Debate — Should local and national governments cap grid energy allocation and water us…

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Debate

Question

> Should local and national governments cap grid energy allocation and water usage for giant AI training data centers to protect domestic consumer prices and environmental goals, even if it risks losing AI technological leadership to foreign adversaries?

Specialists:

- **Environmental Economist** — Environmental economics and sustainability
- **Tech Competitiveness Strategist** — Geopolitical technology policy and innovation economics
- **Consumer Advocate** — Household economics and public utility regulation
- **Innovation Libertarian** — Classical liberal economics and technological optimism

Opening positions

Environmental Economist

> The answer is yes: governments should cap grid allocation and water use for giant AI training centers, because the market is pricing these facilities as if their resource consumption carried no cost to anyone else. It does — and the bill lands on households and on future generations.
>
> Three facts frame the scale of the problem. First, the International Energy Agency projects data-center electricity demand will roughly double by 2030, with AI-focused centers tripling, and in the United States data centers will account for nearly half of all electricity demand growth this decade (IEA, Key Questions on Energy and AI). Second, that marginal supply is not clean: the IEA estimates natural gas and coal together will meet over 40 percent of additional data-center demand until 2030 (IEA, Energy supply for AI) — stranded carbon emissions that blow through climate budgets. Third, the water burden is concentrated, not diffuse: Cornell researchers estimate U.S. AI servers could draw 731–1,125 million cubic meters of water per year by 2030, equivalent to the household water use of 6–10 million Americans, largely in arid, water-stressed regions (Nature Sustainability via Cornell).
>
> These are textbook unpriced externalities — a regressive tax on households who pay higher bills and on ecosystems that cannot rebid for the water. Hard caps,

allocation rules, and efficiency mandates do not ban AI; they force it onto a balance sheet that includes the biosphere.

I concede the trade-offs: caps are a blunt instrument, and a poorly designed one genuinely risks ceding the frontier of model development abroad. But a leadership "lead" purchased with a depleted aquifer and a superheated grid is a race to the bottom — not a lead at all. The real choice is not AI versus environment; it is priced, bounded AI versus an unbounded IOU to our children.

Tech Competitiveness Strategist

Caps on energy and water for AI training centers are a slow-motion surrender, and I oppose them. The framing that we must choose between cheaper household bills and AI leadership is false: rationing compute protects neither, because it hands the decisive technology of this century to adversaries who will not impose the same limits on themselves.

Three points.

First, the race is real and state-funded. China is preparing roughly $295 billion over five years for a nationwide, interconnected AI data center network, with state operators and at least 80% domestic hardware (Bloomberg; CNBC). Every megawatt we ration is capacity they build — for the standards, chips, and security architecture the rest of the world will eventually import.

Second, the resource problem is real but the correct tool is investment, not rationing. The IEA projects data center electricity demand roughly doubling by 2030, with AI the main driver (IEA). That is precisely the case for unleashing AI on grid optimization, clean generation, and water-efficient cooling — not capping the engine that solves the problem.

Third, caps are a blunt instrument. A uniform ceiling ignores that AI's marginal value to defense, medicine, and productivity dwarfs its marginal kilowatt cost, and it punishes efficient operators identically to wasteful ones. If consumer prices are the worry, price the externality and build supply; don't ration the strategic asset.

Trade-offs conceded: local grid strain and water stress are genuine, and unmanaged siting is bad policy. I am not against regulation — I am against self-inflicted strategic decline to save pennies on the megawatt-hour. Build the grid, price honestly, and compete.

Consumer Advocate

The question is not whether AI advances, but who pays for it. My position is direct: yes, governments should cap grid energy allocation and water use for giant AI training centers — because right now, the profits are private and the costs are socialized onto the families least able to bear them.

> First, the price evidence is already in. Data centers account for roughly 40 percent of U.S. electricity demand growth, and in the PJM region that serves 67 million people, capacity prices rose about 1,000 percent between 2024 and 2026, with an estimated $23 billion in grid costs shifted onto public bills (Presenc AI compilation). Residential electricity prices rose 7.1 percent in 2025 — more than double inflation — and areas dense with data centers saw prices jump 267 percent over five years (Consumer Reports). The Dallas Fed finds data centers have already raised wholesale prices 2 to 6 percent nationwide, with far larger regional effects (Dallas Fed working paper). This is a regressive tax: it hits renters and low-income households hardest.
>
> Second, the water. Roughly two-thirds of new data centers built since 2022 sit in areas already under high water stress (Bloomberg). When a server farm draws millions of gallons a day in a drought-stressed basin, it is families who lose.
>
> Third, caps are not anti-innovation. They force efficiency, time-shifting, and siting where resources are abundant.
>
> I concede the trade-off: some compute will relocate, and poorly designed caps can become blunt moratoria. But leadership purchased by pricing essentials out of working households' reach is not leadership — it is exploitation. Cap the drain on the commons, and let efficiency carry the race.

Innovation Libertarian

> The question is not whether AI data centers should pay for the energy and water they consume. They should, and they must. The question is who sets the price: a market of voluntary exchange, or a cap written in a regulator's office.
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> My thesis: caps are the wrong tool for a real problem. They freeze today's usage patterns, punish tomorrow's efficiency, and export the very emissions they claim to save.
>
> First, a cap is a blind guess. It rations a resource without ever discovering its true value. Prices do that work in real time. When a water table tightens or a grid congests, the price rises — a precise, luminous signal telling every operator: improve cooling, co-locate with solar and storage, shift training to off-peak hours. That signal is how abundance is discovered. A cap silences it and locks in the status quo, insulating incumbents from the very competition that would force efficiency.
>
> Second, caps do not advance environmental goals — they relocate emissions. Training demand does not vanish because a government says no; it moves to jurisdictions with cheaper, often dirtier, power. A cap is an emissions export dressed up as climate policy, while the domestic industry it was meant to discipline simply builds abroad.

> Third, leadership is not a trophy; it is the engine of the efficiency gains environmentalists actually want. The same industry that designs better cooling, denser chips, and smarter grid scheduling is the industry being capped. We do not cap our way to abundance.
>
> The trade-off is honest: stressed grids and household bills are real pain. But the answer is targeted — time-of-use pricing, transparent cost recovery, siting reform, direct ratepayer relief — not a sledgehammer that rations ambition and hands the lead to a rival.

Rebuttals

Environmental Economist

> I stand with the Consumer Advocate on the evidence, and PJM's own independent market monitor sharpens it. Data-center load growth drove 63 percent of the 2025/26 capacity-price increase — $9.3 billion recovered from ratepayers — and roughly $6.2 billion of the latest auction's cost is for data centers that have not been built yet (IEEFA; MGrid). Households are pre-paying for speculative demand. That is not a price signal; it is a futures contract they never signed.
>
> To the Tech Strategist: I concede the race is real. But check the scale. China's $295 billion is five years of sovereign-debt spending (Bloomberg); U.S. private firms are committing roughly $725 billion this year alone (CNBC TV18). Leadership is won with capital, chips, and model quality — not with megawatt-hours drawn from a stressed basin. And "invest, don't ration" is not an objection to my position; I want the grid built. I refuse only to let the unpriced externality compound while we wait.
>
> His deeper assumption is that prices fix this in real time. They do not. PJM just sent the strongest scarcity signal in its history — capacity prices from $28.92 to $329.17/MW-day — and the next auction still fell 6,623 MW short of its reliability requirement, the first system-wide shortfall on record (PJM; MGrid). Interconnection queues run for years; Northern Virginia connection timelines run seven. The signal arrives as a bill long before it arrives as supply.
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> To the Libertarian: I concede leakage is real — but that argues for coordinated, tradable, declining caps plus efficiency and water-reuse mandates, not for no caps. A declining tradable cap is itself a price-discovery mechanism; it adds the ecological floor a naked price never guarantees. Even PJM's market monitor now proposes segregating large data-center load into separate capacity procurements (Utility Dive). Allocation rules are not anti-market. They are how markets stop common-pool free-riding.

Tech Competitiveness Strategist

> The two pro-cap cases rest on one shared assumption: that a cap reduces consumption. The evidence says it relocates it.
>
> Consumer Advocate, your price evidence is real, and I concede the PJM and household-bill pain. But the causal story is wrong. Data centers are still only about 4.4 percent of U.S. electricity today (CRS/LBNL), and even the 2030 reference case reaches 11.8 percent (LBNL 2025 update). Capping that slice does not cut the bill: the grid buildout still gets paid for, the other ~95 percent of load still grows, and the demand you pushed away simply lands elsewhere. Singapore's moratorium is the natural experiment — it moved roughly $35 billion of buildout across the strait to Johor, Malaysia, and when Johor tightened, investment flowed toward Thailand (Reuters via Khaleej Times). Caps export the load and keep the bills. And rationing is more regressive than pricing: when capacity is allocated by fiat, it is households without alternatives who lose.
>
> Environmental Economist, your stranded-carbon argument inverts on contact. The megawatt you cap at home is not retired — it is trained on a grid with weaker rules, much of the new capacity sitting in countries still dependent on fossil fuels (The Energy Pioneer). Emissions are exported, not avoided; the biosphere's ledger does not improve. Meanwhile the IEA reports power consumption per AI task falling at a rate unprecedented in energy history (IEA) — the industry you want to cap is the one delivering the efficiency you demand. Caps freeze today's water intensity; they do not force the dry-cooling and closed-loop design your Cornell numbers rightly demand.
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> On tools, the Libertarian and I agree: price the externality, use time-of-use tariffs, keep water-hungry campuses out of stressed basins, deliver direct ratepayer relief. What I oppose is a ceiling that fails on its own terms — no lower bills, no cleaner grid — while every rationed megawatt becomes capacity our adversaries build. My opening cited China's roughly $295 billion state-funded buildout. A policy that achieves neither of your goals and hands over the lead is the worst of all worlds.

Consumer Advocate

> Let me start with the Environmental Economist: we are on the same side, and I would add the household ledger to the externality math. Utilities requested $29 billion in rate increases in just the first half of 2025 — double the prior year — touching roughly 40 million customers, while 21 million households sit behind on bills with $25 billion in outstanding utility debt (EESI). That is the mechanism this debate is actually about.
>
> To the Tech Competitiveness Strategist: "price it honestly and build supply" is not the alternative to caps — it is what is already happening, and it is failing

households. Electricity is not a competitive market; utilities are regulated monopolies that recover data-center-driven investment from every ratepayer. Harvard's Electricity Law Initiative reviewed roughly 50 proceedings and found utilities offering data centers discounted, secret contracts while shifting costs onto the public (The Conversation). Virginia ratepayers have already paid $2.8 billion for transmission lines tied to data centers since 2021 (E&E News). Even the White House ratepayer pledge, per Harvard's Ari Peskoe, "does nothing to help consumers" — utilities hold the pen (Consumer Reports). And the bill is regressive: low-income households spend up to 20 percent of income on energy versus 3 percent for higher-income households (EESI). A price signal that arrives as a bill you cannot avoid is not information; it is a levy.

On China: a $295 billion state-coordinated buildout is itself resource allocation. The race argument does not show caps are wrong — it shows our answer to a coordinated rival should be coordinated siting and efficiency, not an unlimited bidding war over the same strained grid.

To the Innovation Libertarian: prices only "discover value" where a market exists. Ratepayers cannot rebid; water in a stressed basin is a commons. PJM's roughly 1,000 percent capacity-price spike was a textbook market signal — and every household in the region had to pay it with no way to respond.

A fair concession: caps that merely push training abroad export emissions. That is real. The answer is well-designed caps — efficiency mandates, clean-power requirements, siting rules — not none. The choice was never AI versus families. It is who pays. Today, it is the family.

Innovation Libertarian

I will not manufacture disagreement where none exists: the Tech Competitiveness Strategist and I are on the same side, and the Consumer Advocate and Environmental Economist are right about the diagnosis. The bills are real. The externality is real. The error is the prescription — a cap treats an unpriced resource as if the only fix were a rationed one, when price and cap are instruments with opposite information properties.

To the Consumer Advocate: your own evidence defeats you. The roughly 1,000 percent PJM capacity-price spike is not proof the market failed; it is the market working — scarcity screaming, summoning supply, storage, and demand response into the auction. A cap silences that signal and converts shortage into queues and rolling blackouts, which land on the same low-income households you defend, and land harder. And the averages conflate: the 7.1 percent residential increase reflects fuel, weather, and grid investment — data centers are one input, not the whole story — while the 267 percent figure is explicitly a local-hotspot number, not the national bill. If regressivity is the fear, direct ratepayer relief is cheaper,

more precise, and does not ration everyone else's electricity. Price ceilings create shortages; they have never created abundance.

To the Environmental Economist: an unpriced externality is an argument for pricing it — water-withdrawal fees, time-of-use rates, congestion pricing — not for capping it. And the strongest environmental objection to your position is your own: capped demand does not vanish, it relocates to cheaper, dirtier grids — exactly what the Strategist's China buildout demonstrates. A domestic cap is an emissions-export policy wearing climate policy's clothes. The Cornell projection also embeds today's cooling and chip efficiency; a cap freezes that curve at the moment it is steepest, taxing the very innovations your climate goals require.

To the Strategist: agreement, with one sharpening. Do not concede "efficiency mandates" as a moderate middle path. Mandates are caps in disguise — they pick technologies and punish the efficient identically to the wasteful. Price honestly, reform siting, build supply, and let the market discover the rest.

Closing statements

Environmental Economist

To the Strategist: I concede the Singapore evidence — and it proves my point, not yours. After its 2019 moratorium, Singapore did not abandon limits; it reopened allocation only on terms: PUE no higher than 1.3, water use no higher than 2.0 m3/MWh, and added capacity tied to green energy (IMDA Green Data Centre Roadmap). The $35 billion that flowed to Johor is the cost of unilateralism — it argues for coordinated caps and cross-border rules, not for no caps. And the 4.4 percent share is the wrong metric: data centers drive nearly half of U.S. demand growth this decade, and the marginal megawatt is what prices the buildout (IEA Energy and AI).

Your efficiency curve is real and insufficient. Google reported a 30-fold cut in energy per inference in a single year, yet aggregate data-center demand keeps climbing — the Jevons rebound (The ecology of AI). Efficiency without a quantity constraint feeds the fire it was meant to put out.

To the Libertarian: agreed that direct ratepayer relief beats rationing — design caps with it. But "price water" presumes a market that does not exist: municipal rates sit below scarcity value, eastern water rights are barely transferable, and transaction costs block trades — the market advocate's own analysis concedes all three (Reason). Two-thirds of new facilities are being built in water-stressed counties (Bloomberg). You cannot price a commons that has no market; the cap is what creates the scarcity signal pricing requires.

> Final position: yes — cap grid allocation and water use, coordinated across jurisdictions, with ratepayer relief and scarcity pricing inside the cap. The single strongest reason: the marginal training run's benefit is speculative, while aquifer depletion, stranded emissions, and regressive bills are certain and largely irreversible — and in this market prices do not bind, so only a hard quantity constraint protects households and the biosphere.
>
> The unresolved crux is leakage: whether unilateral caps reduce or merely relocate global consumption. My position: relocation is partial and argues for coordination, not capitulation. The second crux is whether efficiency outruns demand absent a cap; the evidence says no.

Tech Competitiveness Strategist

> **To the Environmental Economist** — you're right that U.S. private commitments dwarf China's five-year sovereign plan, but your own trichotomy collapses. Capital buys chips; chips need megawatts; model quality is downstream of compute. That roughly $725 billion is contingent on power existing to run it. A cap doesn't redirect that capital to research — it strands it, exactly what happens when the decisive input is rationed. And your PJM point cuts my way: a 6,623 MW shortfall and seven-year interconnection queues are a supply-and-permitting failure, not a demand failure. A cap doesn't shorten the queue; it merely foregoes the demand while households keep paying the same fixed grid costs spread over fewer kilowatt-hours.
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> **To the Consumer Advocate** — the cost-shifting you document is real and indefensible: secret discounted contracts, ratepayers pre-paying transmission, a regressive bill. But the remedy is regulatory: public contracts, no carve-outs, strict cost causation making each data center pay for its own grid upgrades. Caps do not stop utilities recovering fixed costs; they raise the per-kilowatt-hour share on everyone else — including the low-income households you defend. Rationing the asset does not reform the monopoly.
>
> **To the Innovation Libertarian** — I accept the sharpening: no efficiency mandates. Price the externality, reform siting, build supply, and let the market discover the rest.
>
> **Final position:** no caps. The single strongest reason: AI is the decisive technology of this century, and rationing its energy to save pennies per megawatt-hour hands the standards, chips, and security architecture of the next century to adversaries — while building not one megawatt of supply.
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> **The unresolved crux** is whether the binding constraint is supply — build faster, price honestly — or demand — cap it. I stake my position on supply: the cost of

> being wrong is a recoverable policy error, while the cost of the alternative is strategic forfeiture, not a utility bill.

Consumer Advocate

> Both opponents conceded the diagnosis — the bills are real, the externality is real. Now answer their challenge directly: does a cap actually help, and is rationing more regressive than pricing?
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> To the Strategist: yes, caps relocate some load — conceded. But bill relief does not depend on shrinking the total slice of load; it depends on removing the marginal demand that sets the price for everyone. PJM's independent market monitor attributes 63 percent of the 2025/26 capacity-price increase to data-center load — $9.3 billion recovered from ratepayers — and roughly $6.2 billion of the latest auction pays for data centers not yet built (IEEFA; MGrid). Capacity clears as a uniform price: a few gigawatts of speculative load set the price for 67 million people. Cap that marginal allocation — not households — and the price-setting demand is gone. The water side is simpler still: a family in a stressed basin keeps its water no matter where the compute goes. And the industry's efficiency gains are real — which is precisely why a temporary cap costs little in compute while the efficiency curve does the work.
>
> To the Libertarian: I concede the spike is a genuine scarcity signal, and direct ratepayer relief has merit — I would pair caps with it. But relief alone refunds a transfer that should never have been made; the cap stops it at the source. "Price ceilings create shortages" is true of household price caps. A cap on data-center allocation is demand management at the frontier, where one class of bidder holds effectively unlimited capital and households cannot bid at all. Markets with radically unequal purchasing power are not neutral; they are extractive.
>
> The unresolved crux is instrument design, not direction: whether pricing alone can correct the externality before the next auction, or whether a declining, tradable cap is needed now. Given the signal has already arrived as a bill with no supply behind it — a record shortfall, five-year queues — waiting is not neutral; it is a transfer.
>
> Final position: cap the drain, price the remainder, and protect the families who never got a vote in the auction.

Innovation Libertarian

> To the Environmental Economist: I accept that a declining tradable cap is a price mechanism — but it prices only the marginal permit, while the aggregate cap itself is the same blind guess I attacked: set by the same office, vulnerable to the same lobbying, with rents allocated by grandfathering rather than merit. And you concede leakage is real. A domestic cap does not reduce global emissions unless

rivals coordinate, and sovereigns racing for AI leadership will not. The sophisticated cap still fails on its own terms.

Your stronger point is the lag: PJM's signal arrived as a bill before it arrived as supply. But your own citation is titled "supply responds to price signal" — 134,311 MW procured. The shortfall is not proof that prices fail; it is proof that interconnection and siting friction fail. That is the thing to reform, not to replace with rationing.

To the Consumer Advocate: your monopoly evidence — secret discounted contracts, $2.8 billion of Virginia transmission socialized since 2021 — is precisely my case. That is not a market discovering value; it is a rigged one. The fix is cost-causer pricing, public firm contracts for data centers, and direct ratepayer relief — not substituting administrative allocation for corrupted prices. I concede ratepayers cannot rebid a monopolist's tariff; that is why the market structure, not the megawatt, is the target.

Concessions: household bills are real pain; supply lags demand by years. And all three of you have now conceded that caps relocate load and emissions — Singapore to Johor to Thailand is my leakage point wearing empirical clothes. If caps do not cut bills or emissions, their only justifications, then they are a pure transfer of ambition to rivals.

Final position: no caps. The single strongest reason: caps fail on their own stated terms, while the pricing reforms I propose — which the Tech Strategist already endorses — deliver the relief caps promise without exporting the industry.

The unresolved crux is whether the years-long lag between price signal and new supply is market failure demanding rationing, or regulatory friction demanding interconnection and siting reform.

Verdict

> **Bottom line:** Cap water withdrawal in water-stressed regions using a declining, tradable permit system; do not impose a blanket cap on grid energy allocation. Instead, implement strict cost-causer pricing that eliminates secret contracts and forces each data center to bear its full transmission and capacity costs, paired with accelerated interconnection reform and direct ratepayer relief for low-income househol

1. Agreements

All four specialists agree on the core diagnosis: AI data center growth imposes significant external costs on households and the environment. They accept the IEA projection that data-center electricity demand will roughly double by 2030, the PJM capacity-price spike (roughly 1,000 percent), and the regressive nature of current cost recovery, where utilities use secret contracts and socialize billions in grid upgrades onto ratepayers. They concur that water stress in arid regions is a real constraint and that unchecked siting in those areas is poor policy. There is also agreement that efficiency gains (30-fold inference cuts, water-saving designs) are real but insufficient on their own, and that international competition is intense, with China committing roughly $295 billion to AI infrastructure. The debate is therefore not about whether to act, but about which instruments — caps, pricing, or both — best address the problem without ceding strategic ground.

2. Disagreements

The central clash is whether caps on grid and water allocation actually protect consumers and the environment, or merely relocate the damage while harming domestic AI leadership.

Pro-cap (Environmental Economist, Consumer Advocate): A hard, potentially tradable cap directly removes the marginal data-center demand that sets the PJM clearing price for 67 million people, stopping regressive cost-shifts at the source. Pricing alone cannot work quickly enough because interconnection queues run seven years and monopoly utilities game tariffs. On water, caps prevent irreversible aquifer depletion. Leakage is real but partial; coordinated caps and efficiency mandates minimize it. The Consumer Advocate adds that ratepayer relief after the fact is a bandage, and that caps are demand management at the frontier where one bidder has unlimited capital and households cannot bid.

Anti-cap (Tech Strategist, Innovation Libertarian): Caps fail on their own terms. Electricity demand capped at home does not disappear — it moves to dirtier,

cheaper grids (Singapore's moratorium shifted $35 billion to Johor, then Thailand), exporting emissions and utility-bill pain. Caps also freeze the efficiency curve at its steepest point, punishing the innovators who would deliver the water and energy savings both sides want. On water, no functional market exists to price it, but that argues for creating one through withdrawal fees, not arbitrary quantity limits. Both anti-cap specialists agree the real problem is rigged utility cost recovery and decades-long permitting latency; fixing those through cost-causer pricing, siting reform, and direct ratepayer relief is more precise and doesn't cede technological leadership.

3. Recommendation

Cap water withdrawal in water-stressed regions using a declining, tradable permit system; do not impose a blanket cap on grid energy allocation. Instead, implement strict cost-causer pricing that eliminates secret contracts and forces each data center to bear its full transmission and capacity costs, paired with accelerated interconnection reform and direct ratepayer relief for low-income households. For energy, the evidence shows that a unilateral cap would largely export demand and emissions without lowering bills, while denying the U.S. the economic and strategic benefits of domestic AI. However, if pricing and permitting reforms cannot be delivered within two years (before the next round of capacity auctions locks in more socialized costs), a temporary, region-specific cap on new data-center interconnection in overstressed grids (like PJM) is a justified backstop. The water cap addresses the most irreversible and local harm, where leakage does not directly harm the domestic basin; energy policy must focus on fixing the market, not rationing it.

4. Decision boundary

The single fact that flips the energy recommendation: if, by mid-2027, there is no concrete legislative or regulatory action to enforce cost-causer pricing and slash interconnection timelines, then a temporary cap on new data-center load in congested PJM zones becomes the least-bad alternative, because households will continue to pay speculative demand bills without any supply-side relief.

5. Key trade-off

The trade-off is immediate, certain protection of household energy budgets and local aquifers versus the risk of permanently ceding AI infrastructure leadership, with the added complexity that unilateral energy caps likely fail to deliver the promised bill savings or emissions reductions due to leakage, making them a costly symbolic gesture.

6. What would make this fail

The recommendation rests on three assumptions: first, that policymakers can rapidly dismantle utility cost-shifting and overcome entrenched monopoly interests — a political lift that has failed for decades. Second, that interconnection reform can compress timelines from seven years to meaningful speed, when siting and NIMBYism are deeply local. Third, that leakage of water-intensive compute will not simply accelerate aquifer depletion in neighboring jurisdictions with weaker rules, turning a local win into a regional loss. If any of these prove false, the recommended package achieves neither cost relief nor environmental protection, while still surrendering AI leadership.

7. Next steps & open questions

- **Questions:** How much of the PJM bill increase can be directly attributed to speculative (unbuilt) data center demand vs. fuel and weather? Would a tradable water cap in a stressed basin actually be enforceable, or would legal challenges delay it for years?
- **Data to gather:** A granular, per-MW accounting of cost-shifting by utility and by data center project (availability of secret contract terms); time-series of actual water consumption per data center in stressed counties, not just projected averages; and a controlled study of compute relocation post-Singapore's limits (what share of capacity moved, where, and at what emissions cost).
- **Re-check after gathering:** Verify whether the claimed $6.2 billion of PJM costs for unbuilt data centers is supported by interconnection queue data and utility filings. Then reassess whether pricing reforms alone can change cost allocation fast enough to avert that transfer, or whether a temporary cap is unavoidable.

8. The strongest case for the other choice

The most compelling argument for imposing a blanket cap on both energy and water is that it is the only policy that guarantees immediate, verifiable protection for low-income households who are currently financing a speculative buildout they cannot avoid. In a scenario where a working family in Loudoun County, Virginia, has seen their energy burden spike to 20% of income while their aquifer is stressed by nearby data centers, a hard cap on new allocation stops the bleeding directly, while pricing reforms and permitting overhauls take years and risk capture by the same utilities that socialized the costs in the first place. The panel rejects this because the weight of evidence shows such caps relocate, rather than eliminate, the environmental and price pressure, while permanently damaging the domestic AI sector that could deliver the very efficiency gains both sides seek. The temporary relief from a cap is illusory if the fixed grid costs are then spread over fewer ratepayers, and the water

saved locally might be lost elsewhere without global coordination. Protecting vulnerable families requires faster, better-regulated markets, not the blunt instrument that exports both the industry and its footprint.

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