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Thank you for the opportunity to testify today at the Public Hearings on Data Centers by the Center for Rural Pennsylvania. Data centers are a fast-growing industry across the globe. Driven mainly by artificial intelligence workloads and other cloud expansions by major providers, the global data center market is estimated at \$300 - \$400 billion in 2026, depending on the estimator, and growing at about 11% per year (at compound annual growth rate).

Much has been and is being written, discussed, and debated about data centers. The impacts are many. And across our communities, municipalities, counties, states, and even nations, governments are considering and discussing prospective bans on data centers – or more accurately in many places time outs on passage to understand better benefits, costs, and especially, impacts on local communities where they are located.

There is also much activism on data center issues today. And such interest and organizing are critical, as we know here in Central Pennsylvania, where there has long been activism on environmental issues that posed potential threats to quality of life for community residents. Thirty-five years ago, not too far from here in Union County, many banded together to form the Ban the Burner campaign to stop a proposed 700-acre toxic waste incinerator from being constructed. Their efforts were successful and the project never got off the ground.

A decade later, the application of hydraulic fracturing -- also called fracking – created new well drilling opportunities in the Marcellus Shale play. While data centers are not a resource extraction industry like oil and gas, they have environmental impacts similar to the impacts from unconventional well drilling and hydraulic fracturing that consumed communities two decades ago – impacts on air quality, water quality, road conditions, land uses, heat and temperature effects, noise, physical size, and design. Lessons can be learned from the recent impacts of shale gas drilling and civic responses to the industry.

Unconventional well drilling created a boom – bust scenario for communities in the Marcellus region, similar to the long history of the resource curse that plagued parts of rural Pennsylvania for over a century. Gas drilling was not new – Pennsylvania, along with New York, Ohio and West

Virginia, has a long history of mineral extraction – but it also has an erratic history of natural gas drilling and state regulations.¹

The new technology of hydraulic fracturing – fracking -- brought a rapid increase in well drilling to the Marcellus region and its arrival was debated and contentious. Proponents cited the economic benefits, particularly jobs for rural areas suffering from decades of job losses in mining and manufacturing, jobs that were not coming back. The environmental impacts on air and water quality and on residents' health and their environment were extensively analyzed and debated, but not always in clear ways. Elected and government officials focused on job growth – important in these counties which had lost so many industrial and mining jobs, but the discussions were not always clear on discerning the difference between short-medium term job gains and longer term. Most well jobs were in the well construction phase, with many going to out-of-staters who had the background and training to start immediately. Pennsylvania gave short shrift to developing a long-term pipeline in the industry, though some of our regions did much better on workforce issues related to the sector. The state also opted to implement an “impact fee,” leaving it the only state without a severance tax on drilling, affecting total revenues in the long term.

The state also attempted to take over parts of local land use planning in promoting the industry. Hydraulic fracturing and horizontal drilling, new drilling practices generated from new technology, were not part of the state's latest oil and gas law of 1961. Local governments and the state developed reactive “patchwork regulatory responses” until the legislature passed Act 13 to “modernize” the statute and set up the state to “supersede local regulation of oil and gas operations.”² Municipalities countered. In 2012, the law was successfully challenged by local municipalities (*Robinson Twp. V. Commonwealth of Pennsylvania*) and the challenge was upheld in Pennsylvania courts that Act 13 was unconstitutional in overriding local land use regulations and concluded that local governments had the authority to regulate fracking as an industrial use under local zoning ordinances.

Our neighbor just to the north passed on moratorium on high-volume hydraulic fracturing in 2008 to understand better unconventional well drilling and its impacts. Through multiple stages, the moratorium transcended into a final study finding significant public health risks of air and water pollution, and New York imposed a statewide ban on hydraulic fracturing in 2014.

¹ Sabina Deitrick and Joel Tarr, “The Erratic History of Natural Gas in Pittsburgh and Western Pennsylvania,” in Joel Tarr (ed.), *Devastation and Renewal*, vol. 2, University of Pittsburgh Press, 2026, forthcoming.

² Heidi Gorovitz Robertson, “Local Jurisdictions and Variations in State Law in the Marcellus Shale Region,” Chapter 2 in Sabina E. Deitrick and Ilia Murtazashvili (eds.), *When Fracking Comes to Town: Governance, Planning, and Economic Impacts of the US Shale Boom*, Cornell, 2021.

This month, on July 14th, our same neighbor put a one-year moratorium on large data centers, the first state (so far) to do so. In Governor Kathy Hochul's message, the goal of the moratorium is "to direct state regulators to create standards that address environmental impacts, energy demand, water usage and other factors." Political support is growing across states across political and technology landscapes, including here, and more states are likely to follow.

We can learn from our past experiences in resource extraction and hydraulic fracturing and draw from them.

- Data centers must be viewed from local lenses. The impacts – and especially the costs -- are localized. While job creation and property taxes benefits are local and promoted as such, many financial benefits flow out of the region and state, but the environmental costs and health impacts are local. Organizing and gaining community support and trust are critical to not repeating the mistakes of the Marcellus Shale drilling boom and the battles that ensued. Rural Pennsylvania has suffered through multiple boom – busts in resource extraction and suffered the costs. The "resource curse" isn't necessary just for extractive industries.
- Municipal planning issues and concerns are important to understand and discuss. Municipalities and residents' concerns about shifting planning regulations at this time with discussions about easing zoning permits and "fast tracking" are real. The state lost in *Robinson Twp. V. Commonwealth of Pennsylvania*. It must understand local planning concerns if it attempts again to degrade local land use controls.
- Model ordinances and design standards are necessary and good ones have been developed. Local governments can't go alone again. We have a strong infrastructure in our state in getting organized and getting information out – from our state agencies (DCED, L&I, DEP, etc.) to state planning and environmental professional organizations to county governments and council of governments to local level officials, businesses, and numerous organized residents and local level organizations. Bring them in and hear their voices. Organizing takes time, but less time than reactive positioning.
- Employment does matter. What will be the workforce needs? Can an agricultural extension program be a model of workforce needs and workforce development in the future? Let's not replicate the "hotel as worker housing" model of the Marcellus well drilling construction years. Rural areas have many successes to build on for PA residents. Penn State Extension is also doing a lot of work on data centers.
- Make clear the impacts and the extensiveness of those impacts and build in protections now. Local planning can address infrastructure impacts and burdens, zoning issues and community impacts, but knowledge needs to be shared widely. We now have lots of stories and studies on impacts that were not reviewed in advance and have common understandings – such as impacts in energy, water, air, heat and external temperature,

power, soil, tax breaks, resident burdens and costs, light, design (or lack thereof) – all impacts that are now known and can be addressed. Examples from large scale data center projects include:

- Reduced water pressure and water losses for residents; worse, nearly depleted aquifers for some (example from Atlanta).
- Revenues and fees not collected because of unbilled water hook ups or connections (example from Atlanta).
- Industry tax breaks and tax exemptions, with possibility of 100% exemption for qualifying facilities (Ohio). With that, Governor Mike Dewine recently paused these tax exemptions as a new Joint Data Center Select Committee reviews these exemptions.
- Road infrastructure and conditions. As with the construction of unconventional wells, existing infrastructure was not built for the volume of heavy truck traffic, with its impact on road conditions, air quality, light issues, and noise.

These are just a few. Data centers are power and water hungry operations. They aren't new. But the size and scale are, and the impacts can be much more devastating in both financial and environmental ways.

I reflected back on the Marcellus Shale boom in our state, driven by technological advances in an old resource sector. There are lessons to be learned from our own recent history.

I commend the Center for Rural Pennsylvania for holding these hearings for centering rural communities into the state's conversation and its goals going forward in data center development. Thank you.