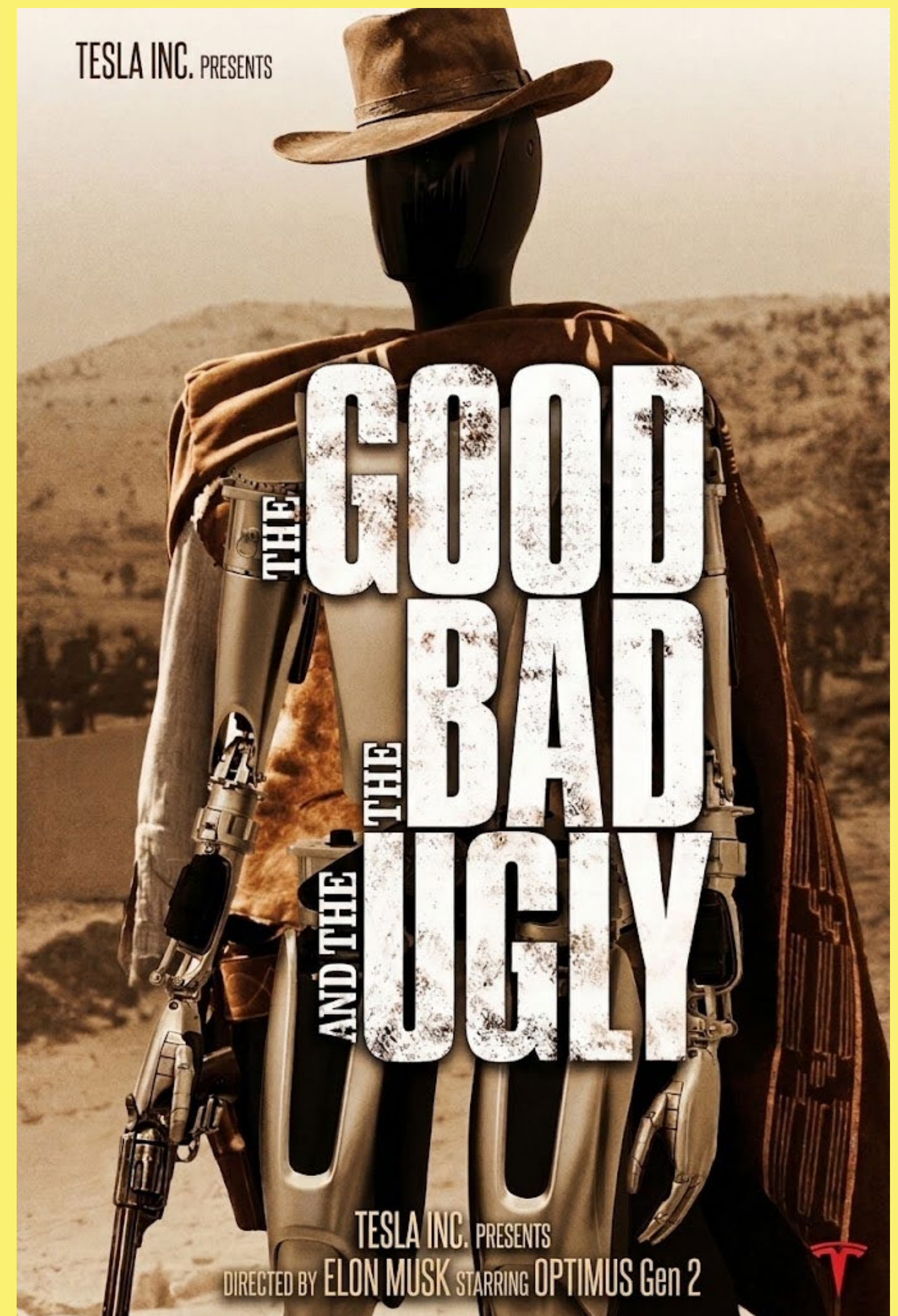
Natural Gas & SMR Nuclear

- When grid queues exceed 7 years, developers build on-site power generation.
- Requires acquiring gas lateral ROWs, compression setbacks, and air permits.
- Landmen secure fuel supply corridors and plant acreage simultaneously.

Active Litigation Matrix: Community Lawsuits & Regulatory Injunctions

State / Court	Case Name	Legal Cause of Action / Core Issue
Texas (Austin Court of Appeals)	In re Pamela Griffin v. City of Taylor	Writ of mandamus seeking to compel municipal referendum banning data centers.
Illinois (Will County Cir. Ct.)	Joliet Residents v. Joliet Tech Center	Suit filed May 2026 to block \$20B, 795-acre AI data center campus buildout.
Wisconsin (U.S. Dist. Ct.)	Ostergaard v. Microsoft Corp.	Class action suit filed July 2026 over industrial noise emissions in Mount Pleasant.
Michigan / Mississippi	Valenzuela v. Alliance Cloud / Haley v. xAI	Proposed federal class actions alleging public nuisance, constant vibration, and property devaluation.
Virginia (VA Supreme Court)	GW Acquisition v. Oak Valley HOA	Challenging Prince William County zoning board approval based on public notice defects.
Nevada (Washoe County)	NV Energy v. Tract (Landco) I	Utility seeking injunction against developer constructing private gas/diesel plants.

An AI Aside



All Energy Projects Need Landmen

01 AAPL Changes Definition of Landwork

In March 2020, the definition of landwork was broadened to include: **minerals or real property associated with or connected to energy sources.**

02 The Mineral Estate is Dominant

Surface land use for renewable energy projects and other large scale developments can be impacted if the mineral estate is severed.

03 Oil and Gas Trained Us Well

The speed, efficiency, and cost effective nature that land teams apply to traditional energy projects can be applied to any energy project

Algorithms Don't Negotiate. People Do.

Securing the Social License to operate in rural communities

Acting as the human shield, diplomat, and negotiator for the developer

Translating corporate digital ambitions into tangible local community benefits to prevent protests and political blowback





Hamm Institute for American Energy

OKLAHOMA STATE UNIVERSITY

American Energy + AI Initiative

It is important for landmen to have a seat at the table to share the value of their skills and expertise in the AI space.

The American Energy + AI Initiative is a national effort to fast-track the infrastructure and energy capacity needed to power AI, advanced computing, and 21st-century industry.

Questions?

Kyle Reynolds

kyle@rbgpermian.com or
kyle@bryantmoore.com

