



AI/Data Centers

Kat Duffy

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Artificial Intelligence (AI) policy is crowded with hype and conflicting claims, making independent analysis difficult, Ms. Duffy noted. She emphasized that her research is funded by an endowment and public-interest philanthropy—not companies or governments—allowing for neutral, academically independent information and advice.

Drawing on 25 years of technology policy experience, Ms. Duffy argued that generative AI differs from past technology trends like blockchain, the metaverse, and the Internet of Things. While surrounded by hype, AI represents a genuinely transformative technology receiving unprecedented global attention.

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State and Global AI Challenges

States face many of the same AI challenges as national governments, including impacts on law enforcement, education, utilities, water, and infrastructure. The main difference is that national governments also address national security issues. States can therefore learn from international AI governance efforts. Ms. Duffy described AI as “everything, everywhere, all at once,” with implications across nearly every area of government.

State AI Legislation Landscape

While NCSL is tracking more than 1,600 AI-related proposals, Ms. Duffy said many involve studies, commissions, or research rather than major policy changes. Only a few hundred bills represent significant legislative action, and the landscape continues to evolve quickly.

Key State policy issues include:

- AI chatbots and consumer protections.
- Child safety.
- Misinformation.
- Liability for AI-related harms.
- Automated decision-making.
- Data center impacts.

Ms. Duffy added that broad federal preemption of state AI laws is unlikely, with Congress more likely to pursue narrow, issue-specific approaches.

Data Centers: Infrastructure and Community Impacts

Data centers are emerging as a major challenge due to their demands on electricity, water, and infrastructure. AI-related data centers used nearly 5% of U.S. electricity in 2024, with projections reaching 12–15% by 2030. Cooling needs and infrastructure expansion are also growing concerns.

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Communities are raising questions about:

- Tax incentives and public costs.
- Transparency and nondisclosure agreements.
- Environmental impacts and siting decisions.
- Whether projects provide lasting economic benefits.

While construction can create temporary jobs and strain housing and services, permanent employment is often

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limited, with typical data centers employing roughly 50–100 workers after completion.

Future AI Infrastructure and Governance

According to Ms. Duffy, there is currently no established best practice for governing AI infrastructure, leaving many communities uncertain about proposed projects. AI infrastructure is shifting from training large models to running applications through “inference.” Although this may require smaller, more distributed data centers, overall electricity demand is expected to continue increasing.

Emerging Issues: Agentic AI and Legal Responsibility

Ms. Duffy highlighted the rise of agentic AI—autonomous systems capable of taking actions such as making purchases, booking travel, or interacting with other systems. As these tools become more autonomous, states will face questions about accountability and liability when AI acts without direct human direction.

Debates over AI legal status, including concepts like AI rights and legal personhood, could intensify within the next 18 months. Because states oversee corporate incorporation, a single state recognizing AI entities could have broad implications for contracts, taxation, and liability.

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Lessons from Other Governments

Ms. Duffy encouraged states to learn from other examples, including Utah’s AI regulatory sandbox and Singapore’s AI testing and verification framework.

She concluded that states are well positioned to collaborate on AI governance through existing networks, similar to how they have coordinated policies in areas such as medical licensing and commercial law. A national AI framework, she argued, may emerge more effectively through state cooperation to develop a fabric of governance than through broad federal legislation.

DISCUSSION



Senator Charles Schwertner
(Chair, Senate Business and Commerce Committee, Texas):

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Marilyn Dondero Loop (Senate President Pro Tempore, Nevada)

asked how states should determine the appropriate number and scale of data centers to allow in their communities.

She noted that Nevada already has major data center operations, including Switch, and that similar growth pressures are emerging in other states.

She questioned whether there is a roadmap or framework for evaluating proposals when multiple companies

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seek to locate facilities in the same area. While recognizing that data centers are increasingly necessary, she emphasized the need to balance economic development with community impacts—particularly in states like Nevada where water resources are limited.

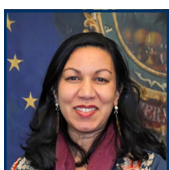


Ms. Duffy: There is currently no standard rule of thumb for determining how many data centers a state should have based on population, geography, or other factors. States are effectively navigating this issue without a clear roadmap.

The right approach depends on the role a state wants to play in the AI ecosystem. For example:

- States focused on AI research, startups, and smaller models may need smaller, more distributed, less energy-intensive data centers.
- States seeking to become major AI infrastructure hubs may pursue large-scale facilities similar to those being developed in Texas.

Each state will need to develop its own strategy based on economic goals, resources, and infrastructure capacity. States with limited water resources, such as Nevada and Arizona, must make water availability and water rights central considerations when planning future data center development.



Senator Kesha Ram Hinsdale (Senate Majority Leader, Vermont) raised concerns about the role of AI in children's lives, particularly its potential impact on youth mental health. Referencing earlier discussions about K–12 education,

she questioned whether expanding AI use in schools is always necessary or beneficial.

She expressed skepticism based on previous technology trends in education, where schools were encouraged to rapidly adopt devices and digital tools before fully understanding their effects. Vermont is examining approaches taken in places such as Utah and the Los Angeles Unified School District regarding AI use in schools.

The Senator described efforts to introduce a pause on AI chatbots, particularly relational chatbots designed to interact socially with users. She said policymakers struggled with terminology and definitions, making it difficult to regulate emerging technologies. She questioned arguments that students “need” AI tools immediately, noting that many of these technologies are still new and that educators and policymakers are still learning about their impacts. She argued that policymakers need more

time to evaluate AI's role in education and youth development rather than assuming widespread adoption is automatically beneficial.

Ms. Duffy: The rise of AI in K–12 education is occurring at the same time that research is questioning the benefits of heavy technology use in classrooms. Studies have found limited educational gains from many existing education technology tools, leading some schools to reconsider device-intensive learning models.

AI use in schools and large-scale AI infrastructure are separate issues. Basic AI tools used in classrooms require far less computing power and would not drive the need for major data centers.

For K–12 policy, states should focus on core educational goals, standards, and consumer protections. Because AI applications will spread quickly and vary widely, much of the responsibility for oversight may fall under consumer protection frameworks.

There is currently no proven model showing that introducing AI into classrooms consistently improves outcomes. While AI may eventually deliver significant benefits in some areas, the technology is still too new to know where those benefits will emerge. Given the uncertainty, states should proceed cautiously while continuing to evaluate the impacts of AI in education.

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Senator Cathy Kipp (Senate President Pro Tempore, Colorado): Senator Kipp raised concerns about the environmental impacts of data centers, arguing that their effects extend beyond proximity to power plants. She noted that many data

centers rely on diesel generators and, in some cases, behind-the-meter gas turbines to provide additional power during peak demand. These systems can create air pollution, noise, and additional carbon emissions. She argued that policymakers should consider the full range of environmental and community impacts created by data centers themselves, not just the effects of the power facilities that supply them.

She emphasized that these impacts are particularly concerning in Colorado, where communities are already

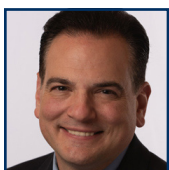
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facing climate-related challenges, including drought and wildfires. Senator Kipp also highlighted other local impacts, including:

- **Noise pollution:** The constant low-frequency hum from data centers can increase ambient noise levels in nearby communities and create health concerns.
- **Heat impacts:** Large data centers can contribute to localized heat increases, creating heat island effects in surrounding areas.

Ms. Duffy: Data center impacts depend not only on power sources but also on how facilities are operated. Memphis is an example where inadequate permitting for turbine-based power generation contributed to excessive emissions.

There also are challenges with noise regulation because data centers create a constant low-level hum that existing ordinances often do not address; however, ongoing innovations in cooling technology offer some solutions. States should work with developers to adopt the latest, most efficient approaches and plan for future upgrades.



Senator Nicholas Scutari (President of the Senate, New Jersey) asked about two issues: the connection between data centers and AI performance, and the benefits and drawbacks of attracting data centers.

He questioned why states should want data centers when many residents oppose them. He noted that New Jersey had previously offered tax incentives to attract data centers but has since stopped, with policymakers concluding that companies may locate there without additional financial incentives due to the state's population density and market advantages. He asked states that have embraced data center growth, such as Texas, to explain the potential benefits and why they view these facilities as valuable.

Why should states invite data centers while many residents oppose them?

– Sen. Nicholas Scutari, NJ

Ms. Duffy: States pursuing advanced technology and economic growth may view data centers as essential to staying competitive. Some states are also using data center investments as public-private partnerships to

upgrade power grids and attract broader infrastructure improvements.

She emphasized that the need for large data centers depends on a state's strategy. States seeking to host major AI infrastructure or supercomputers may benefit from them, while others may not need large facilities.

Places like Northern Virginia have strong reasons to attract data centers because of existing technology and national security infrastructure. Ultimately, the value of data centers depends on a state's industries, economic goals, and whether businesses require high levels of AI computing power. For example, advanced pharmaceutical research may need significant AI capacity, while corporate offices with limited AI workloads may not.



Senator James Manning (Senate President Pro Tempore, Oregon) said his state has been grappling with data center growth, particularly concerns about the cost of generating the electricity needed to power these facilities and the

potential impact on ratepayers. He noted that Oregon has developed approaches to ensure data centers are responsible for their own energy costs, contrasting Oregon's situation with Texas, where independent power generation provides more flexibility than states operating within larger regional power grids. He expressed caution about expanding data centers, citing concerns about electricity demand, grid impacts, and other community challenges.

Ms. Duffy: Until recently, there was not a strong connection between data centers and higher electricity rates. However, the rapid growth in data center power demand, combined with limited transparency, has increased public concern.

While data centers may contribute to rising energy costs, rate increases are also driven by many other factors. Greater transparency, reporting, and public education are needed to help consumers understand what is actually driving higher utility bills.



Senator Chris Karr (Senate President Pro Tempore, South Dakota) asked about the future of data center technology, including the possibility of building data centers in space. He questioned whether the concept is science fiction

or a realistic next step as companies continue to push beyond today's large, energy-intensive facilities. He asked

continued

what the next major evolution in data center design might be if space-based facilities do not become practical.

Ms. Duffy: There is growing interest in both space-based and underwater data centers, largely because of potential cooling advantages. Space-based data centers would raise complex governance issues. Space regulation has historically been shaped by international law, similar to rules governing the oceans, with existing debates focused on satellites, low-Earth orbit, connectivity, and nuclear issues.

As data centers expand into space, new international policy challenges are likely to emerge. While investment in the technology will continue, major questions remain, including whether it can overcome technical challenges such as latency and data transmission speeds.



Senator Bobby Joe Champion
(President of the Senate, Minnesota)

asked about efforts to ensure communities benefit from data center development, particularly since many facilities are located in lower-income or environ-

mentally challenged areas. The question focused on whether communities are negotiating community-first agreements with data center companies, such as requirements for local investment, protections for ratepayers, or infrastructure benefits.

The Senator also asked about potential solutions to reduce impacts and share benefits, including:

- Capturing waste heat for district heating systems.
- Sharing excess power through microgrids.
- Ensuring communities receive tangible benefits when hosting large data centers.

The question highlighted the need for data center development to provide local value rather than placing the costs primarily on nearby residents.

Ms. Duffy: The strongest trend so far has been a push for greater transparency in how data centers are developed. Many municipalities are moving away from relying on non-disclosure agreements (NDAs) and requiring more public access to contracts, reviews, and project details for proposed data centers.

Communities with limited political power often face the greatest impacts, creating a cycle where marginalized areas have fewer resources to advocate for them-

selves. Greater community engagement and outside support will likely become increasingly important as these issues receive more attention.

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However, the country is still in the early stages of addressing data center impacts. While concerns are becoming clearer, there are fewer established solutions. States and local governments should share best practices and learn from each other.

The federal government's traditional role in coordinating information and bringing stakeholders together has weakened, creating a need for states and communities to develop their own networks for sharing strategies and solutions.



Senator Rod Bray (Senate President Pro Tempore, Indiana)

said his state is working to attract data centers while facing strong public criticism. He emphasized that his concerns are not about opposing technology, but about

understanding how to manage its impacts.

He raised questions about the possibility of AI systems becoming legal entities capable of incorporating themselves. He asked whether this is an emerging issue policymakers need to address now or something that has already begun.

Ms. Duffy: I support a three-year federal moratorium on granting legal personhood to AI agents while policymakers study the implications of agentic AI.

Allowing AI systems to become legal entities could create new liability challenges, especially because U.S. companies already have legal personhood and many disputes are resolved through courts rather than regulation.

A key concern is accountability: if an AI agent takes actions on someone's behalf—such as making purchases or bookings—it may become unclear who is responsible when something goes wrong: the user, the company, or the AI provider. Policymakers need to establish clear rules for liability and legal authority before these systems become widely deployed.