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Senator Nick Miller, Policy Chair
Senator Marty Flynn
Pennsylvania Senate Democratic Policy Committee

Senator Miller, Senator Flynn, and members of the committee:

NetChoice is a trade association of America's tech businesses. We are leaders in tech policy in the states, in Washington, and in the courts. We are submitting written testimony because today's agenda could not accommodate an appearance by NetChoice advisor Barbara Comstock, who served in the Virginia General Assembly and led legislation to make the Commonwealth more attractive for data centers.

A bipartisan coalition led to nearly unanimous approval and subsequent extensions of the Virginia legislation carried by Delegate Comstock. Comstock's original law and subsequent extensions gained the signatures of both Republican Gov. Bob McDonnell and Democrat Gov. Terry McAuliffe. All understood that data centers were the infrastructure for innovation and for nurturing high-paying tech jobs. Virginia thereby opened the door to billions in investment in high-tech data processing and hosting centers, and Virginia remains the number one data center location—*in the world*. (Beijing is #2)

In 2021, Pennsylvania enacted similar legislation to exempt sales tax on equipment in large data centers. Now, Pennsylvania treats data center equipment the same way it treats business machinery bought by Pennsylvania farmers, manufacturers, and miners. Taxpayers rightly don't complain about subsidies or "tax breaks" when a local manufacturer doesn't have to pay sales tax on new machinery or when a farmer doesn't have to pay sales tax on a new harvester. By the same token, sales tax exemptions for business machinery in every industry should be supported since that's how new investment happens.

The operators of hyperscale data centers don't typically ask for taxpayer-funded improvements or economic development grants. Conversely, large data centers generate new payroll and income taxes and pay substantial property taxes in the communities they support – $900 million in Loudoun County, Virginia county last year.

That is why Governor Shapiro and Senator McCormick both celebrated $90 billion of announced investments at the summit in Pittsburgh last month. That summit brought together Silicon Valley, Wall Street, trade unions and Pennsylvania companies like Westinghouse – who announced they would be building a state of the art nuclear power plant in Pennsylvania.

Before the summit, Governor Shapiro also announced $20 billion in Pennsylvania investment by Amazon, starting with data centers in Bucks County and Luzerne County. This is the largest private investment in

the Commonwealth's history and the Governor noted this will make Pennsylvania a key player in the nation's battle for AI supremacy against China.

The Governor also announced at the IBEW local 163 Union hall a $10 million investment in workforce development as part of this effort that will provide training for 10,000 trade workers.

Governor Shapiro also said data centers will bring new local tax revenue to support police, local communities, parks, and schools. This is exactly what happened in Loudoun County, Virginia, which now receives $900 million annually in local taxes from their data centers – almost 40% of the county's general revenue. This growing business revenue allows them to keep their personal home property taxes low while funding schools, police, social services, infrastructure, etc.

During construction of a large hyperscale data center, 1,800 skilled workers are on the job for about two years. This includes electricians, operating engineers, ironworkers, carpenters, pipefitters, HVAC specialists and more. At the Pennsylvania Summit this summer, a union leader highlighted for all the attendees that productivity by building trades is 14% higher, cost is 4% less – and on-time, on-budget, and with the highest quality. That is why the partnership between data centers and trades is so strong and so valued. And once a large data center is completed, they tend to build more data centers in that area and provide a steady stream of reliable jobs and revenue.

Even before today's rise of AI, America needed a new billion-dollar data center about once every week, on average. That is needed just to keep up with what we are storing in the Cloud: photos, videos, documents, and messages. Every app on your phone uses the cloud. And every business, government, and educational application hosted in the cloud needs data centers, too.

On top of that demand, America's race against China on AI development and deployment requires even more data centers. Every industry, including manufacturing, health care, education, agriculture, and finance, is adopting AI to stay on the cutting edge of innovation.

Data centers are the essential production equipment to deliver cloud and AI, so our members are eager to see Pennsylvania join other states trying to attract large-scale data centers.

Why should Pennsylvania want to attract large-scale data centers?

Thanks to America's excellent fiber network, our tech industry can build a data center *anywhere* in the country and be able to serve users *everywhere.* So, our industry naturally wants to locate new data centers in states and communities where they are welcome – and where there is adequate power.

Not every state has the factors that attract data center investment. But Pennsylvania already has a deep talent pool, availability of affordable land and reliable energy, major airports, and strong community partners.

Tech industry facilities and data centers are #1 in terms of capital investments in the US.

PPI's Investment Heroes of 2024 report shows *Tech / Internet* as the top sector for US capital investment, at nearly $100 billion for the year, up 47% since 2019. Each of the top 3 capital investment heroes build data centers (Amazon, Alphabet, and Meta), all together they invested $85 billion in 2023 – more than

energy, telecom, pharma, or manufacturing.[1] This investment trend will continue – in states that make long-term data center investment a possibility.

Pictured here is Meta's data center campus outside of Columbus, Ohio. The initial structure was 970,000 square feet and cost $750 million.

Construction brought $244 million to the local supply chain and 1,200 construction workers earned $78 million in wages.

Across the street, Google is building a $600 million, 275,000 square foot data center on 440 acres, setting the potential for future expansion.

In states like Missouri, Iowa, Ohio, Illinois, and Nebraska, data centers have been major drivers of investment. A 2022 report from Mangum Economics, ***The Impact of Data Centers on the Iowa Economy***, showed significant results from a growing data center sector, driven by the state's data center incentive programs. In Iowa, direct economic impact in 2021 for the construction and operation of data centers was $934 million, including 2,400 construction jobs, $167 million in construction pay and benefits, 1,100 full-time operational jobs, and $96 million in data center operations pay and benefits.

There are also notable indirect economic ripple effects, estimated in 2021 to be $3.5 billion, including 14,400 jobs and $970 million in pay and benefits. Plus, for each operational data center job created, an additional 9.8 jobs were supported by the data center in non-construction businesses. And indirect economic activity led to $107 million in tax revenue collected by the state and $113 million collected by local governments.

Similarly, a 2022 report from Mangum Economics, ***The Impact of Data Centers on the Nebraska Economy***, showed equally impressive economic impacts. Direct economic impact for the construction and operation of data centers provided $410 million in economic output, including 1,170 construction jobs, $65 million in construction pay and benefits, 490 full-time operational jobs, and $50 million in associated data center operations pay and benefits.

There are also notable indirect economic ripple effects, estimated in 2021 to be $1.4 billion, including 5,400 jobs and $393 million in associated pay and benefits. Plus, for each operational data center job created, an additional 6.3 jobs were supported by the data center in non-construction businesses.

Iowa and Nebraska are states that added data center economic development programs and experienced strong economic impacts, increased tax revenue and job creation. Based on studies of several states with large data center industries, Mangum has recently described the broader benefits, too:

> *Research has shown that data centers share the pool for high-tech labor with industries such as architecture, engineering, computer system design, software, telecommunications, scientific research*

[1] Progressive Policy Institute, Investment Heroes 2024, at https://www.progressivepolicy.org/investment-heroes-2024-faith-in-the-future/

& development, and technical consulting. The existence of a vibrant data center market helps to attract talent that supports all of these industries.

Large-scale data centers bring Incremental economic benefits ***and*** incremental tax revenue

Not only do high wages in the data center industry offer a vital new employment option, but these centers also are a driving force for development of renewable energy resources and upgrades to utilities and internet infrastructure. Moreover, data centers generate new income and business taxes, sales taxes on non-exempt purchases, and local property taxes.

In 2019, Virginia's Joint Legislative Audit and Review Commission (JLARC) evaluated Virginia's tax incentives for data centers, using confidential tax information from data center taxpayers[2]. JLARC concluded that 90 percent of the investment in data centers would not have occurred in Virginia were it not for those tax exemptions. Instead, those investments would have been made in other states that give data center equipment the same tax treatment as equipment used in manufacturing and agriculture.

Over a ten-year period, JLARC's analysis showed that Virginia's state government recovered 75 cents in state tax revenue for every dollar of sales tax that was exempted for data center equipment.[3]

And after considering *local* taxes, Mangum concluded in its 2020 Virginia Study that, "*the 'cost' of the State data center incentive is only 10 percent of the amount of State sales tax revenue exempted*." [4] At the local level, data centers generated more than $300 million in local tax revenue for Loudoun County, Virginia in 2019. That money reduces everyone else's property taxes while supporting local schools and law enforcement, for example. Now these benefits are spreading to counties across Virginia.

Tax and tech education benefits from data centers in Loudoun County, Virginia

Loudoun County in northern Virginia reported that property tax revenue from data centers was $895 million in 2024. Data center taxes have allowed Loudoun county to reduce its real estate property tax rate while still gaining millions of dollars for roads, schools, and public services.

Loudoun County's data center tax revenue has been growing steadily since 2016, when it was only $146 million. During this time, the data center industry partnered with Northern Virginia Community College to develop a **Data Center Operations** program offering an associate's degree in engineering technology, a 26-credit career studies certificate, and data center operations classes. Many students enrolling in the program came from low paying fields and now have jobs paying $80k-$100k a year [5].

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[2] Joint Legislative Audit and Review Commission (JLARC), *Data Center and Manufacturing Incentives, Economic Development Incentives Evaluation Series*. 17-Jun-2019.

[3] JLARC Evaluation, Appendix N: Results of economic and revenue impact analysis, at http://jlarc.virginia.gov/pdfs/oversight/ED_initiatives/datacenters_Appendix%20N.pdf

[4] Jan-2020, Mangum Economics, *THE IMPACT OF DATA CENTERS ON THE STATE AND LOCAL ECONOMIES OF VIRGINIA*, p.24, at https://www.nvtc.org/NVTC/Insights/Resource_Library_Docs/2020_NVTC_Data_Center_Report.aspx?_zs=doEs91&_zl=5cbX5

[5] Pathways to promising data center careers,

Moreover, companies who build and operate data centers offer paid on-the-job training. For example, Amazon Web Services has a 12-week data center training opportunity that pays $20-$28 per hour to help entry-level trainees become data center technicians[6].

Large-scale data centers build broadband infrastructure that helps rural communities

Large-scale data centers build new connections to high-capacity fiber networks, and this infrastructure can be leveraged to improve broadband service all along the "middle mile", including by schools, colleges, and health institutions.In North Carolina and New Mexico, as in other states, Facebook brought high-speed internet to five counties in a new internet fiber route[7]. Microsoft's Airband Initiative brings high-speed internet to rural America, partnering with multiple broadband service companies for the effort[8].

Large-load data centers do not increase electricity rates for other customers

In a hearing this year, the largest public utility in Kansas testified in support of data center tax legislation:

> "Because of their large volume electricity use, these large load customers, including data centers, absorb a greater share of the fixed costs of operating grid infrastructure (power plants, poles and wires), thus lowering rates for all customers. "

The authoritative source when it comes to electricity rates and data centers is Dominion Energy, the largest public utility in Virginia and serving the largest concentration of data centers in the world. Dominion CEO Bob Blue explained that Virginia's rates are lower than national and regional averages:

> "On the affordability front, when we compare ourselves to national averages, we have been below the national average for residential customer rates for the last 18 years. Our residential rates have grown by a little bit, more than 1% a year, and our commercial rates by a little less than 1%, since 2010. The rate of inflation over that period has been about 2.6%. Relative to other things that our customers are paying for, our rates are declining."
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> "This summer, we were 21% below the national average. We're 36% below the East Coast regional average. That's for residential customers, but the story is the same for our industrial customers. We're 16.7% lower than the national average and we're 38.7% lower than the East Coast rate. That's important when we think about trying to attract businesses to Virginia. "

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[6] Work Based Learning Program Data Center Operations Technician

[7] Facebook, Nonprofit Bring High-Speed Internet to Rural North Carolina and Building backbone network infrastructure

[8] Zayo brings its fiber footprint to Microsoft's Airband initiative

Moreover, in their 2024 study of Virginia's data center industry, the Joint Legislative Audit Review Commission (JLARC) found that **Virginia ratepayers are *not* footing the bill for data centers**, and that the State Corporation Commission **has the tools to continue to ensure ratepayer protection**.

Water use by data centers

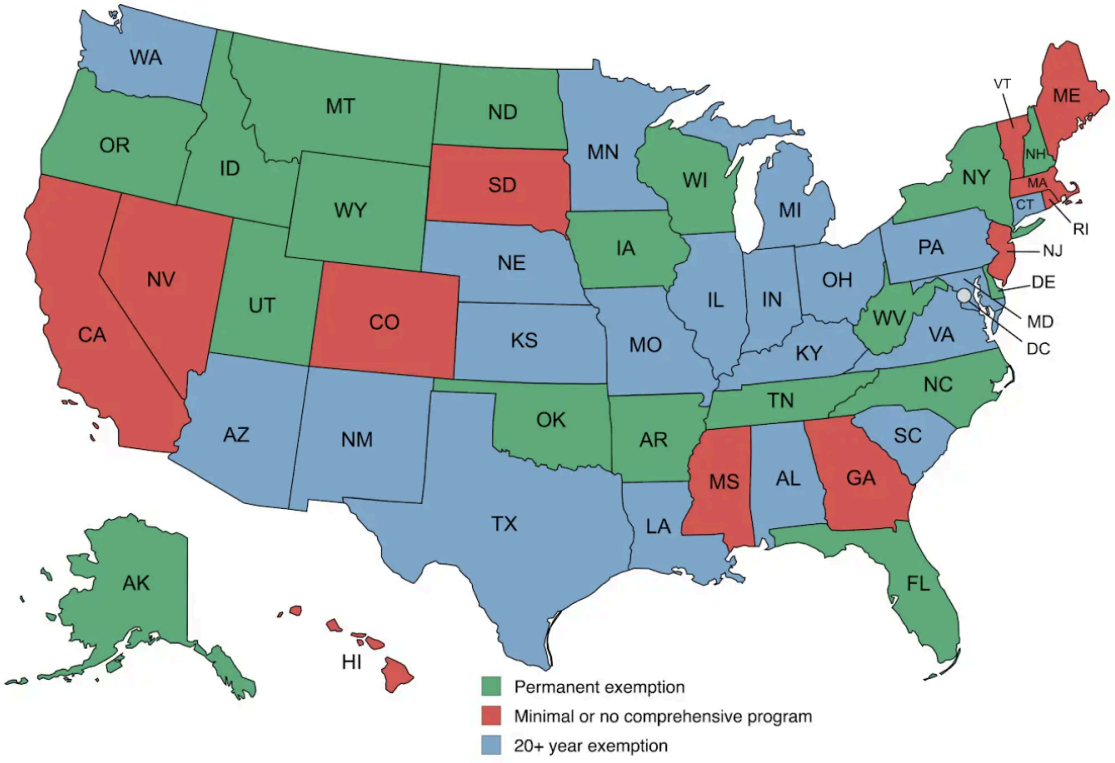
Hyperscale data centers deploy a range of technologies to remove heat generated by storage servers and AI processors. Cooling the equipment is the most energy intensive portion of the operation, and this is an up-front design decision made based on local factors such as water availability, climate, and elevation.

Most data centers use water-based cooling because it uses far less electricity than the conventional air-conditioning in our homes and offices. For water-based cooling, 80% of water intake is returned to the municipal system that provided the water. Approximately 20% of intake water evaporates into the air above the data center, just like the evaporation that happens with agricultural irrigation, golf courses, reservoirs, and swimming pools.

In their 2024 study of Virginia's data center industry, the Joint Legislative Audit Review Commission (JLARC) concluded, "Most data centers use about the same amount of water or less as an average large office building, although a few require substantially more."

States are competing to attract large-scale data centers

While Virginia adopted policies to become the largest data center market in the world, the landscape for attracting data centers has changed. Unlike a decade ago when only five states had tax structures that were welcoming to data centers, today 39 states have sales tax exemptions, as seen in the map below:



America's data center industry makes long-term commitments and works with the public and private sector to make the US #1 in AI, and makes sure we have the energy, manufacturing and trades jobs that make it all happen. This is a unique time, where Wall Street, local and national businesses, power companies, and Washington and Pennsylvania are coming together to make these investments happen. That's good news for the Commonwealth, where you have skilled construction trades to build these data centers, and you have a business climate that welcomes these investments.

Pennsylvania is on the map with your 2021 legislation and now you are on the cutting edge of AI investments that will be driving economic growth and creating a strong economic ecosystem for the jobs of the 21st century.

Sincerely,

Steve DelBianco
President & CEO, NetChoice

The Hon. Barbara Comstock
Former Congresswoman and Virginia Legislator, and Advisor to NetChoice