

Aligning America's AI Infrastructure Strategy

Tanya Das, Ph.D.
NSF Compute-Energy Nexus Workshop
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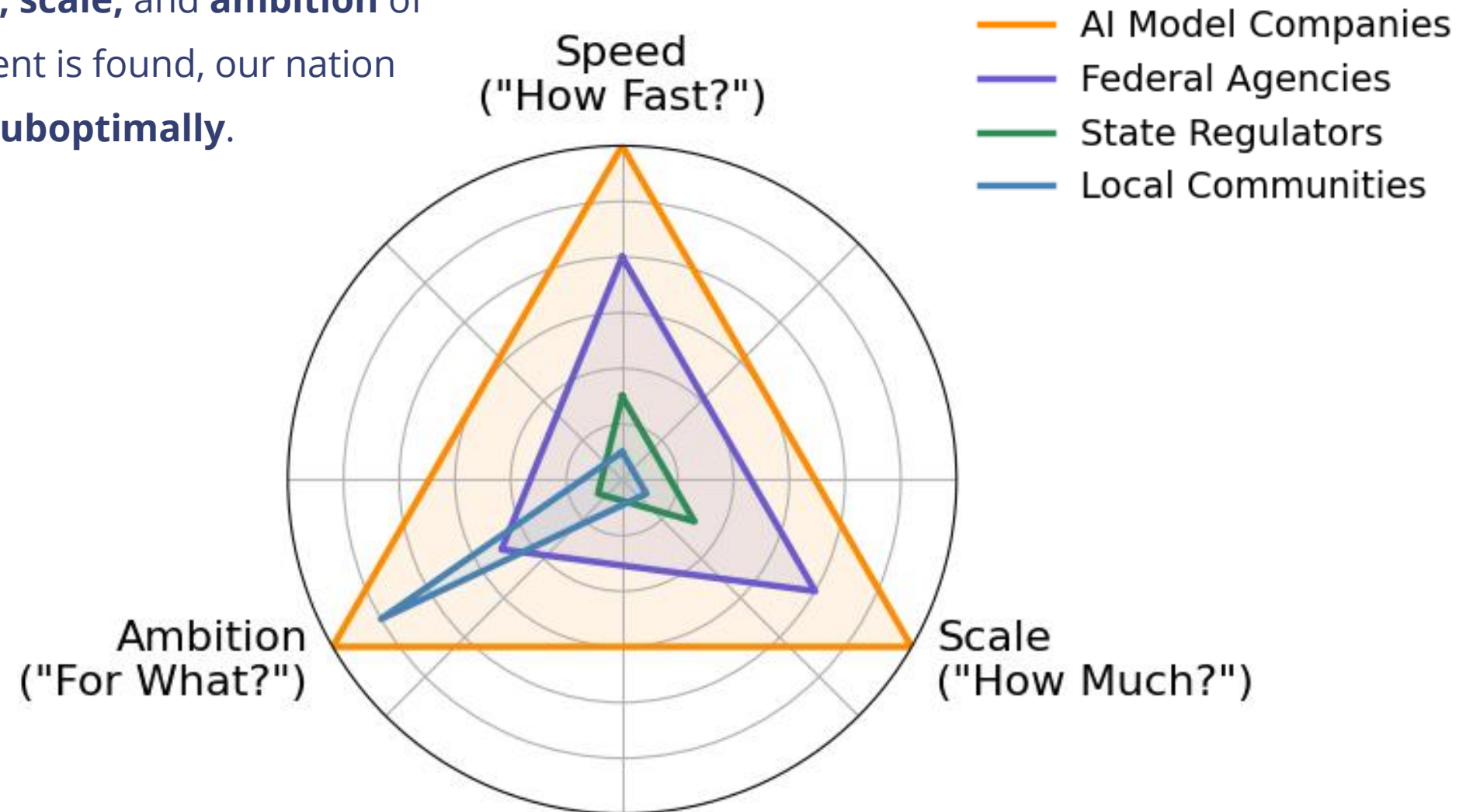


The AI Infrastructure Challenge

Differing priorities and timelines

State of play:

Key decisionmakers disagree on **speed**, **scale**, and **ambition** of AI infrastructure buildout. Until alignment is found, our nation will build AI infrastructure **slowly** and **suboptimally**.



The AI Infrastructure Challenge

Differing priorities and timelines



Stakeholder Misalignment

Disagreement on “how”, “how much”, and “for what”



Federal Policymakers

Promoting **rapid, large-scale** AI infrastructure deployment



January 2025: President Trump announces **Stargate Initiative**, a \$500 billion investment in AI infrastructure



PRESIDENTIAL ACTIONS

LAUNCHING THE GENESIS MISSION

Executive Orders | November 24, 2025

November 2025: President Trump announces signature AI initiative, the **Genesis Mission**

Through the **U.S. Department of Energy**, the Mission will address 3 key challenges of national importance using AI:

- American energy dominance
- Advancing discovery science
- Ensuring national security

Stakeholder Misalignment

Disagreement on “how”, “how much”, and “for what”



State Governors

Balancing economic development goals against legislator concerns



Youngkin vetoes bill to require site assessments for data centers

The bill would have mandated examining sound volume within 500 feet of schools and residences, along with measuring potential effects on ground and surface water, agriculture resources, parks, registered historic sites and forest land on or around proposed facilities.



by **Tad Dickens**
May 6, 2025

GEORGIA RECORDER

Governor vetoes pausing data center tax breaks, homestead exemption bump and higher ed assistance

BY: JILL NOLIN AND ROSS WILLIAMS - MAY 8, 2024 1:00 AM



Statehouse NEWS BUREAU™

Following DeWine's veto, sales tax break for Ohio data centers survives for now

The Statehouse News Bureau | By **Sarah Donaldson**
Published August 8, 2025 at 3:50 PM EDT

Stakeholder Misalignment

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State Regulators

Balancing **traditional utility planning** frameworks to power **rapid, concentrated loads** while prioritizing **grid stability and ratepayer protection**



July 2025

Ohio PUC requires new data center customers to guarantee pay for electricity usage for up to 12 years, protecting ratepayers from bearing costs of speculative data projects.

November 2025

Georgia elects 2 Democrats to state PUC for the first time in twenty years, following rising concerns about high electricity bills.

November 2025

Virginia SCC approves new rate class for data center customers, protecting residential customers from bearing costs of infrastructure upgrades.

Stakeholder Misalignment

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Local Communities

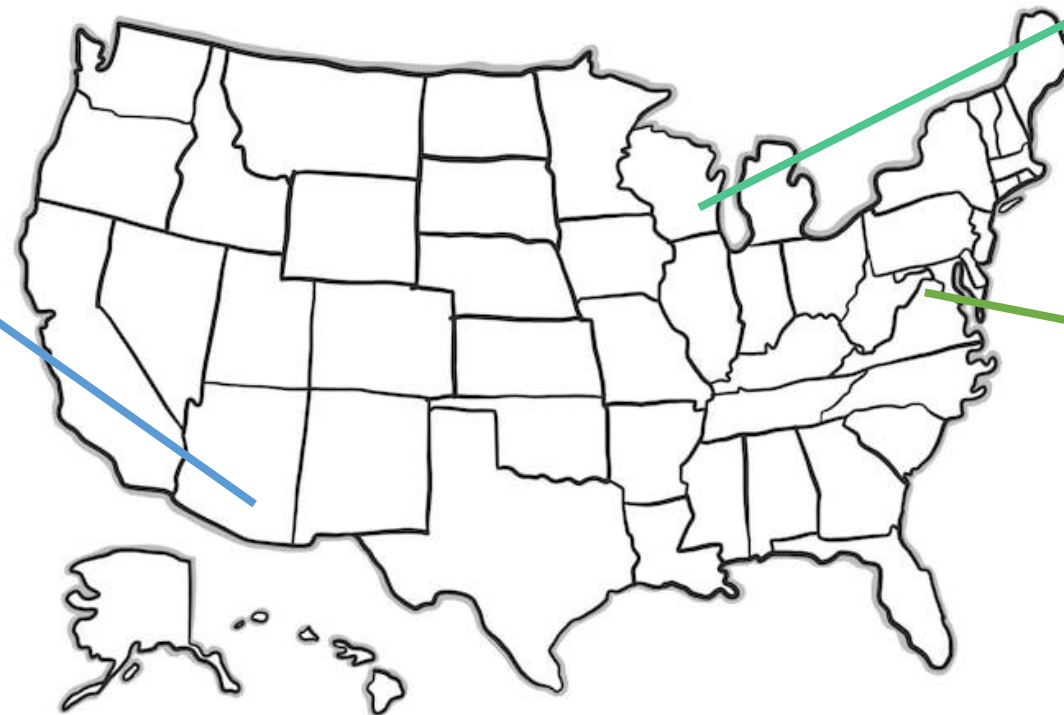
Concerns around **cost distribution, environmental impacts, and local benefits**

Caledonia, Wisconsin

Residents successfully campaigned against a proposed Microsoft data center project, citing concerns related to **electricity costs, property values, construction pollution, and more**

Tucson, Arizona

Communities pressured developer to switch from liquid to air cooling over **water use concerns**, causing AWS to drop out of a proposed project



Loudon County, Virginia

Community pushback **ended automatic zoning approval of data centers**, requiring new proposed projects to undergo legislative review and public hearings

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How much compute is enough?

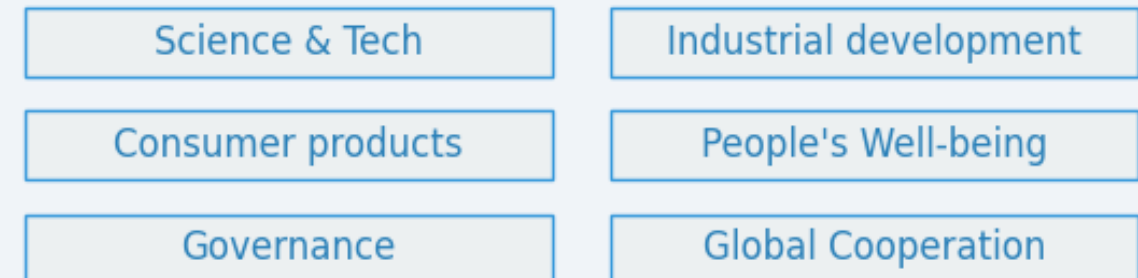
U.S. lacks strategic framework for AI capacity needs

For what purpose?

Public perception of AI is limited (chatbots, image generators, dystopian), undermining public support for AI infrastructure investments

China's Domestic AI+ Initiative, August 2025

Key application areas



- #### Critical Enablers
- AI Model Capabilities
 - Data Supply
 - Computing Power
 - Open Source Ecosystems
 - Talent Teams

Source: [State Council](#), People's Republic of China

Framework for an Integrated U.S. AI Strategy

Building alignment across three pillars



How: Align local, state, and federal policy on key principles

- Fair cost allocation, protecting ratepayers
- Environmental stewardship, preserving natural resources and landscapes
- Grid reliability through flexible loads
- Clean energy acceleration
- BYOC “Bring Your Own Capacity”
- Direct community benefits such as jobs, tax revenue, and local investments



How Much: Establish national AI strategy

- Establish national AI capacity goals and targets tied to economic and national security objectives
- Distinguish between strategies to advance the national interest vs. commercial deployments



For What: Prioritize societal benefits

- Pursue priority AI applications with tangible public value, e.g. healthcare, science, education
- Explore benefits to communities hosting data centers

A Call for Alignment

Finding a path forward

State of play:

Key decisionmakers disagree on **speed, scale, and ambition** of AI infrastructure buildout. Until alignment is found, our nation will build AI infrastructure **slowly** and **suboptimally**.

The solution:

Finding **alignment regionally and nationally** on AI infrastructure buildout is essential for enabling AI innovation in the U.S.

