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Good morning, Chairman Barrar, Representative Sainato, and members of the committee. Thank you for the opportunity to appear this morning to discuss the state of Pennsylvania's energy infrastructure, pipeline safety and emergency response preparedness.

Modern, robust and well-functioning infrastructure is critical to the continued success of Pennsylvania's energy industries. Producers and consumers alike rely on these networks to safely and effectively move traditional fuel products along the supply chain. As a result, they have a significant impact on every facet of the industry and, ultimately, on consumers and the economy.

Oil and natural gas pipelines are the cornerstones of a healthy infrastructure network. Former Secretary of Transportation Norman Mineta likened pipelines to the country's arteries, which is an apt description. They provide the most reliable form of energy transportation, which is critical to supplying the fuels that we rely on daily.

Not only are pipelines the most efficient form of transportation, they also have the highest success rate of any delivery option. In fact, 99.999 percent of fuels moved by pipeline reach their destination without incident.

Pipelines help keep costs down and reduce dependence on less reliable transportation, like railcar and truck. They help to keep our communities safe, and, increasingly, they are helping to reduce carbon emissions by bringing online more natural gas production, which has proven a viable alternative to coal.

The Environmental Protection Agency reported this year that CO² emissions decreased nearly 14 percent between 2005 and 2017 in the United States, even while oil and natural gas production increased more than 80 percent and 51 percent, respectively, during the same period.ⁱ Last year, the Energy Information Administration found that greater natural gas consumption accounted for 61 percent of electrical power generation CO² reductions.ⁱⁱ

In Texas, we have seen what a lack of infrastructure can do to a region's electrical grid as well. As we continue to develop alternate sources of renewable power, natural gas power generation is essential to avoid brown outs and black outs. We must have an alternative to our lost coal-fired power generation.

The Appalachian Basin was responsible for 18 percent of the nation's reduction in carbon emissions and over 21 percent of reductions in electricity generation emissions, according to the EIA. Pennsylvania's carbon emissions fell 17 percent, and its carbon emissions from electricity generation fell 30 percent.

Those impressive achievements owe chiefly to shale development, which has grown remarkably here in Pennsylvania. Today, the state produces 18 billion cubic feet per day of natural gas—20 percent of U.S.

supply.ⁱⁱⁱ With vast resources in the Utica and Marcellus Shale Reserves, Pennsylvania has moved from seventh largest natural gas producer in 2011 to the second largest in the country, behind only Texas.^{iv}

Pennsylvania's shale growth has contributed significantly to the United States' energy security. The U.S. will become a net-energy exporter next year, which has not been achieved in more than 70 years. That owes largely to Pennsylvania, which supplied more than half of the country's new natural gas supply over the past decade.^v

Oil and natural gas contributed \$44.46 billion to Pennsylvania's economy in 2015, and the industry supports more than 322,600 jobs in the state, which include a wide range of skills and specialization. And these are lucrative opportunities; the average wage paid by the industry is 90 percent higher than the national average.^{vi}

There should be no mistake, however. Continued production growth hinges on investment in midstream infrastructure. Pennsylvania's impressive shale development is quickly outstripping its capacity to move products from drilling sites to refineries and finally onto consumer markets. Without sufficient pipeline capabilities, producers could quickly run into a situation where they are cut off from markets, which, of course, would limit growth.

That's not a theoretical scenario. At West Texas' Permian Basin—one of the world's largest and most established oil and gas reserves—pipeline shortages created a glut at production sites. Last year drillers halted operations after prices bottomed out. Nearly immediately after new pipelines reached the area, prices rebounded and inventory cleared out.

Pennsylvania's neighbors to the north offer another cautionary tale. During recent cold weather snaps natural gas prices in New England, New York and New Jersey spiked to as much as 70 percent above normal rates due to tightened supply—which resulted because of insufficient pipeline capacity. Electric rates there are more than 50 above the national average, again due to the costs of transporting natural gas.^{vii} This also opens the door to imports and increases our trade imbalance.

Pennsylvania has several important projects that can help it get ahead of potential problems, including the Mariner East II Pipeline. The 300-mile transport line will have the capacity to move 275 million barrels per day of natural gas liquids and will connect Pennsylvania suppliers to markets across the region.

Sadly, the project has been dogged by opposition, which has been successful in disrupting construction and often turning the conversation from the evidence to heated rhetoric. These attacks have taken every opportunity to misconstrue reality, politicize circumstances on the ground and turn public opinion.

It bears considering the facts of the Mariner East II Pipeline and the regulatory process, which invariably point to the conclusion that it poses no unwarranted risk to surrounding communities or geographies.

The regulatory process for major pipelines is intentionally rigorous. And, by all accounts, the Mariner East II has met or exceeded those requirements. As a report commissioned by West Goshen Township in 2017 concludes: "Sunoco's plans exceed federal minimum safety requirements. It said the proposed 20-inch pipe would be tested to a standard beyond U.S. pipeline safety regulations, and that the type of coating to be used on the line essentially eliminates the likelihood of seam corrosion."^{viii}

Consider, for example, federal Department of Transportation requirements that pipelines be installed 30 inches below ground in rural areas and 36 inches in urban areas. The Mariner East pipeline is 48 inches deep in those places. The DOT requires that horizontal directional drilling (HDD)-installed lines to be 48 inches below the natural bottom of water bodies wider than 100 feet. The Mariner East line starts at 48 inches below and goes down to at least 60 inches.^{ix}

Mariner East II is not an unprecedented project. In fact, there are more than 60,000 miles of pipelines across Pennsylvania that operate around the clock and, in near unanimity, without incident. In fact, there are more than ten carrying similar products as Mariner East in Southeast Pennsylvania. Unlike those existing lines, the Mariner East employs the latest technologies and monitoring systems to ensure its safe operation.

Those include reinforced pipes, internal and external monitoring systems, x-ray inspected joint welds, bonded-epoxy coating to prevent damage and corrosion, pressuring testing 25 percent above operating levels and automated emergency controls.

Sunoco Partners, the pipeline's developers, have made clear they take communities' safety seriously. At the company's expense, it has provided training to over 3,000 first responders to contain and mitigate all impacts in the event of an incident.

When the pipeline's installation experienced an inadvertent release of bentonite drilling clay—which, it should be noted, is a normal occurrence with horizontal directional drilling— Sunoco agreed to “an extensive revised Operations Plan” that set forth additional measures and controls to ensure all permit conditions are followed and to minimize inadvertent returns and water supply incidents.

Regrettably, the facts about the Mariner East II Pipeline—and countless other developments like it, both in Pennsylvania and across the country—have often been pushed aside by passionate, though frequently misinformed, rhetoric. That's led to local officials interrupting construction with lawsuits and calling for unnecessary reviews that only undermine the regulatory framework.

In Chester County, for example, commissioners filed litigation to stop construction. The suit arose over concerns about a sinkhole that developed, even though its cause remains unclear. Last year Delaware County heeded the pipeline opponent's push for a quantitative risk assessment with taxpayer dollars, despite countless other studies that showed similar results. Let's be clear, everyone incurs a level of risk each and every day and these studies show that an individual has a much greater chance of being struck by lightning than being killed by a pipeline incident.

It is critical that policymakers consider the Mariner East II Pipeline, and all pipeline construction, solely on fact and the full body of evidence. Overwhelmingly, the entirety of information points to the same conclusion:

- The regulatory process is intentionally rigorous. Pipelines that meet those standards should be permitted to move forward without the risk of being interrupted without due cause.
- Projects like the Mariner East II Pipeline have demonstrably met, and often exceeded, regulatory benchmarks. Therefore, unless extenuating circumstances arise—which, in the case of Mariner East, by my professional assessment, they have not—the projects should not be subject to interference.

There is a right time to debate the value and importance of new infrastructure deployment. That process should invite all stakeholders to the table to make their voices heard. Indeed, that kind of healthy debate has occurred through hundreds of meetings about this project between the company, the public, local elected officials, and regulators. This project has been legally permitted. Pipeline opponents however, continue to oppose the project, despite the fact that their voices have been heard and the merits of the project correctly outweighed their opposition. The continued opposition equates to nothing more than sour grapes amongst these few ideologues.

There should be no room for attacks that misrepresent the facts and operate in hyperbole and less-than-honest opinion campaigns. Those tactics undermine the needs of our state and communities.

If you consider the Mariner East II Pipeline on merit, you will find this critical infrastructure development is safe; it is well designed and executed; and it is in the interest of Pennsylvania's families and businesses.

Thank you for your time and consideration.

ⁱ EPA, [Inventory of U.S. Greenhouse Gas Emissions and Sinks](#)

ⁱⁱ EIA, [U.S. Energy-Related Carbon Dioxide Emissions, 2017](#)

ⁱⁱⁱ [Forbes](#)

^{iv} EIA, [Pennsylvania is the fastest-growing natural gas-producing state](#)

^v [Forbes](#)

^{vi} API, New [Study: 322,600 Pennsylvania jobs supported by natural gas and oil](#)

^{vii} Forbes, [What happens when you don't build natural gas pipelines?](#)

^{viii} [StateImpact](#)

^{ix} [DelCo Times](#)