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Majority Policy Committee
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Data Centers: Impacts, Operations, and Policy Considerations

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Good afternoon, and thank you to Chairman Miller, Senator Flynn and distinguished members of the Senate Democratic Policy Committee for holding this important hearing today. My name is Tony Nokovich, and I am the Vice President of Engineering for Pennsylvania American Water. For more than 135 years, we have provided water services across Pennsylvania and currently serve 2.3 million Pennsylvanians in more than 400 communities in 38 counties. We are proud to serve as the Commonwealth's largest water and wastewater utility, and we value our relationship with the General Assembly and are grateful for the invitation to provide our perspective on the emergence of data centers across the Commonwealth, but particularly in Northeastern Pennsylvania.

We recognize the economic and technological importance of data centers in today's digital world. As the Commonwealth's largest water utility provider, we stand ready to support this growth and are committed to enhancing the economic leadership of Pennsylvania by attracting and bringing data centers online with reliable water service. We are familiar with the operational challenges data center water demands present, particularly in terms of seasonal water demand fluctuations, distribution system impacts and water quality management. Pennsylvania American Water stands ready to work with

data centers to ensure that providing them with the service they need does not adversely impact other customers. Pennsylvania American Water also encourages open dialogue between water and electric utilities, interstate water commissions, and local communities impacted by data centers. These communications will lead to sounder policy that considers the needs and concerns of all of that are impacted by data centers. The communications should extend to development, construction and operation of data centers.

First, I would like to discuss data center water consumption and how that relates to our seasonal water demands. Data center water demand can vary significantly depending on the approach they need for cooling their systems, but many data centers depend on water and require substantial amounts of it to cool their servers and other equipment. Water cooling is favored because its efficient heat dissipation is the most effective way to cool data centers. Data centers may also use air cooling and hybrid cooling which requires substantially less water.

Data centers that use water cooling require water year-round, but they need even more water in the summer months. The summer is when we experience our peak demands for residential and non-residential customers too. People fill their swimming pools, water their yards, gardens and their children play with sprinklers. The data centers will further increase our summer peaks, requiring water providers like Pennsylvania American Water to construct their facilities to satisfy these peaks.

To provide perspective on the water data centers may use in the summer months, an average size water cooled data center can use sixteen million gallons of water in July, with a maximum day demand of up to three million gallons. That same data center might only use 24,000 gallons of water in the month of January. These extreme demand swings present potential challenges to system design and operation, but the right regulatory construct and deal structure enables water utilities like Pennsylvania American Water to support the development of this important nascent industry.

Water cooled data centers also impact our water distribution systems. The large amount of water needed to cool data centers can exert stress on our water distribution infrastructure. Pennsylvania American Water is well positioned to manage this stress because we invest approximately \$700 million in infrastructure upgrades on an annual basis across the Commonwealth. Our infrastructure and systems are prepared to manage the consumption, but other water utilities may not be able to provide the same reliability. That is why it is important to place data centers in areas where dependable water service is available.

Additionally, infrastructure investment to serve data centers can also improve service to other customers. These investments may include increasing main sizes, improving pumping/storage capacity, and PFAS mitigation that benefits all customers. Pennsylvania American Water strives to be a solution provider by collaborating with developers of data centers to ensure the proper infrastructure upgrades are performed. Data centers should pay the costs associated with development and infrastructure upgrades necessary to serve them, so our other customers do not foot the bill for the

investments they do not benefit from. We want to be a cooperative partner when it comes to development of data centers, but balance and fairness to our existing customers must also be considered.

Lastly, infrastructure to serve water cooled data centers must be managed to ensure it does not adversely impact water quality. At Pennsylvania American Water, we prioritize ensuring water quality standards are met and maintained for the delivery of high-volume flow to data centers. The significant demand required by water-cooled data centers can require large transmission mains and storage tanks. Water could be stagnant in those larger pipes and storage tanks during the cooler months when water usage from the data center is low, which could also cause low chlorine residual issues. Furthermore, sudden high-demand events may reduce pressure in the system, impacting existing customers. Pennsylvania American has addressed these challenges in the past and can collaborate with data centers to mitigate these risks as part of the planning process.

In conclusion, data centers provide substantial economic and technological benefits in an era where AI is growing fast. The water demand for data centers presents complex, but solvable, challenges for water utilities. These challenges are particularly relevant in managing seasonal demand spikes, maintaining system reliability and safeguarding water quality. As the General Assembly looks at policy measures to streamline the growth of data centers, it would be beneficial to consider water demand forecasting, infrastructure cost-sharing, capacity agreements, alternative water sourcing mandates and operational resilience and demand management requirements. We are willing and encourage the General Assembly to work with us and other stakeholders to

develop an impactful strategy to assist with the growth of data centers in the Commonwealth. These measures, coupled with regulatory oversight, will ensure customers of Pennsylvania American Water will continue to receive clean, safe, reliable and affordable water and wastewater services.