

Prepared Testimony of  
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*before the*  
House Energy Committee

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Good morning, Chair Fiedler, Chair Causer, and members of the House Energy Committee. My name is Stephen DeFrank, Chairman of the Pennsylvania Public Utility Commission (PUC or Commission).

I appreciate the opportunity to testify in front of the Committee today on the important topic of the electric transmission system here in Pennsylvania.

Resource adequacy—ensuring that we have enough megawatts on the grid to meet our needs—is a topic of growing importance. After many years of flat demand for electricity, the combination of electrification and the unprecedented surge in data center expansion are placing new needs on our electrical grid. Over the coming years, we will need to add new generation resources to the system to meet this demand. Just as important, however, is the need to make the most effective use of our grid. Multiple technologies and operational practices exist that can allow us to maximize the infrastructure we have before making costly investments in new power plants.

To step back for a moment, Pennsylvania is a member of the PJM Interconnection (PJM), which is one of several Regional Transmission Organization (RTOs) around the country. PJM runs the bulk electric system for approximately 65 million people across thirteen states and the District of Columbia. RTOs allow for various utilities to share resources, leading to greater flexibility and a more efficient power system overall.

In practice, this means that Pennsylvania's transmission system is an interstate system, managed by PJM and under the regulatory jurisdiction of the Federal Energy Regulatory Commission (FERC). Having said that, we at the Public Utility Commission still have some direct regulatory tools at our disposal when it comes to managing the transmission system for the state, as well as advocating at PJM and at FERC for changes in the way the system is operated. Moreover, the Commission has regulatory authority over siting of new transmission and maintains its jurisdiction over the distribution system managed by our jurisdictional electric distribution companies (EDCs).

One way to utilize our existing siting authority to improve our transmission system is to encourage installation of advanced transmission equipment. A number of technologies exist that can reduce line losses or otherwise increase the amount of power we get out of our transmission system. In fact, you will be hearing about some of those technologies from other testifiers here today. At the PUC, we encourage all of our jurisdictional utilities or their associated transmission companies to explore any and all options to harness the most value out of our grid. At our public meeting on March 27<sup>th</sup> this year when considering a transmission project, our Vice Chair Kim Barrow offered a statement urging all electric utilities to explore composite core advanced conductors when upgrading or replacing transmission infrastructure.

We also encourage innovative thinking from our utilities to maximize the effectiveness of our electric grid. For example, PECO has utilized conservation voltage reduction (CVRs) programs. CVR programs provide energy savings by operating the system at lower voltages, which can improve distribution efficiency. To provide another example, PPL has begun implementing dynamic line ratings (DLRs) on its system. DLRs account for weather conditions and other factors to determine when it is safe to increase the amount of power moving through the system in real time. Solutions like these all have a role to play in meeting the challenges facing our electric system, and we are always exploring new operational practices with our utilities.

Other tools at the disposal of the Public Utility Commission are the energy efficiency and conservation plans authorized by Act 129. Act 129 was passed in 2008 at a time when rate caps were expiring and rising energy prices were a major concern. In the intervening years, due to several factors including the emergence of cheap natural gas from the Marcellus Shale, prices stabilized. Now, with prices again on the rise, I believe there are opportunities to refocus our Act 129 programs to help address resource adequacy concerns by maximizing efficiencies in our transmission and distribution systems.

The Commission recently issued a Tentative Order proposing Phase V of the Act 129 Energy Efficiency and Conservation Program. Our proposed program would run for five years, commencing on June 1, 2026. The proposal includes five main areas of energy efficiency measures: market rate energy efficiency, low-income energy efficiency, solar, combined heat and power, and demand response. As I noted in a statement when approving the Tentative Order, Act 129 has provided significant benefits to the Commonwealth, delivering approximately \$4.5 billion in savings to Pennsylvania homes and businesses. As prices for both generation and delivery of electricity face upward pressures, the value of investments that reduces demand will become even more economic. I believe energy efficiency will be an extremely important tool as we navigate this chapter of high demand growth. After all, the cheapest watt is the one you do not use.

To note just one example of a new way to use Act 129 funds more flexibly, House Bill 505 introduced by Representative Donahue, would allow our EDCs to use Act 129 money for measures that reduce distribution system losses. Across the transmission and distribution systems, five percent or more of the power we generate is lost. Any reductions in system losses help maximize the existing resources we already have on the system. This is the kind of thinking needed to get the most out of the infrastructure we have.

Along with the establishment of energy efficiency and conservation plans, Act 129 also mandated the adoption of advanced metering infrastructure (AMIs), more commonly known as smart meters. Since the passage of that legislation, Pennsylvania's large EDCs have invested billions of dollars in rolling out smart meters throughout the Commonwealth. Smart meters have a number of uses, such as communicating with the EDC to improve reliability by pinpointing outages and guiding restoration efforts. They could also have an important role to play in improving overall system efficiency and performance. At the individual customer level, that could mean integrating smart appliances with a smart meter to reduce usage when demand on the grid is highest. When scaled up to the system wide level, the opportunities are even greater.

One promising industry development which offers a new avenue for investment, grid management, and resource adequacy are virtual power plants. In September of 2020, FERC issued Order 2222, allowing distributed energy resources to participate in wholesale markets. RTOs throughout the country are currently implementing rules and procedures to get this new marketplace up and running. The Commission issued an advanced notice of proposed rulemaking on Order 2222 last year, and we are currently deliberating next steps. Given the investment in AMIs throughout the Commonwealth, the Commission hopes any next steps, including a potential rulemaking, can increase efficiency, enhance service, and potentially lower costs through proper utilization of virtual power plants.

We are also interested in bringing more attention to, and increasing uptake of, time-of-use (TOU) rate designs. TOU rates, when properly designed, can reduce peak demand on the grid, thereby

flattening the load curve and helping to reduce the costs associated with meeting peak demand. All major EDCs currently offer TOU rates as part of their default service plan. However, the uptake on those TOU offerings, whether from EDCs or electric generation suppliers (EGSs), has been low - only about 6,000 accounts enrolled in TOU offerings in 2023. The Commission is committed to improving customer awareness of TOU offerings, as they can be a valuable tool in helping manage increased electricity costs at both the consumer and system level. As Pennsylvania's electricity landscape continues to evolve, the PUC remains focused on ensuring resource adequacy through continued engagement with the General Assembly, the Governor, PJM, utilities, and stakeholders to address emerging grid reliability challenges while fostering a competitive electricity market that provides affordable and transparent options for consumers.

The Commission looks forward to continuing to work with the General Assembly, industry partners, and consumer advocates on these issues and others. And of equal importance, the Commission will continue our concerted focus to think outside-the-box about new policies and tools we can presently leverage to further facilitate an affordable, safe, and reliable energy future for all Pennsylvanians.

On behalf of the Commission, I appreciate the opportunity to testify today. I welcome your questions and look forward to continuing our collaboration with the General Assembly to advance policies that benefit all Pennsylvanians.