PA House of Representatives
Republican Policy Committee

128, Main Capitol Building
Harrisburg, PA 17120
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**Rep. Joshua D. Kail**
Chairman

**PA House Republican Policy Committee Hearing**
**"Rising Energy Costs in Pennsylvania"**
**February 6, 2023, at 10 a.m.**
**Room 140, Main Capitol Building**
**Harrisburg, PA**

| | |
|---|---|
| 10:00 a.m. | Welcome and Pledge of Allegiance |
| | **Challenges Facing our Energy Providers Panel** |
| 10:15 a.m. | **David Callahan**<br>*President, Marcellus Shale Coalition* |
| 10:20 a.m. | **Rachel Gleason**<br>*Executive Director, Pennsylvania Coal Alliance* |
| 10:25 a.m. | **Terry Fitzpatrick**<br>*President and CEO, Energy Association of Pennsylvania* |
| 10:30 a.m. | **Questions for the Panel** |
| | **Impact of Energy Prices on Consumers Panel** |
| 11:00 a.m. | **Rod Williamson**<br>*Executive Director, Industrial Energy Consumers of Pennsylvania* |
| 11:05 a.m. | **Kevin Sunday**<br>*Director of Government Affairs, PA Chamber of Business and Industry* |
| 11:10 a.m. | **Greg Moreland**<br>*Pennsylvania State Director, NFIB* |
| 11:15 a.m. | **Mike Butler**<br>*Mid-Atlantic Executive Director, Consumer Energy Alliance* |
| 11:20 a.m. | **Questions for the Panel** |
| 11:50 a.m. | Closing Comments and Conclusion |

# Testifier Biographies

PA House of Representatives Policy Committee Hearing
*"Rising Energy Costs in Pennsylvania"*

## David Callahan
## President, Marcellus Shale Coalition

David Callahan is president of the Marcellus Shale Coalition (MSC), a leading trade association focused on unconventional shale development from the Marcellus and Utica plays. A native Pennsylvanian, Mr. Callahan leads the organization, founded in 2008, representing members engaged in all aspects of natural gas development, including exploration and production, midstream gathering, processing and transportation, as well as the suppliers and contractors who work with the industry.

On behalf of the organization's membership, Mr. Callahan engages with elected officials, regulators, civic leaders, allied business interests and the media to advance responsible shale development, enhance the industry's social license to operate, strengthen our economy and better our shared environment.

Mr. Callahan has more than 30 years of experience in the energy sector, in which he has represented companies and organizations across the energy value chain. Previously, he held leadership positions with JKLM Energy and MPLX, as well as with organizations including API of Pennsylvania.
Mr. Callahan earned a B.A. from the Indiana University of Pennsylvania and an M.A. from the Maxwell School of Citizenship and Public Affairs at Syracuse University. He and his wife, Wendy, have one son and live in central Pennsylvania.

## Rachel Gleason
## Executive Director, PA Coal Alliance

Rachel is Executive Director of the Pennsylvania Coal Alliance, the legislative and regulatory advocacy arm of the third largest coal producing state in the nation.

With more than 160 member companies, Rachel works closely with elected officials and regulators on the state and federal level to advance the interests of the bituminous coal mining industry and educate policymakers, elected leaders, and the public on the economic and social benefits of Pennsylvania's coal industry.

## Rachel Gleason
## Executive Director, PA Coal Alliance (cont.)

In this capacity, she works with the PA Department of Environmental Protection, the U.S. Environmental Protection Agency, the Office of Surface Mining Reclamation and Enforcement under the U.S. Department of Interior, and other state and federal agencies with regulatory and enforcement responsibility for coal production and utilization. Rachel also interacts regularly with state legislative leaders and committee chairs to promote the interests of the PCA and its members and serves on the Mine Families First Response and Communication Advisory Committee, as an alternate on the state's Mining and Reclamation Advisory Board and the Climate Change Advisory Committee, and as the staff liaison to the PCA-appointed members of the Pennsylvania Board of Coal Mine Safety.

Rachel came to the PCA after serving as Executive Director for the House Majority Policy Committee, as well as positions with a legislative reporting company and a public affairs consulting firm. During her eight years with the House of Representatives, she addressed policy initiatives and navigated the intricate details of the managed and advised state legislators on a myriad of highly technical and most complex issues. In the private sector, she advocated for clients at both the local and state levels and demonstrated an ability to quickly build expertise in new areas and develop relationships with individuals and groups with diverse interests.

Rachel is a graduate of Shippensburg University. She lives in Hershey, PA with her husband, Pete and their loyal Golden Retrievers, Buckley and Thatcher.

## Terrance Fitzpatrick
## President and CEO, Energy Association of Pennsylvania

As President, Terrance represents the interests of electric and natural gas utilities in the Commonwealth.

From 1999 to 2007, he was a Commissioner of the Pennsylvania Public Utility Commission, serving as Chairman from 2003 to 2004. From 1995 to 1997, he served as Counsel to the Environmental Resources and Energy Committee in the Senate of Pennsylvania and helped to draft Pennsylvania's electricity competition law.

During his career, he has also served as an administrative law judge with the Pennsylvania Environmental Hearing Board and as legal counsel with the PUC, with the Insurance Department, with two private law firms, and with the Electric Power Generation Association. He has authored articles on administrative law and energy topics, and a white paper on improving infrastructure in Pennsylvania.

## Rod Williamson
## Executive Director, Industrial Energy Consumers of Pennsylvania

Rod E. Williamson currently serves as the Executive Director of the Industrial Energy Consumers of Pennsylvania (IECPA) and the Michigan Association of Businesses Advocating for Tariff Equity (ABATE) providing strategic direction and energy expertise for these groups consisting of the large industrial energy consumers. Rod also serves as the Executive Director of the Transformer Manufacturing Association of America (TMAA). Additionally, Rod has served as a board member of KIUC, the Kentucky Industrial Utility Customer group, and AIEC, the Alabama Industrial Energy Customer group, and was a member of TVIC, the Tennessee Valley Industrial Committee.

Rod is Clark Hill's Practice Group Director, supporting the firm's energy and environment legal practices. Rod is responsible for the strategic planning, business development, and daily operations of these practice areas. Rod also leads the firm's Energy Management Consulting group. Rod provides unbiased energy management for large electric and natural gas customers.

Rod has significant experience managing industrial customer interventions in natural gas and electricity regulatory proceedings at state public service commissions, developing state and federal energy policy recommendations, testifying before state legislative energy committees, and drafting state energy legislation.

## Kevin Sunday
## Director of Government Affairs, PA Chamber of Business and Industry

As a member of the government affairs team for the largest broad-based business advocacy association in the state of Pennsylvania, Kevin manages energy and environmental legislative and regulatory issues, including matters relating to air, waste, water, land use, natural resources, power generation, transportation and transmission. He has helped secure passage of recent key environmental legislation at the state level and helped shape the development and implementation of various energy and environmental regulations.

In addition, Kevin has testified on these issues before Congress, the Pennsylvania legislature, EPA and FERC and regularly provides the Chamber's perspective on such matters to leading regional print and broadcast media outlets. Kevin regularly files comments and testimony on behalf of the Chamber on key regulatory and legislative matters to various state and federal agencies, working in concert with the various members of the Chamber to develop consensus positions on such matters.

Prior to joining the Chamber, Kevin led media relations and communications for the Pennsylvania Department of Environmental Protection and held a senior role with a communications firm. Kevin serves on the board of directors for the American Red Cross Central Pennsylvania Region and is a magna cum laude graduate of Towson University.

He lives in Mechanicsburg with his wife, Heather, and their two sons, Isaac and Owen.

## Greg Moreland
## Pennsylvania State Director, NFIB

Greg Moreland is NFIB's Pennsylvania State Director, responsible for NFIB's advocacy, communications, and operations on behalf of the 13,000 small business members across every industry and community in the Keystone State. A former paratrooper in the U.S. Army, 82nd Airborne, Moreland served as a policy analyst to then-Speaker Mike Turzai, and later chief of staff to the late state Sen. Dave Arnold.

As spokesperson for NFIB in Pennsylvania, Greg is a resource on policy matters and economic conditions affecting small businesses, including taxes, spending, and the state budget; mandates, regulations, and red tape; the general business environment, the cost of healthcare, energy, insurance, and workers' compensation. He has been quoted and appeared on broadcasts for publications and outlets across the state.

In 2022, Greg was highlighted in City & State Pennsylvania's, "The 2022 Pennsylvania Forty Under 40" list.

## Mike Butler
## Mid-Atlantic Executive Director, Consumer Energy Alliance

As the Mid-Atlantic Executive Director for the Consumer Energy Alliance, Michael has been an influential voice of the energy consumer. CEA provides consumers with sound, unbiased information on U.S. and global energy issues. Mike's expertise and insight on energy issues have garnered significant media coverage as his editorials have been picked up in many publications, including the Baltimore Sun, Harrisburg Patriot-News, Newark Star-Ledger, Philadelphia Inquirer, and Pittsburgh Tribune-Review.

Michael has spent the past 17 years working in and around politics and government in Pennsylvania and neighboring states. During his career in politics, Michael served as the Finance Director for the successful re-election effort of United States Senator Bob Casey. Additionally, he served as District Director for Congressman Jason Altmire and Finance Director for Dan Onorato's gubernatorial campaign.

This experience prompted him to launch Grant Forbes, LLC, specializing in government relations and business development. Since launching Grant Forbes, LLC, he has used his extensive network and governmental knowledge to assist a broad array of clients, including AM LLC, Brownsville Area Revitalization Corporation, The Efficiency Network, Surtreat, Three + One Advisors, Shelly Lyons Communications, and Steel City Media.

He holds a B.A. from Dickinson College and a JD/MPIA from the University of Pittsburgh.

**Testimony of**

# David Callahan, President
**Marcellus Shale Coalition**
**Before the**
**House Republican Policy Committee**

**Rising Energy Costs**

**February 6, 2023**

Good morning, Chairman Kail and distinguished members of the committee. My name is David Callahan, and I serve as President of the Marcellus Shale Coalition (MSC). The MSC is a state-wide trade association representing more than 130 energy companies from the upstream, midstream, and downstream sectors, and those who supply goods and professional services to the industry. Our members are fully committed to working with local, county, state and federal government officials to facilitate the safe development of natural gas resources in the Marcellus, Utica and related geologic formations. I appreciate the opportunity to be with you today and to share some thoughts on how we may collectively work together to address concerns related to increasing energy costs for consumers through policies that expand access to clean, domestic and affordable sources of energy.

Pennsylvania's energy industry has served a unique and critical role throughout our nation's history, powering America's industrial revolution, the successful campaigns to win two world wars, and most recently, navigating through the challenges of a worldwide pandemic.

Each of these historic events – and thousands in between – were spurred in large part thanks to the abundance of natural resources with which Pennsylvania is blessed, and generations of talented, hardworking and patriotic Pennsylvanians that met each challenge.

Center to many of these accomplishments is energy. Energy is, fundamentally, how we power things, build things, move things, and meet the necessities of our modern economy and way of life. And, from the birthplace of the modern oil and natural gas industries, to our bountiful coalfields, to the innovations of George Westinghouse and other nuclear pioneers, and a water-rich state that has helped power renewable resources, the success of our energy industries has always been inextricably linked to the success of our economy and continued advancement of our quality of life.

## Role of Natural Gas in Pennsylvania's Economy

Some quick table setting may be in order. Several of you are no doubt already familiar with these statistics, but it bears repeating.

In 2008, at the dawn of the Marcellus era, Pennsylvania produced just 25% of the natural gas which we used in the state. We were the 15th largest producer in a nation that, just years earlier, was legitimately concerned about whether we would have enough natural gas to power businesses or heat homes. Natural gas was an insignificant part of our electric generation portfolio – well under 10% - due to both scarcity of the resource and its high price at the time.

Fast forward to today. Pennsylvania is the second largest natural gas producer in the nation, behind only Texas. We now produce more than 20% of the *nation's* natural gas and serve a key role as both a domestic and international exporter of gas. Last year, nearly 53% of our electricity in Pennsylvania came from natural gas, helping make Pennsylvania the largest electricity exporter in the nation. It bears emphasizing: many of the New England states, as well as New Jersey and New York, are able to tout their climate-emission reductions *not* because they have re-engineered their own power generation supply, but because they have literally shut down their own generation units, and instead relied upon Pennsylvania to keep the lights on and their businesses open.

If we are to not only maintain, but grow, this impressive profile, we must tackle the barriers to energy access which ultimately will provide more stability and affordability for consumer energy prices.

**2008 versus 2023**

I commend the committee for focusing this hearing on rising energy costs for consumers, and what we can do to address the concerns of the average consumer. While certain influences on cost, such as international conflict and federal policies, for example, remain outside the direct control of any individual state, we can take certain steps at the state level that can be helpful and which I will touch upon in a few moments.

But it is worth taking a brief moment to examine how far we have come in Pennsylvania to improve the market for energy costs for the consumer. And it is apparent that much of the progress is due to the development our abundant domestic natural gas resource.

In 2008, Pennsylvanians faced the beginning of expirations of electricity generation rate caps, which were first imposed following passage of the 1996 electric competition act. Many feared skyrocketing price impacts on consumers, and because of this fear, some policymakers considered returning Pennsylvania to a regulated marketplace in which ratepayers – not private investors – shouldered the risk of building new power plants.

Natural gas prices routinely exceeded $12 or $13 an MCF[1], and nationally, companies were finishing years of investments in natural gas import terminals and figuring out which nations we would negotiate with to buy their natural gas – just to maintain the status quo.

[1] The average natural gas cost for the six largest utilities in 2008 was $13.69/mcf, declining 74% to $3.61/mcf in 2020 (Source: PA PUC Purchased Gas Cost Rate)

What happened over the next 15 years, however, was unprecedented and forever altered our nation's energy strategy and the global marketplace. During that time, the United States went from an energy importer to an energy exporter, providing us with something that had been considered unattainable – energy security. This happened as innovation and technology allowed us to access unconventional shale resources that provided an abundant supply of natural gas and oil from under our own feet. As a result of this increased supply, prices began to drop for the American consumer.

It is important to understand that here in Pennsylvania, even with the higher electricity prices that consumers have seen over the past year, electricity still costs between 30-40% less today than it did in 2008. Natural gas prices – even though higher over the past year – are still substantially below where they were before we were producing our shale resources. In fact, PA Public Utility Commission data shows that through 2021, the energy costs of homeowner's natural gas bills have gone down between 61% and 76%, saving consumers billions of dollars each year[2]. So instead of the $12 - $13 MCF price pre-shale development, the average price for 2022 was below $6 per MCF in Pennsylvania - still half of what it was 15 years ago. Currently, natural gas is trading below $3 per MCF.

This favorable environment has attracted over $13 Billion worth of new natural gas electric generation in Pennsylvania – all with private investment and no taxpayer subsidies, and largely with the work provided by our skilled construction trade unions. As a result, we have seen natural gas generation grow from less than 5% of our generation portfolio in 2005 to 53% of our electricity generation portfolio today. Pennsylvania is now the largest exporter of electricity in the entire nation[3], sharing the benefits of these resources with consumers beyond our own borders. While there are some to our east and north who have been critical of Pennsylvania's electric generation, the fact is that we are keeping their lights on: in 2021, Pennsylvania produced the same amount of electricity as Massachusetts, Maryland, New Jersey and New York – combined[4].

**Preserving Consumer Energy Choice**

Preserving the ability for consumers to have access to diverse energy supplies is foundational to preserving our ability to have access to affordable and reliable energy resources.

Reliability is often overlooked in this equation. As important as it is to be able to afford our energy bills, we also need the lights to go on when we flip the switch. We need the electricity to flow when the hospital, school, senior citizen living center or household with vulnerable citizens call upon it. Access to natural gas for heating our homes, cooking our food, heating our water, or powering our businesses and manufacturers is critical to this equation. In addition to sourcing these resources locally – supporting Pennsylvania jobs – this diversifies our energy portfolio and reduces stress on our electric grid, particularly during times of high demand.

[2] PA PUC Purchased Gas Cost Rate 2008 - 2021

[3] In 2021, PA exported 35% of the electricity it generated (PA Independent Fiscal Office, March 2022)

[4] PA: 242 million mWh; MA, MD, NJ & NY: 245 million mWh (Source: PA Independent Fiscal Office, March 2022)

Indeed, 3.4 million households[5] in Pennsylvania – housing nearly 8.4 million residents – use natural gas as their primary heating source. Imagine if prohibitive and punitive policies like those being advanced in jurisdictions like New York and elsewhere were in place here in Pennsylvania? Extreme weather events would most certainly lead to life-threatening disruptions for Pennsylvanians because our electric grid would likely become overwhelmed. And to emphasize this point, while there are certainly lessons being learned from the unprecedented Winter Storm Elliot, the fact of the matter remains that PJM, the grid in which Pennsylvania operates and provides the majority of the generation, was a net exporter of energy to other regional grids despite PJM underestimating demand.

With this backdrop in mind, we express our appreciation and support for legislation[6] that safeguards the ability of consumers to access their desired energy source. We are particularly grateful to Representative Tim O'Neal for championing this legislation last session, and for Representative Kristin Marcell for spearheading the effort this session.

**Natural Gas: A Solution to Poverty**

Thanks to the abundance and affordability of natural gas, the average annual savings to consumers in Pennsylvania is between $1100 and $2200 in energy costs, according to the most recent available data from the Pennsylvania PUC. This is a consumer benefit realized by all Pennsylvanians but is most beneficial to lower income individuals and communities of color. So actions and policies that either directly or indirectly hinder development of natural gas, and thereby restrict supply and transportation opportunities, only hurt those who need the most help by driving up costs.

To understand the impact of restricting access to natural gas, we need only look to our neighbors in New England who pay 81% more for their electricity than Pennsylvanians primarily because of the blockade New York has imposed on pipeline development prohibiting access to Pennsylvania produced gas.[7]

To further emphasize the need to ensure affordable energy, a U.S. Senate whitepaper analyzing the impacts of increased energy costs found that for every 10% increase in energy costs, 840,000 people across the U.S. are pushed into energy poverty.[8] Naturally, poorer households are more sensitive to energy prices, so again, policies that enhance supply and transportation of natural gas disproportionately help those in poorer communities who need access to cheap and reliable energy that natural gas provides.

And for those who still question the importance of natural gas for affordability, a recent study out of Texas examined the impact of energy prices on lower income households demonstrated

[5] U.S. Energy Information Administration (Nov. 17, 2022): https://www.eia.gov/state/print.php?sid=PA#:~:text=Two-thirds%20of%20Pennsylvania%20households%20use%20natural%20gas%20as,states%2C%20after%20Texas.%20Last%20Updated%3A%20November%2017%2C%202022

[6] House Bill 1947 (2021-2022 Legislative Session)

[7] U.S. Chamber of Commerce – Global Energy Institute 2018 Average Retail Electricity Prices

[8] https://www.energy.senate.gov/services/files/075f393e-3789-4ffe-ab76-025976ef4954

that policies restricting and banning access to natural gas can be devastating to lower income families. By analyzing the impacts of policies that banned natural gas in California and New York, the report found that a "transition away from natural gas would spike energy costs and disproportionately impact lower income households who would have to pay nearly two to three times as much for electricity compared to natural gas."[9]

**Benefits of Retail Competition**

While people are understandably concerned about rising energy costs and the impact it has on their household, business, school or non-profit budgets, we are fortunate in Pennsylvania to have some options that are not available in every state.

Thanks to the foresight of this General Assembly and past governors, Pennsylvania has a mature, robust competitive energy marketplace that allows consumers in many service territories[10] to choose their electric or natural gas supplier. With respect to electricity supply, customers can make decisions based on a host of factors that reflect their own purchasing priorities, including cost, fixed rates for determinate time periods, preferred generation choices or a combination of these options. Natural gas suppliers are able to also offer a variety of products that meet a consumer's needs. In all cases, the public utility continues to deliver the electricity or natural gas to the consumer, without interruption. While there are no doubt improvements that can be made to strengthen Pennsylvania's competitive marketplace, there are numerous options available right now for many consumers that can deliver electricity or natural gas to consumers for costs which are below the utility's default price.

I encourage your constituents to explore their supply options at www.papowerswitch.com for electricity and www.pagasswitch.com for natural gas. I have also included links at the bottom of this testimony to Fact Sheets[11] we have prepared which expand further on the benefits of consumer choice.

Nearly every Pennsylvania household uses electricity, and as we discussed earlier, two-thirds of our households use natural gas as their primary heating source, so the ability to shop competitively for a supplier that may be able to offer lower or locked-in rates to consumers is a significant advantage of which we should rightfully be proud.

**Challenges to Energy Access and Affordability**

One of the most critical challenges we face in the natural gas industry is the inability to acquire operating permits in a predictable time frame. Whether they are permits required to produce, process or transport the gas through pipeline development, Pennsylvania's process to review and approve the required permits is entirely unpredictable and unnecessarily time consuming. While

[9] Pathway for Progress: Natural Gas and Addressing Energy Progress

[10] Pennsylvania's competition law is not applicable to customers served by rural electric cooperatives, but is applicable to customers served by a regulated public utility.

[11] Please see: https://marcelluscoalition.org/wp-content/uploads/2022/07/Electric-Customer-Choice-07-01-22.pdf & https://marcelluscoalition.org/wp-content/uploads/2022/06/Natural-Gas-Customer-Choice.pdf

the PA Department of Environmental Protection (PA DEP) has, on its face, a Permit Decision Guarantee policy, in reality the policy is not adhered to. Too often, rather than either approving or denying a permit, the Department simply takes no action while it constantly re-engineers project designs, requests additional or supplemental information from applicants far beyond what the permit instructions compel or imposes permit criteria on applicants that are not found in either statute or regulation.

There is significant inconsistency across the Commonwealth as to how these rules are applied as well. In some regions, particularly north central Pennsylvania, operators are generally able to acquire permits in a predictable timeframe (albeit longer than what the Permit Decision Guarantee dictates they ought to be). However, in some cases, particularly in southwestern Pennsylvania, it can take 200, 300 or even more days to obtain a simple, straightforward earth disturbance permit to build a well pad, compressor station, or pipeline.

We have greatly appreciated the support of the members of this committee to advance legislative solutions to reform permitting and provide greater predictability, through proposals such as "deemed approved" legislation that would hold the Department accountable to a set timeline and third-party permit review, which is utilized successfully in other agencies and across the nation. While no legislative solution will ever be able to fully address the bureaucratic maladies that frustrate energy development in Pennsylvania, knowing that we have strong, vocal and effective advocates in the General Assembly, and in this caucus, has been reassuring to many who wish to continue to invest in our state and employ our residents.

**Conclusion**

On behalf of the MSC's member companies and their employees, I thank you for the opportunity to provide testimony at today's hearing. Our members and their employees are rightfully proud of the role they play each day to provide clean, reliable and affordable energy to your constituents. You can count on us to work cooperatively with you, the governor and your colleagues in the Senate to advocate and advance smart policy that builds upon our strong foundation.

I welcome the opportunity to answer your questions.

PENNSYLVANIA COAL ALLIANCE

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**Pennsylvania House Republican Policy Committee**
**Public Hearing on the Rising Price of Energy in Pennsylvania**

**February 6, 2023**

**Testimony of:**
**Rachel Gleason**
**Executive Director**
**Pennsylvania Coal Alliance**

Chairman Kail and members of the House Republican Policy Committee, I am Rachel Gleason, the Executive Director of the Pennsylvania Coal Alliance (PCA) and I appreciate the opportunity to provide testimony on the price of energy in Pennsylvania.

The PCA is the principal trade organization representing underground and surface bituminous coal operators in Pennsylvania, as well as other associated companies whose businesses rely on coal mining and a strong coal economy. Nationally, Pennsylvania is the third largest coal producing state, and PCA member companies produce nearly 90 percent of the bituminous coal mined annually in Pennsylvania, which totaled over 42 million tons in 2022. PCA does not directly represent any generation, however, high Btu thermal coal that is mined in our state is sent to power plants in Pennsylvania and in PJM. Fuel receipts to generators have not been finalized for 2022, but preliminary estimates from the U.S. Energy Information Administration indicate 25 million tons of Pennsylvania – mined thermal coal was sent to US power plants, 80% of which was sent to plants operating in PJM states.[1]

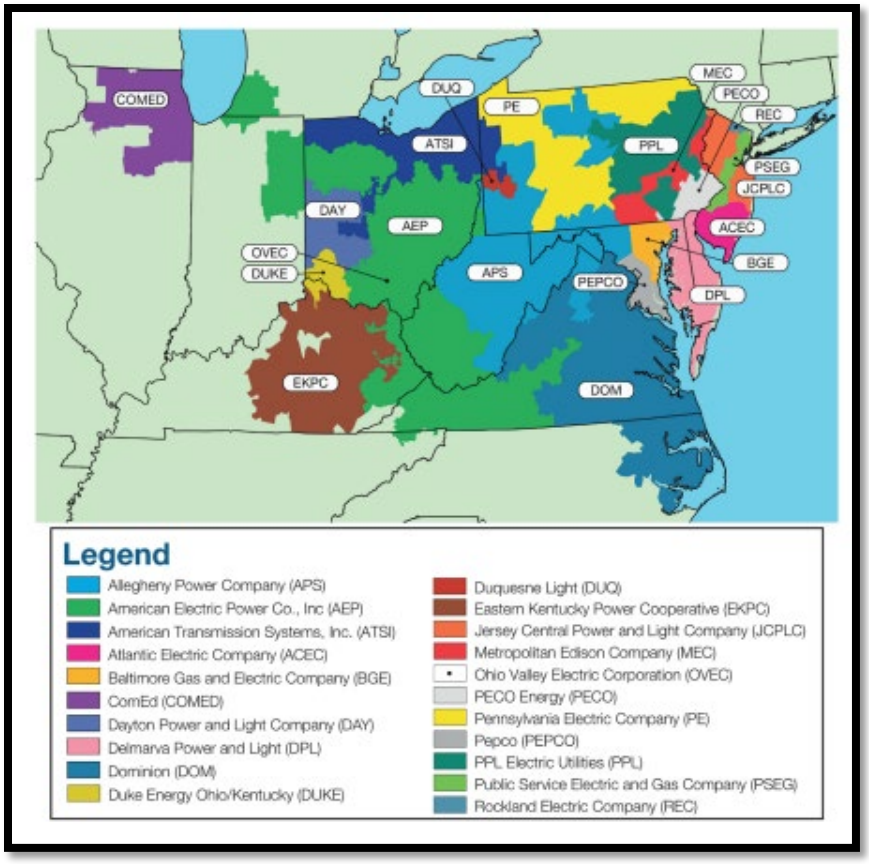
[1] https://www.eia.gov/electricity/data/eia923/

**Determining the Price of Electricity**

There are several considerations that contribute to the price a residential consumer pays for electricity.

First, there is the wholesale electricity market, operated by a regional transmission organization called PJM Interconnection, LLC ("PJM"). The PJM Interconnection operates a competitive wholesale electricity market and manages the reliability of its transmission grid. In managing the grid, PJM dispatches generation and coordinates the movement of wholesale electricity in all or part of 13 states, serving 65 million people.

**PJM's Footprint and 21 Control Zones**




*Source: Monitoring Analytics 2022 Quarterly State of the Market Report for PJM: January through September*

PJM determines the lowest cost of available generators needed to meet demand for every hour and then determines a clearing price at each location in the region for each hour which is

referred to as the locational marginal price ("LMP"). Each generator is paid by LMP multiplied by its production in each hour. The continuous determination of LMPs is referred to as the PJM Energy Market.

The Energy Market consists of the Day-Ahead and Real-Time markets. The Day-Ahead Market is exactly how it's title sounds; prices are set for energy that will be delivered the next day. The hourly prices are determined by generators offering supply and utilities bid demand from low to high until the projected demand is met, plus some reserves. There are a number of factors that contribute to offers from generators, including fuel cost, maintenance, labor, and taxpayer subsidies. The Day-Ahead Market solidifies generation expectations for the next operating day, some price certainty, and less price volatility.

LMP is settled twice, once in the Day-Ahead market and again in the Real-Time. Any deviations from what cleared the Day-Ahead market is address in the Real-Time Market. The Real-Time Market, similarly, addresses immediate electricity needs in real time. If a supplier of electricity commits to running it will be paid the day-ahead price and the real-time price for any generation that exceeds what was scheduled. The Day-Ahead and the Real-Time Markets average a little over 60% of the wholesale cost.

PJM's capacity market is also a component of the wholesale market. The capacity market is a commitment to provide electricity three years in advance to ensure sufficient supply and deliver in an emergency. In exchange for the commitment, generation sources are provided a daily guaranteed payment. Historically the capacity market accounts for just under 20% of the wholesale cost.

On the retail side of the market, the distributor is separate from the supplier of your electricity. An Electric Distribution Company (EDC) is the utility that manages the distribution of electricity to customers, reads meters, sends bills, address outages and fixes poles and lines when there is a problem. Separately, the Electric Generation Supplier (EGS) provides retail electricity. Each

EGS is reselling electricity it acquired on the wholesale market to provide a rate that is appealing to those shopping for electricity. If a consumer opts not to shop, the EDC offers default service.

**Coal Markets**

Coal is a global commodity subject to the ebbs and flows of supply and demand. The year 2022 was as bizarre of a year as 2020. Looking back two years at the pandemic and lockdowns, the former Governor declaring our industry non-essential and then correcting that declaration, we had a depression-like economy and saw record low coal production in Pennsylvania and record low demand. Operators had to cut expenses and, in some cases, idle mines. Fast forward two years to a war between Russia and the Ukraine, China refusing Australian coal imports and Europe barely having enough power to keep their lights on, demand skyrocketed globally, and prices increased.

In 2022 we saw domestic thermal prices climbing over $200/ton for bituminous coal, and exports at double the price. Industry has contracted over the years, and over-production does not exist as it would have in the past when new mines would pop up to make a quick dollar. The operators in the current market survived previous downtrends and plan their production based on permitting, access to capital, and market predictions. Nevertheless, no one predicted a pandemic and the economic realities that followed. The coal industry adjusted as much as possible to increase production when the economy turned back on, but demand remained high throughout the year.

Considering this, when discussing the price of electricity, it is important to understand the LMP that PJM determines, and how it impacts which generation sources are chosen to meet demand. As of September 2022, 49% of PJM's installed capacity was natural gas, 24% was coal, and 18% was nuclear. However, installed capacity does not translate to consistently operating, which is where the Day-Ahead Market, Real-Time Market, and capacity payments come into play.

**Installed capacity (By fuel source): January 1, May 31, June 1, and September 30, 2022**

| | 01-Jan-22 | | 31-May-22 | | 01-Jun-22 | | 30-Sep-22 | |
|---|---|---|---|---|---|---|---|---|
| | MW | Percent | MW | Percent | MW | Percent | MW | Percent |
| Coal | 48,568.4 | 26.1% | 46,902.0 | 25.6% | 43,492.9 | 24.0% | 42,805.1 | 23.6% |
| Gas | 85,826.3 | 46.1% | 86,113.3 | 47.0% | 86,801.0 | 48.0% | 87,930.0 | 48.5% |
| Hydroelectric | 8,792.0 | 4.7% | 8,789.6 | 4.8% | 8,491.7 | 4.7% | 8,491.7 | 4.7% |
| Nuclear | 32,301.2 | 17.4% | 31,971.0 | 17.4% | 31,971.0 | 17.7% | 31,971.0 | 17.6% |
| Oil | 5,545.5 | 3.0% | 5,365.4 | 2.9% | 5,267.3 | 2.9% | 5,267.3 | 2.9% |
| Solar | 1,843.0 | 1.0% | 1,997.0 | 1.1% | 2,665.6 | 1.5% | 2,666.5 | 1.5% |
| Solid waste | 650.5 | 0.3% | 650.4 | 0.4% | 650.4 | 0.4% | 650.4 | 0.4% |
| Wind | 2,590.5 | 1.4% | 1,526.0 | 0.8% | 1,563.8 | 0.9% | 1,563.8 | 0.9% |
| Total | 186,117.4 | 100.0% | 183,314.7 | 100.0% | 180,903.7 | 100.0% | 181,345.8 | 100.0% |

*Source: Monitoring Analytics 2022 Quarterly State of the Market Report for PJM: January through September*

Prices are a key outcome of markets and is an indicator of competition. According to Monitoring Analytics, in the first nine months of 2022 the prices were the highest in PJM since the market was created in 1999.[2] The largest contributor to increased prices was the cost of fuel, primarily natural gas and coal. Because coal was in such demand in 2022, US power plants conserved the coal they had and tried to rebuild stocks. Generally, when gas prices are high, as they were in August of this year hitting $10/MMBtu, utilities turn to coal, but this year many turned to natural gas and paid the high prices due to low coal inventories. Since utilities cannot store the gas at the plants, it was critical for them to rebuild coal inventories to cover any emergencies in the winter. US coal inventories grew from 82 million tons at the end of August to 94 million tons at the end of November – and just in time, as Winter Storm Elliott in December required a lot of coal to once again come to the rescue to keep the lights on.

**Importance of Coal-Fired Generation and a Diversified Grid**

Coal-fired electric generation is the only source of baseload power with on-site fuel that can ramp up when called upon, however, coal is no longer the predominate source on PJM's grid. Natural gas generation has rapidly increased and displaced most coal-fired generation over the

[2] https://www.monitoringanalytics.com/reports/PJM_State_of_the_Market/2022/2022q3-som-pjm.pdf

past 20 years, especially in Pennsylvania. Nevertheless, coal is the only generation source that repeatedly comes to the rescue of 65 million people, and Winter Storm Elliot should raise many red flags when it comes to the volatility of our grid, and price.

PJM saw 23% of its generating fleet shutdown on Dec. 24.[3] Since the storm, PJM has acknowledged that they underestimated demand by about 10%. While no fuel source came through the bitter cold unscathed – mechanical challenges in the frigid temperatures took plants of all kinds offline. Natural gas plants accounted for 70% — or 32 gigawatts – of the nearly 46 gigawatts of outages, the majority due fuel availability and to equipment failures.

PJM has faced gas supply problems from cold weather before, but it's a growing problem becoming more pronounced as the gas generation sources account for a larger share of the grid's dispatchable baseload generation. In January of 2018, during another polar vortex event, half of the total PJM natural gas capacity was not available to supply peak demand. And in February of 2014, during another cold snap, PJM found that 23% of total generator outages were due to interruptions of natural gas supply. In both 2018 and 2014, it was coal generation that came to the rescue, ramping up power supply when gas couldn't, when nuclear stayed the same and couldn't generate any more, and renewables did what renewables do, worked some of the time and didn't work some of the time.

A recent report from the North American Electric Reliability Corporation (NERC) concluded fossil-fuel plants are being removed from the grid too quickly to continue to meet demand.[4] As we electrify everything from cars to homes, we are dismantling the grid and adding taxpayer subsidized unreliable sources. These unreliable sources, or renewables, not only distort the Day-Ahead Market and the capacity market, but they also increase the risk of grid failure during weather events like Winter Storm Elliot. In a filing earlier this month to the Federal Energy Regulatory Commission, the Independent Market Monitor agreed that PJM has permitted

[3] https://pjm.com/-/media/committees-groups/committees/mic/2023/20230111/item-0x---winter-storm-elliott-overview.ashx
[4] https://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_LTRA_2022.pdf

offers from capacity resources that were incorrectly defined as capacity and agreed that offers should not have been permitted. [5] Ensuring the grid is comprised of diverse generation sources that compete on a level playing field keeps the market competitive, provides reliability and resiliency, and controls cost because of the competition. Subsidizing generation sources distorts the markets and lowers capacity payments, leading to baseload not being compensated for being available to perform when needed, threatening reliability, and directly impacting capital investments, including maintenance.

This past year was volatile for the coal markets, and while 2022 saw record coal demand that increased prices, January 2023 hasn't been a great month for coal burn and gas prices have plummeted, which has led to slightly increased coal inventories, utility stockpiles making a rebound and lower per ton prices.

Thank you to the Committee for the opportunity to testify, and I welcome any questions.

[5] https://www.monitoringanalytics.com/filings/2023/IMM_Comments_Docket_No_EL23-13_20230113.pdf

**Before the**
**House Republican Policy Committee**
**Public Hearing re**
**The Rising Cost of Energy in Pennsylvania**
**February 6, 2023**

**Testimony of**
**Terrance J. Fitzpatrick, President and CEO**
**Energy Association of Pennsylvania**

Good morning Chairman Kail and members of the House Republican Policy Committee. I am Terry Fitzpatrick, President and CEO of the Energy Association of Pennsylvania ("EAP" or "Association"), a trade association comprised of electric and natural gas utilities—also known as electric and natural gas distribution companies (EDCs and NGDCs)—operating in Pennsylvania.[1] EAP advocates for its members before the General Assembly and state agencies, assists its members by facilitating sharing of information and best practices, and provides educational opportunities for employees of its members and others through its operations and consumer services conferences. Thank you for this opportunity to testify regarding the recent increase in energy prices which are contributing to higher electric and natural gas utility bills.

Electric and natural gas utility bills are higher this winter due to increases in the wholesale prices of electricity and natural gas. Wholesale energy prices have increased significantly over the past two years due to a number of factors: the economic recovery and higher energy demand following the pandemic, the war in Ukraine, and general inflationary pressures. The U.S. Energy Information Administration ("EIA") has reported that the spot market

[1] EAP members include: Citizens' Electric Company; Columbia Gas of Pennsylvania, Inc.; Duquesne Light Company; Leatherstocking Gas Company, LLC; Metropolitan Edison Company; National Fuel Gas Distribution Corp.; PECO Energy Company; Pennsylvania Electric Company; Pennsylvania Power Company; Peoples Natural Gas Company LLC; Peoples Gas Company (formerly Peoples TWP); Philadelphia Gas Works; Pike County Light & Power Company; PPL Electric Utilities; UGI Central Penn Gas; UGI Penn Natural Gas; UGI Utilities, Inc.; Valley Energy Inc.; Wellsboro Electric Company; and West Penn Power Company.

price of natural gas at the Henry Hub averaged $8.30 per million British thermal units (MMBtu) in the third quarter of 2022, up from $6.59 per MMBtu in April 2022 and from $2.66 per MMBtu in April 2021.[2] Similarly, the wholesale price of electricity in the PJM region (which includes Pennsylvania) rose from $35.09 per megawatt hour ("MWH") in the first quarter of 2021 to $58.33 per MWH in the first quarter of 2022, and to $110.99 in the third quarter of 2022.[3] The simultaneous rise in wholesale prices of natural gas and electricity is not just a coincidence, as electricity prices tend to follow natural gas prices due to the growing use of natural gas to generate electricity. There is some good news here as the wholesale price of natural gas has fallen in the past two months, and EIA projects that lower prices will continue through 2024 (see the attached chart).

The rise in the wholesale prices of natural gas and electricity has caused a rise in the retail prices that electric and gas utilities charge their customers for energy supplies. Pennsylvania has "restructured" its electric and gas utility industries, which means that these utilities do not produce energy—they do not own power plants and gas wells. As a result, electric and gas utilities must procure supplies for their customers in wholesale energy markets. Restructuring also means that customers have the option of purchasing energy supplies from an "electric generation supplier" or "natural gas supplier" (collectively, "competitive suppliers") rather than purchase these supplies from their utility. Competitive suppliers also purchase energy supplies in wholesale energy markets, so the prices they offer to customers have also increased.

Electric and gas utilities have a legal obligation to provide energy supplies for their customers who do not choose competitive suppliers. For electric utilities, this supply service is referred to as "default service." Under Act 129 of 2008, electric utilities are required to use competitive procurement tools to purchase a "prudent mix" of spot market, short-term, and long-

[2] EIA Short Term Energy Outlook, May 2022, p. 2; and January 2023, p. 2.
[3] *Id.,* Table 7a.

term contracts with the goals of providing price stability at the "least cost to customers over time."[4] An electric utility's plan for carrying out this statutory obligation must be set out in a competitive procurement plan that is subject to approval by the Public Utility Commission following a formal process in which all interested parties, including consumer representatives, are provided an opportunity to be heard. It is important to note that while electric utilities are authorized by law to recover the costs of providing default service, they do not earn a profit on these energy sales to customers. Electric utilities only earn a return on the portion of the bill by which they recover charges to pay for the electric distribution system.

The supply service offered by natural gas utilities to residential customers and to commercial / business customers with low usage is similar in most respects to that of electric utilities.[5] For gas utilities, this supply service is referred to as "provider of last resort" service or POLR service. Gas utilities make filings setting out their plans for procuring gas supplies for their customers who do not purchase from competitive suppliers, and these filings are adjudicated in a formal process in which consumer representatives and other parties participate. Gas utilities are required to follow a "least cost fuel procurement policy" to serve these customers.[6] Like electric utilities, natural gas utilities do not earn a profit on their supply service.

Electric and gas utilities adjust their charges for default or POLR service quarterly or semi-annually to reflect their purchases of energy in wholesale markets. Supply charges typically make up roughly half of a customer's bill, with the remainder consisting chiefly of charges to pay for the distribution systems that transport energy to a customer's home or place of business. In order to increase the distribution portion of the bill, utilities must file for a base rate increase with the PUC in which their revenues, expenses, and capital investments are

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[4] 66 Pa.C.S. Sec. 2807 (e)

[5] Industrial customers who purchase large amounts of natural gas are referred to as "transportation customers" and, since the early 1970's have purchased their gas supply on the competitive market with gas utilities providing the distribution services to deliver the gas to the customer.

[6] 66 Pa.C.S. Sec. 1318 (a)

scrutinized in a formal process. The PUC is charged with responsibility to establish "just and reasonable" rates for distribution service.[7]

What can electric and gas customers do to respond to these increased energy prices? Customers may consider shifting to "budget billing," which smooths out month-to-month variations and can make it easier for customers to budget. Customers can also control costs by conserving energy. This includes adjusting thermostats, using more efficient lighting and appliances, servicing cooling and heating systems, and weatherizing their homes. Under Act 129 of 2008, larger electric utilities are required to offer programs to help customers pay for the cost of energy efficiency improvements to their homes and businesses. Other electric and gas utilities offer energy efficiency tips and information on their websites.

Customers can also consider offers from competitive suppliers. Customers should carefully evaluate competitive offers, for example, by understanding the difference between variable and fixed price products and considering whether early termination fees apply. Customers should also be vigilant to exercise their options when their contract with a supplier expires to make sure they are not switched to a price product that is not appropriate for them. The Public Utility Commission administers both a "PA Power Switch" website and a "PA Gas Switch" website to help customers compare competitive offers to each other and to the supply charges of utilities.

If customers are having difficulty paying their electric bill, they should contact their utility to see if they qualify for a wide range of assistance options. These include both utility specific "universal service" programs funded through utility rates[8] and government sponsored programs. Universal service programs include "customer assistance programs" under which charges are based upon qualifying customers' ability to pay; hardship fund grants for one-time cash assistance; utility customer referral programs wherein utilities refer customers to available

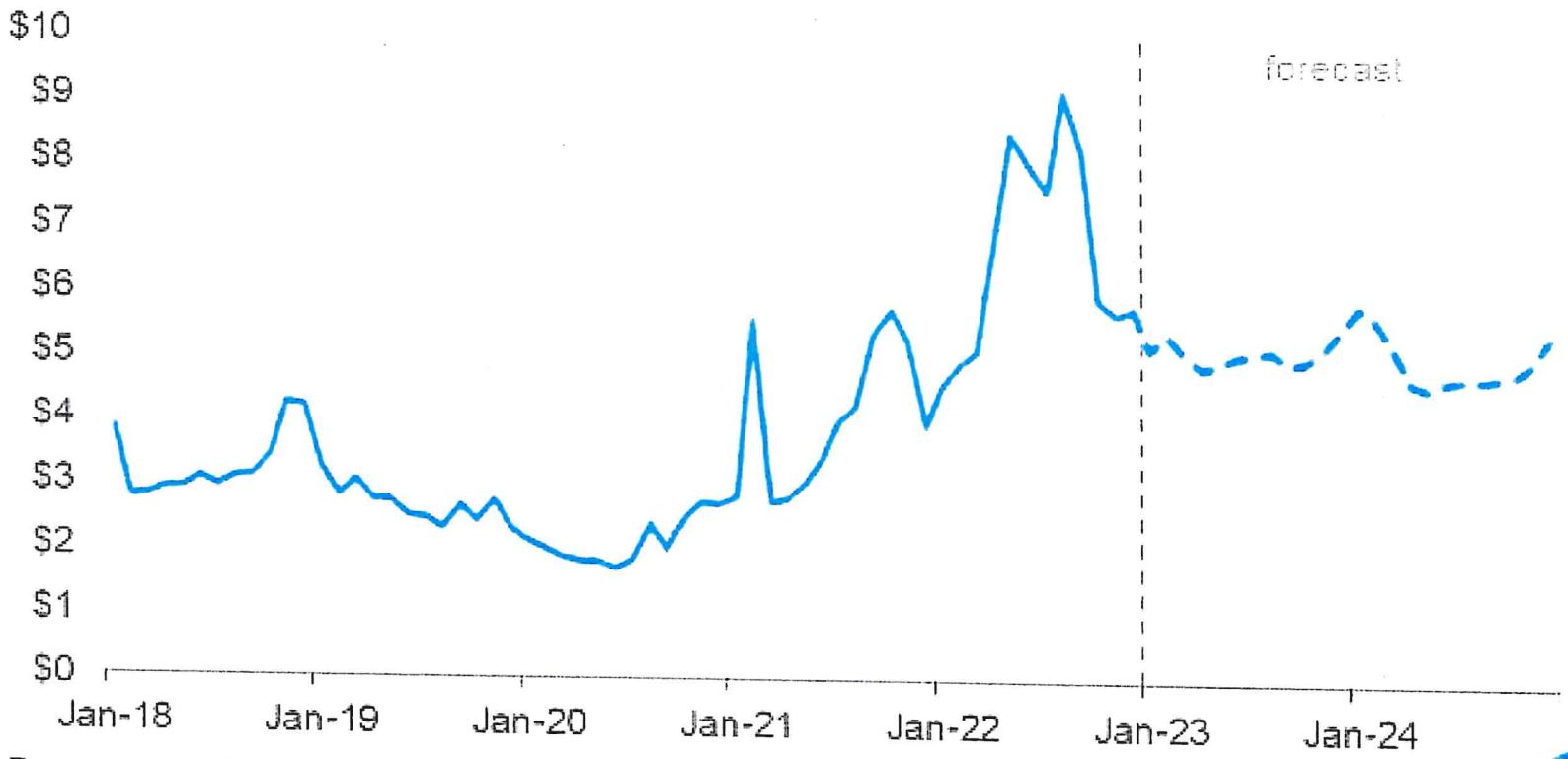
[7] 66 Pa.C.S. Sec. 1301 (a)
[8] Electric and natural gas utilities expended a total of $458 million on these programs in 2021.

community-based programs; "low-income usage reduction programs" under which qualifying customers receive assistance paying for energy efficiency improvements to their homes. Customers may also be able to set up a payment arrangement with their utility to spread out repayment of arrearages.

Government-sponsored programs for energy assistance include the annual Low-Income Home Energy Assistance Program (LIHEAP) as well as COVID-related relief programs such as the federal Homeowners Assistance Fund (HAF) where assistance is available for both past due bills and upcoming payments. Utilities work closely with the Pennsylvania Department of Human Services each year in regard to LIHEAP and have worked with their local county governments and customer assistance agencies to successfully coordinate implementation of the COVID related relief programs aimed at helping customers impacted by the pandemic pay tens of millions of dollars of arrearages.

Thank you for the opportunity to testify and I'll be happy to answer any questions.

**Monthly Henry Hub natural gas spot price**
dollars per million British thermal units




Data source: U.S. Energy Information Administration, *Short-Term Energy Outlook*, January 2023

eia

**February 6, 2023**
**House Republican Policy Committee**
**Rising Energy Cost in Pennsylvania**

**Rod Williamson, IECPA Executive Director**

Good morning, Chairman Kail and members of the committee. I am Rod Williamson, Executive Director of the Industrial Energy Consumers of Pennsylvania (IECPA). IECPA is a trade organization formed in 1982 by large, energy-intensive customers with one or more facilities in the Commonwealth of Pennsylvania. IECPA regularly monitors Public Utility Commission (PUC) activities, participates in the PUC regulatory process, and participates in the legislative process at the General Assembly on matters impacting large energy users.

IECPA represents companies, operating at more than 30 locations in Pennsylvania providing family-sustaining jobs. IECPA members spend over $300 million on energy every year, consume over 3 billion kWh of electricity and over 30 bcf of natural gas at our Pennsylvania facilities.

IECPA members recognize the need to act on climate change, and many of our member companies are implementing their own, individual sustainability programs. At the same time, we need reliable energy that is priced in a way that allows our Pennsylvania operations to grow and successfully compete in the global markets we serve.

**WWW.IECPA-ENERGY.ORG**

***The Voice of Large Energy Consumers In Pennsylvania***

Rod Williamson, Executive Director
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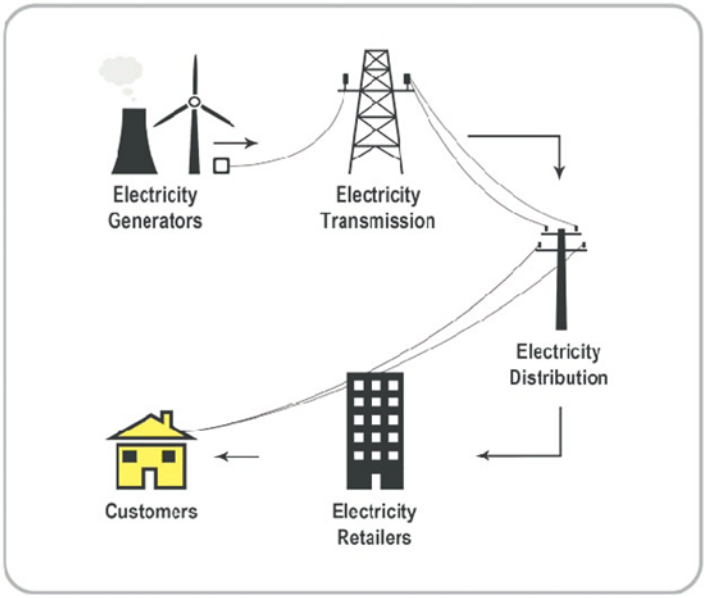
1) IECPA Supports the Electricity Competitive Retail Choice Market Structure in Pennsylvania

Electricity supply has 3 main components:

1) Generators
   Capacity – kW
   (to meet customer Demand)
   Energy – kWh
   (to meet customer Usage)

3) Transmission

4) Distribution




Electricity costs are 30% to 70% of industrial manufacturing costs providing self-motivation to reduce usage and costs.

For large energy user's like IECPA members, a 1 cent per kWh increase in electricity cost can result in over $10 million per year increase in cost!

While the prices in the electric retail choice market can change with the supply and demand in the market, the market provides competition among generation suppliers to control cost. Retail choice also provides greater flexibility for customers to lock-in their price for time periods that are best for them.

*HOWEVER non-market, mandated PA State policy initiatives like renewable portfolio / alternative energy standard requirements, energy efficiency requirements, restrictions on what fuel can be used and regional greenhouse gas programs have and will significantly increase customers electricity cost.*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2) Natural gas is a critical fuel source and raw material for industrial manufacturing companies.

For large energy user's like IECPA members, a $1 per MMBtu increase in natural gas cost can result in over $10 million per year increase in cost!

Pennsylvania's natural gas supply has helped provided a competitive advantage to industrial manufacturing companies.


***Policies that unnecessarily restrict the supply or prevent the domestic use of natural gas should be avoided!***

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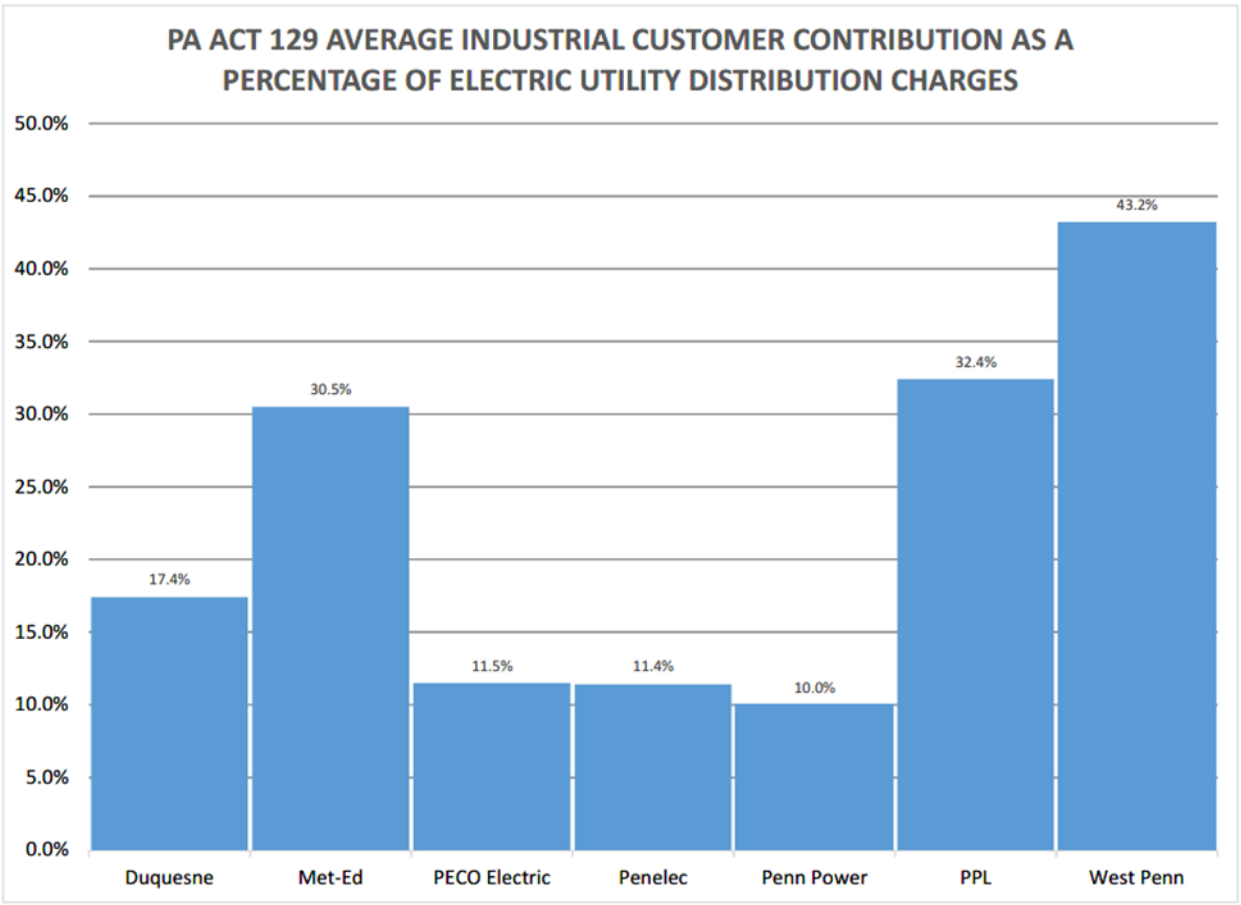
3) Non-Market, Mandated Charges like the Act 129 Energy Efficiency Program are adding Uncompetitive Cost to Industrial Manufacturing Customers

*Since the beginning of the EE&C Program in June 2009, utility customers have paid more than $2 billion into these Act 129 compliance programs through the payment of associated EE&C utility surcharges. This includes over $1 billion in program overhead!*[1]

Act 129 charges are a significant, added cost to the electric distribution utility bill for manufacturing customers - as much as 43% of the utility bill!




***Based on PA PUC 2022 Rate Comparison Report (April 15, 2022)**

[1] Based on information gathered from each utilities' Annual Act 129 Energy Efficiency and Conservation Plan Reports.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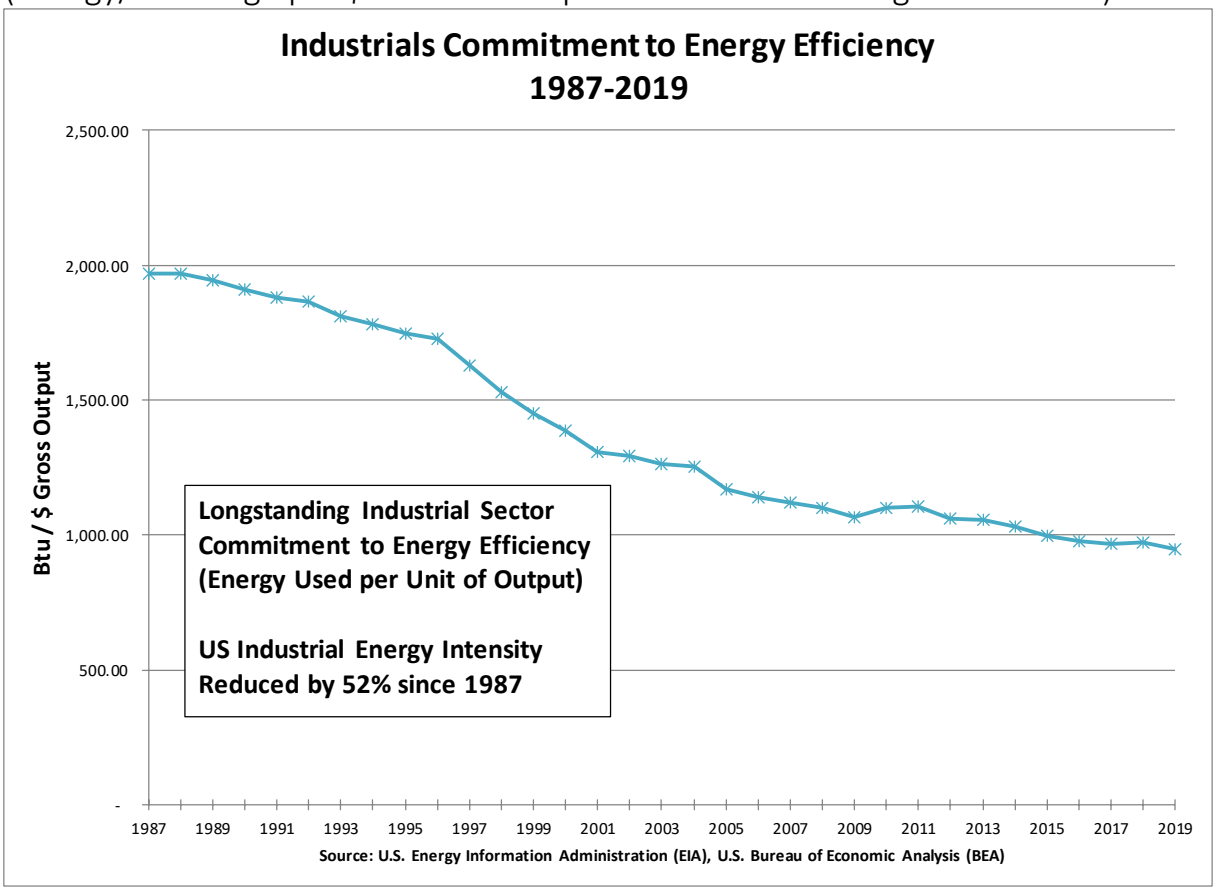
That investment by industrial and manufacturing businesses has largely gone without a return to those entities that are unable to participate in utility EE&C offerings since they have already invested in their own operational improvements to be as efficient as possible and remain competitive. Because these manufacturing businesses are exposed to global trade, they cannot merely pass additional costs on to their customers without risking the loss of those customers to their global competition.

Unlike other energy generation resources, energy efficiency has a direct operational benefit to the individual customer. State policy should not require a manufacturing customer to subsidize / pay for energy efficiency projects at other manufacturing facilities which may be owned by their competitors.

Large energy intensive manufacturers started energy efficiency long before Act 129 in 2008 and will continue long after. Projects were always self-funded without Act 129 and benefited all Pennsylvanians.
(Energy/Btu usage per $ of Gross Output has decreased long before 2008)





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*Conditions have changed significantly since Act 129-Type Programs were enacted by several states. Since then, these programs have been modified in 29 States (including Pennsylvania neighboring states) to provide an opt-out or self-directed program for large manufacturing customers*. (https://database.aceee.org/state/self-direct)
*It is long past time to do the same in Pennsylvania!*

4) The RGGI Program will Create a Significant Electricity Cost Increase to Customers

At the current carbon allowance auction price of $13/ton, electricity market prices in PA could increase over $6/MWh. This would result in significant cost increases to all customers and especially harmful to energy intensive customers:

| | Electricity Cost Increase | Associated Gross Receipts Tax Increase | Total Annual Increase |
|---|---|---|---|
| Residential | $ 358,943,034 | $ 22,505,728 | **$ 381,448,762** |
| Commercial | $ 229,622,729 | $ 14,397,345 | **$ 244,020,074** |
| Industrial | $ 315,461,396 | $ 19,795,203 | **$ 335,256,599** |
| **Total** | **$ 904,027,159** | **$ 56,698,276** | **$ 960,725,435** |

***Not only would this electricity cost increase have a significant direct impact on industrial manufacturing companies' energy bills, it would also significantly raise cost to their employees resulting in further inflationary pressure.***

IECPA's issue is not with the underlying goals of reducing carbon emissions, but rather the unnecessary RGGI cost that would be imposed on electric generators in Pennsylvania that will increase the cost of electricity to Pennsylvania residents, commercial businesses, and energy intensive, trade exposed industrial manufacturers.


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*The increased electricity cost from RGGI is unnecessary because energy-related carbon dioxide emissions in Pennsylvania have decreased just as much on a percentage basis as the other states participating in RGGI and have decreased MORE than other RGGI states on an absolute basis without the added cost of the RGGI program! This has occurred in large part because of the competitive retail choice market in Pennsylvania driving the development of lower carbon emitting generation.*

**Table 1. State energy-related carbon dioxide emissions by year (1970–2020)**

million metric tons of energy-related carbon dioxide

| State | Change (2008-2020) Percent | Absolute |
|---|---|---|
| Connecticut | -11.5% | -3.9 |
| Delaware | -29.7% | -3.7 |
| Maine | -40.9% | -5.5 |
| Maryland | -55.0% | -26.5 |
| Massachusetts | -46.6% | -24.4 |
| New Hampshire | -50.5% | -6.3 |
| New Jersey | -53.1% | -44.5 |
| New York | -32.6% | -46.7 |
| Rhode Island | -8.3% | -0.8 |
| Vermont | -9.4% | -0.5 |
| Virginia | -18.9% | -18.6 |
| **AVERAGE of RGGI STATES** | **-32.4%** | **-16.5** |
| Pennsylvania | -39.7% | -76.7 |

Data sources: U.S. Energy Information Administration (EIA)

, State Energy Data System and EIA calculations made for this table.

https://www.eia.gov/environment/emissions/state/

Note: RGGI's first auction of carbon dioxide emissions allowances in 2008.

*In summary, market competition drives innovation and lower energy pricing. Legislation and regulations should not impose unnecessary additional requirements that force a transition to occur faster than the market can react. Such action only results in higher cost and decreased reliability! Thank you for providing IECPA the opportunity to offer input on this critical issue.*

***The Voice of Large Energy Consumers In Pennsylvania***

Rod Williamson, Executive Director
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Testimony

Submitted on behalf of the
Pennsylvania Chamber of Business and Industry

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**The Rising Price of Energy in Pennsylvania**

Before the:
**Pennsylvania House Republican Policy Committee**

Presented by:
Kevin Sunday
Director, Government Affairs

Harrisburg, PA
February 6, 2023

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Chairman Kail and members of the House GOP Policy Committee,

Thank you for the opportunity to join you today. My name is Kevin Sunday, director of government affairs for the Pennsylvania Chamber of Business and Industry, the largest, broad-based business advocacy organization in the Commonwealth. Our nearly 10,000 members are of all sizes and of all commercial and industrial sectors.

It is an honor to appear before you this afternoon to discuss our state's energy resources and the challenges and opportunities before us. The abundant natural resources of our state have led this country through every major energy transition that has occurred in the past 165 years, from the first oil well drilled in this country in Titusville in 1859, to the first delivery of natural gas to a major metro in Pittsburgh in 1884, to the first commercial nuclear plant in Shippingport in 1958, to today's prolific production of shale gas and many exciting innovations in advanced manufacturing and distributed energy resources.

We are presently the nation's largest exporter of natural gas and electricity, the second largest exporter of coal to international markets, and the second largest producer of electricity from nuclear power. We are home to universities who are producing globally recognized engineering talent and trade schools who train and develop highly in-demand technical talent. We are host the headquarters of PJM, which manages delivery of power to 65 million Americans in 13 states across what is the world's largest organized grid from offices in southeastern Pennsylvania. We are also home to several of the last remaining refineries in the northeast, and are proud to count among the Chamber's members companies who are leading in areas like advanced manufacturing, renewable power, distributed energy resources, robotics, electrified heavy trucking, carbon capture, and hydrogen production.

Our state's energy resources have helped dramatically improve the nation's energy security, as well as that of our allies, as well as significantly reducing our emissions. Among all states, we are second in the reduction of greenhouse gas emissions since 2005, and we are for the first time in decades monitoring attainment statewide for all but one federal ambient air quality standards.

Permitting delays impede the confidence of lending institutions to close a business loan, and the overall delay and uncertainty from our dysfunctional approach to building infrastructure and energy projects in this country leads to underinvestment into development of the resources needed to power our economy. A tax and regulatory approach that sends a strong signal to invest and that improves on the efficiency of government will lead to greater opportunity for Pennsylvanian families and our businesses, helping them grow and expand here. Further, recent events within the electricity grid, as well as grid regulators noting the challenge that increasing deployment of intermittent resources is presenting to reliability, underscore the need for our state to continue lead on energy policy and ensure reliability and the affordable delivery of power through competitive markets and a diverse fleet of power generation resources.

My testimony will discuss in greater detail these contributions, as well as the opportunity and challenges ahead.

## Competitive Markets and Private Sector Leadership Have Delivered Significant Economic and Environmental Progress in Pennsylvania and the United States

The PA Chamber encourages lawmakers on both sides of the aisle to come together to produce durable, bipartisan policy that applies and develops upon Pennsylvania's successful leveraging of our historic leadership positions in energy and industry through competitive markets to produce electricity, natural gas and a host of goods and commodities in an increasingly affordable and sustainable manner. In an increasingly unstable geopolitical environment that is layered over increasing global demand for energy, Pennsylvania should empower America for continued leadership in an increasingly competitive and dynamic global marketplace.

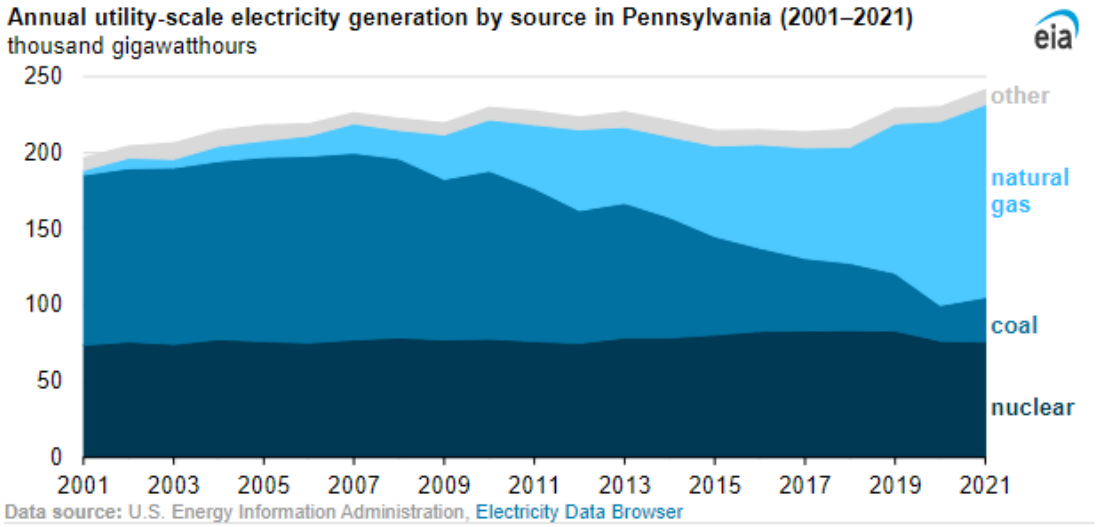
Among all states, Pennsylvania ranks second in total energy production, second in natural gas production, second in installed nuclear capacity, third in coal production, third in electricity production and eighth in manufacturing output. Pennsylvania is also the largest net-exporter of electricity of any state and is the largest producer on the 13-state PJM grid, where prices are at generational lows and GHG emissions have fallen 34% across the region since 2005.

Pennsylvania's energy assets have contributed to significant nationwide decreases in commodity costs for gas and electricity and in emissions of NAAQS and greenhouse gasses. Our state has helped position the United States as a leader in sustainable economic growth, as our nation has outpaced other developed countries in keeping energy prices low while growing the economy and reducing emissions.

Pennsylvania's contributions to growing the economy while reducing energy prices and emissions have positioned the United States for leadership in sustainable growth. As EPA's Acting Assistant Administrator Joseph Goffman noted in a recent memo to regional offices, "ongoing changes in electricity generation mean that the emission reduction goals that the [Obama administration's Clean Power Plan] for 2030 have already been achieved."[1]

This progress on the environment has come while we have increased production of energy in this state. As the table below from the United States Energy Information Administration notes[2], electricity generation in Pennsylvania is at an all-time high.

[1] Memorandum to EPA Regional Administrators: Status of Affordable Clean Energy Rule and Clean Power Plan. United States Environmental Protection Agency Office of Air and Radiation. Feb. 12, 2021. https://www.epa.gov/sites/default/files/2021-02/documents/ace_letter_021121.doc_signed.pdf
[2] EIA Today in Energy, Jan. 26, 2023. https://www.eia.gov/todayinenergy/detail.php?id=55319




This increase in power generation has come both as a result of neighboring states enacting regressive, uncompetitive policies that increases their reliance on our power generation. For example, during an extreme cold weather snap leading up to last Christmas, states to our south and east were in need of imported electricity. Pennsylvania, through the entire energy crunch, was exporting sufficient power to make up for neighboring states' shortfalls. The PJM grid as a whole was also exporting power to neighboring grids whose demand exceeded supply. While the high demand for power resulted in cost increases, we in Pennsylvania and PJM were able to avoid the blackouts southern states saw thanks to the contributions of our energy sector, demand-side reductions, and grid management.

States like New Jersey and Maryland having to import power in December 2022 was not a one-off event. As the Independent Fiscal Office noted in a March 14, 2022 research brief and as show in the excerpted table below, Pennsylvania's power generation sector has produced, remarkably, an increase in output with a decrease in emission. The same cannot be said for many neighboring states, some of whom, despite participating in RGGI, have fleets that are more carbon-intensive that Pennsylvania. Measured on emitted CO2 per unit of electricity, Pennsylvania's power generations sector is cleaner than RGGI states like Maryland and Massachusetts and much less emissions intensive than Ohio (whose power sector is 64% more emissions intensive than PA's) and West Virginia (which is 161% higher).[3] West Virginia and Ohio are not in RGGI, but would stand to benefit from an increase in production from their energy sector should Pennsylvania disadvantage itself through enactment of an energy tax that not all states in the PJM grid pay.

[3] Electricity Update for March 2022. Independent Fiscal Office, March 2022.
http://www.ifo.state.pa.us/download.cfm?file=Resources/Documents/Electricity_Update_March_2022.pdf

**Table 3 - Electricity Generation Carbon Dioxide Emissions**

| State | Generation | | Emissions | | Emissions per Unit | |
|---|---|---|---|---|---|---|
| | 2007 | 2021 | 2007 | 2021 | 2007 | 2021 |
| New York | 145.9 | 125.2 | 53.7 | 28.7 | 0.37 | **0.23** |
| New Jersey | 62.7 | 61.4 | 20.8 | 14.5 | 0.33 | **0.24** |
| Connecticut | 33.2 | 44.1 | 10.5 | 10.6 | 0.32 | **0.24** |
| Virginia | 78.4 | 94.3 | 47.2 | 27.3 | 0.60 | **0.29** |
| North Carolina | 130.1 | 131.3 | 79.4 | 40.5 | 0.61 | **0.31** |
| Pennsylvania | 226.1 | 241.6 | 129.3 | 81.0 | 0.57 | **0.34** |
| Maryland | 50.2 | 39.7 | 31.5 | 15.2 | 0.63 | **0.38** |
| Massachusetts | 47.1 | 19.4 | 25.8 | 8.4 | 0.55 | **0.43** |
| Ohio | 155.2 | 123.3 | 132.0 | 68.7 | 0.85 | **0.56** |
| West Virginia | 93.9 | 65.6 | 87.3 | 58.4 | 0.93 | **0.89** |

Note: Generation in million megawatt hours. Emissions in million metric tons.
Source: U.S. Energy Information Administration. 2021 Emissions are estimated by the IFO based on 2021 generation and 2020 emissions per unit.

Pennsylvania's increase in power generation is also a product of our state's energy policy allowing for significant new investment through competitive markets. In large part, this has allowed us to build off a long history of generation from coal and nuclear and further diversify our portfolio by leveraging Marcellus shale gas, which is highly efficient from in terms of production. According to the U.S. Energy Information Administration, new daily production per rig in the Appalachian basin is 25,436 mcf/day, or two-and-a-half times the production of the next biggest producing formation in the United States – the Haynesville formation, at 10,739 mcf/day per rig.[4]

Compared to all areas of domestic production, natural gas produced in the Appalachian basin, such as from formations like Marcellus shale which produces more than a fifth of all domestic natural gas, has by far the lowest overall greenhouse gas emissions intensity, measured on a 100-year global warming potential methodology, according to the Clean Air Task Force.[5] The emissions intensity of natural gas produced in Appalachia (4.0kg CO2e/BOE) is nearly a third of the intensity of gas produced in the Texas (11.9 CO2e/BOE in the Permian) and nearly a quarter of the intensity of gas produced in the Gulf Coast (14.3 CO2e/BOE) In other words, as a result of the environmental leadership of the private sector and a responsive regulatory approach, gas produced in Pennsylvania, Ohio and West Virginia is both the most prolific and sustainable of all domestic plays.

Recent price spikes are owing in large part to disruptions in international energy markets from Russian's horrific invasion of Ukraine (and the resulting sanctions) as well as the significant disruption the pandemic and mitigation measures wrought in terms of new investment. But it must

[4] Drilling Productivity Report. U.S. Energy Information Administration, Jan. 17, 2023. https://www.eia.gov/petroleum/drilling/
[5] Benchmarking Methane and Other GHG Emissions. Clean Air Task Force, June 2021. https://www.catf.us/wp-content/uploads/2021/06/OilandGas_BenchmarkingReport_FINAL.pdf

not be lost on policymakers that prior to these events, production of domestic energy resources resulted in significant cost reductions for families and consumers, and that recent price forecasts for upcoming months note a very precipitous drop in natural gas prices. It is reasonable to expect such decreases will also tamp down volatility in the electricity market. Taking a long-term view, ensuring that there are strong signals from policymakers for the private sector to invest in production, generation, transmission and use of energy will be paramount to fully taking advantage of our natural resources.

## High Energy Prices Impact Economic Competitiveness and the Affordability of Basic Needs

We have a historic and generational opportunity to leverage the responsible use of our natural resources into sustainable manufacturing of advanced manufacturing, including polymers and petrochemicals; localized heating and power for data centers, educational campuses and health systems; and a dynamic power generation sector that is increasingly reliant on dispatchable natural gas to fill in gaps between intermittent resources, which are continuing to be deployed to the grid in substantial volume.

The interplay of these industries will produce not just family-sustaining jobs, but new innovations that provide for greater human flourishing. This includes leveraging data centers and quantum computing to inform the design of life-saving drugs, advanced materials, and a dynamic energy grid. But given increasing interest rates and recent changes to federal tax policy that disproportionately burdens manufacturers, future private sector investment into our state in these sectors will be dampened if we layer onto these cost increases policy that causes further increases to energy.

High energy prices impact everything from the manufacturing sector to the operations of schools and healthcare system, but are regressive to lower income families. The average low-income household "spends three times more of their income on energy costs compared to the median spending of non-low income households," according to a 2020 analysis of energy burdens by the American Council for an Energy-Efficient Economy.[6] The gap is more pronounced for Native America, Black and Hispanic households in lower income deciles.

High energy prices also drive up the cost of the fertilizers needed to feed a growing world. Energy economist Vaclav Smil has estimated the process to manufacture synthetic fertilizer from ammonia and nitrogen, through petrochemical feedstocks, has allowed the world to feed more than 2 billion people more than it would have otherwise. The ability for the global economy to produce additional volumes of fertilizer is contingent on the availability of these feedstocks.

The United Nations' World Food Programme recently released a recent report on the on-going crisis of food affordability, owing in large part to disruption in energy and transportation from Russia's horrific and illegal invasion of Ukraine. Noted the UN, the "effects of the war in Ukraine,

[6] How High Are Household Energy Burdens? American Council for an Energy-Efficient Economy, September 2020. https://www.aceee.org/sites/default/files/pdfs/u2006.pdf

including higher natural gas prices, have further disrupted global fertilizer production and exports – reducing supplies, raising prices and threatening to reduce harvests. High fertilizer prices could turn the current food affordability crisis into a food availability crisis**,** with production of maize, rice, soybean and wheat all falling in 2022."[7] The UN estimates that a mere 1% increase in global food prices as a result of the energy price shock will jeopardize the food security of 10 million people in the developing world.

**To Turn Pennsylvania Around, Leaders in Harrisburg Need to Work Together and Build on Recent Bipartisan Tax and Regulatory Reforms**

Building 21st century advanced manufacturing operations and leveraging our energy resources into greater opportunity for our residents and businesses is only possible through a determined and bipartisan pursuit of reform to our state's tax and regulatory structure. More than two hundred members of the state House and Senate last year voted to overhaul the state's burdensome business tax structure and, by extension, significantly improve our state's competitive position. Governor Josh Shapiro also campaigned on accelerating the scheduled phase-down of the corporate net income tax and streamlining permitting reviews. We support and applaud such measures, as well as the improvement of the treatment of net operating losses. We are one of a handful of states which limits the ability of companies to carry such losses forward. Manufacturers, in particular those investing heavily into expanding existing operations or in building new sites, are particularly disadvantaged by such limitations.

A more competitive tax policy is also just one element of improving the state's competitive position to attract new investment and expand and retain what is already here. The other key element is improving time-to-market through comprehensive reform to permitting. Our organization was honored to have stood with Gov. Shapiro in the ceremonial signing of his executive order to establish a one-stop shop permitting office, and we have for several session supported legislative proposals to reform the state's regulatory process. Such reforms are needed, and these include permit applications being deemed approved should the agency not render a timely decision on a complete application; providing additional resources to agencies, including the option for third-party review; and providing greater certainty to agency decisions through amending the scope of appeal on permit actions and the associated possibility of fees being awarded to litigants by courts.

Such an approach would build upon recent bipartisan action in Washington, D.C., where lawmakers of both parties have recognized red tape is costing our country too much in terms of lost investment and a modern infrastructure. Over the past few years, Congress has enacted very significant energy and permit streamlining policies, thanks to buy-in like this from Republicans in the U.S. House and Senate. The 2020 defense bill included major provisions to support American leadership in the nuclear industry, including support for the next generation of safe and effective advanced reactor designs.

[7] Global Hunger Crisis. United Nations World Food Programme, January 2023. https://www.wfp.org/global-hunger-crisis/

The bipartisan infrastructure law, in addition to increased funding for bridges, highways, clean water and broadband for Pennsylvania, codified significant permitting reforms to federal environmental reviews. These reforms to cut red tape were a Trump administration policy that have become law with the signature of a Democratic president.

This progress on cutting federal tape has come as lawmakers on both sides of the aisle in Washington recognized that addressing the challenges of growing the economy, improving environmental quality and ensuring abundant, affordable energy will only happen when policy promotes innovation and building new projects in the United States. The non-partisan policy think tank Common Good estimates permitting delays on energy projects costs the nation trillions in public health costs.

Permitting delays impede the confidence of lending institutions to close a business loan, and the overall delay and uncertainty from our dysfunctional approach to building infrastructure and energy projects in this country leads to underinvestment into development of the resources needed to power our economy. A tax and regulatory approach that sends a strong signal to invest and that improves on the efficiency of government will lead to greater opportunity for Pennsylvanian families and our businesses, helping them grow and expand here.

Thank you for the opportunity to address you this morning.

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February 6, 2023

The Honorable Joshua Kail
128 Main Capitol Building
P.O. Box 202015
Harrisburg, PA 17120
*via electronic submission*

RE: House Majority Policy Committee Meeting; Energy Costs

These comments are submitted on behalf of the National Federation of Independent Business in Pennsylvania (NFIB PA). NFIB is the nation's leading small business advocacy organization, representing nearly 13,000 members in Pennsylvania and about 300,000 members throughout the United States. Founded in 1943 as a nonprofit, nonpartisan organization, NFIB's mission is to promote and protect the right of its members to own, operate, and grow their businesses.

Small businesses continue to face truly unprecedented challenges. During the height of the COVID-19 pandemic, tens of thousands of small businesses were deemed non-essential and forced to close for months to protect public health. This led to depressed consumer demand, non-existent or stagnant sales, increased costs, and significant debt. Three years later, many small businesses never made up the losses incurred while now facing labor shortages, supply chain disruptions, continually high inflation, increased energy costs, increased labor costs, and higher Unemployment Insurance tax bills.

These challenges have led to continued pessimism about future economic conditions. In NFIB's latest COVID-19 Small Business Economic Trends (SBET) report from December 2022, business optimism continued to be below average for the twelfth consecutive month and 32% of owners reported that inflation was their single most important problem in operating their business. In addition, NFIB's SBET data indicates that the economy continues to slow, as monthly job creation averaged 562,000 in 2021, but only 375,000 in 2022, with December closing the year at only 223,000.

Inflation remains well above the Fed's 2% target, and the Fed is expected to raise rates again, though increases are expected to be smaller than those of 2022. This means it's more expensive

for owners to borrow money for capital outlays and discourages owners from taking risks to grow their business and hire new employees.

Owners continue to call inflation their top business problem, lamenting the cost increases for their inputs (inventory, supplies, labor, **energy**, etc.) which compel them to raise their selling prices to cover the costs. In the most recent NFIB survey in December, owners still **blamed rising input costs** as the main cause, rather than labor costs (which will be the more stubborn costs to remediate). Sixty-eight percent cited input costs compared to 34% blaming compensation costs. As prices of energy and other inputs soar, businesses are left with little flexibility to make up those costs.

Overall, owners are not optimistic about 2023, as sales and business conditions are expected to deteriorate. Owners will focus on their businesses and do their best to deal with the fallout from all of the uncertainties in a year of slow growth and still-persistent inflation.

Why do the above statistics matter? Because it is important to understand the multitude of challenges that Main Street faces, and how public policy can have dramatic consequences for the small business community. Many small businesses do not have the economies of scale to simply absorb sharp price increases. While we are here today to discuss energy costs and the impact that low-cost energy has on a business, it is not the only component in which business owners are seeing drastically increased prices.

**Energy Costs for Small Businesses**

Several years ago, as a House staffer, I had the pleasure of orchestrating the "Energize PA" package of bills that was spearheaded by then Speaker of the House Mike Turzai. This was a pro-growth, pro-jobs, package of bills aimed at harnessing the Commonwealth's abundant energy supply. Some of you on the committee today had a key role in that package and understood the importance that our energy sector plays in building a healthy business climate in the Commonwealth.

Several years later, I testify before you today as State Director for the largest and most effective small business advocacy organization in the country (National Federation of Independent Business) to tell you the Commonwealth has a long way to go in harnessing the abundance of natural gas beneath our feet which would provide cheaper more reliable energy for residents and small business owners. This is something you already know, though.

NFIB is agnostic to any one energy source. NFIB is not pro-natural gas or anti-solar/wind. We believe that there are benefits to a variety of energy sources. NFIB also believes that no local or municipal government should be able to restrict any type of energy. NFIB was extremely supportive of HB 1947 (O'Neal) from the prior session for this reason. Prohibiting or restricting a utility service based upon the type of energy source is poor public policy because it restricts

competition and impedes upon the free market, forcing residents and businesses to spend significant sums of money to power their home or restaurant.

Our members care about energy sources that are reliable, effective, clean, and cheap, because it directly affects their ability to survive as a business. NFIB members also believe in personal freedom of choice. In Pennsylvania, you can choose the company that generates your home or businesses' electricity — also known as your electric supplier. This means that you have the power to choose to switch to a competing supplier that can offer the lowest price, best price, or provide a specific service you want. NFIB would oppose any legislative infringement to energy choice.

NFIB remains opposed the Regional Greenhouse Gas Initiative (RGGI) because it will drastically raise costs on businesses, while providing no greater service. This policy decision, which imposes a tax, was unilaterally entered into by former Governor Wolf, and NFIB is hopeful that Governor Shapiro will withdraw from the compact before the court is forced to render a decision. Rather than penalizing electric distribution companies for carbon-emissions, let's incentivize them to utilize emerging technologies such as carbon-capture, and reward them for their efforts. Costs roll downhill all the way to the end-user and having hostile energy policies can and will thwart investment in the Commonwealth, resulting in less competition and higher prices.

Recently NFIB PA surveyed our members on energy costs and I would like to briefly share some of the data and their testimonials:

- Members whose energy costs have increased plan to increase selling prices, leave open positions unfilled, delay capital spending plans, and decrease inventory.
    - Members are adding fuel surcharges on bills to customers and keeping temperatures in their brick & mortar businesses many degrees below their previous temperatures.
- A home heating oil company member from northeastern PA stated that "rising fuel oil costs are driving customers to seek cheaper ways to heat their home, cutting into the businesses' bottom line."
- A doctor from the Lehigh Valley stated that, "I am a small medical practice, subscription based called Direct Primary Care. I operate on a small margin and DO NOT want to have to pass these costs onto my patients since the goal of my practice model is to provide affordable primary care medical services. The higher cost of energy is ALSO being seen in my vendors' fees--such as document shredding, shipping supplies, etc."
- A body shop member stated, "Our paint runs off fossil fuels. The increase in this has raised our costs for paint and materials for the vehicles. We have also seen a decrease in self pay customers due to the pricing being raised as well as consumer electricity hikes."
- A diner/bar member stated, "My natural gas has doubled since a year ago. I have to keep temps turned down. Electricity is high but there's not much I can do about that. I have to have lights, beer coolers, freezers, etc. I closed my diner on 9/20/22 due to lack of help. So, I thought these bills would go down some with just the bar open! Boy, was I wrong."

- A machine shop from Northampton stated, “Regulation needs to be reasonable. Government spending, even intended to 'help' business needs to be reduced. Companies that receive funds have a non-free market advantage.”

Not only are energy prices soaring for brick & mortar shops, but, gasoline and fuel costs are crushing small businesses, leading to higher prices for consumers.

- A rental company member in York County stated, “Delivery costs from 2 years ago were $80 in a ten-mile radius. We recently had to increase delivery up to $150. This is just shy of a 90% increase.

**Conclusion**

Energy affects every single thing we do in life. Not one item in this room was made without the use of energy, whether it be in production or transportation, or both. Small businesses need to know that when they flip the light switch in the morning, the lights come on. They need to know that in the coldest days of winter their energy source will continuously power for food freezers so that thousands of dollars of inventory doesn’t rot.

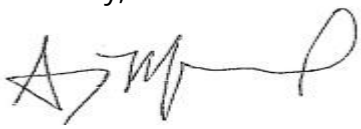
Small businesses rely on consistency, clarity, and certainty. This includes having smart energy policies. Energy choice in Pennsylvania has allowed consumers to shop for providers and fostered competition to keep rates low. In recent years though, the energy industry has come under attack as polluters and price-gougers. Energy companies will not invest in the Commonwealth if the policies and rhetoric from the government are hostile.

We have the opportunity for a renaissance of American manufacturing, bringing businesses and manufacturing back to the nation, and to the Commonwealth. But to do so, we need smart policies that encourage growth and promote competition.

Pennsylvania possesses natural resources few other states have. Let’s no squander an opportunity for growth.

Thank you again for the opportunity to comment on behalf of Pennsylvania’s small and independent businesses.

Sincerely,



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NFIB PA State Director

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February 6 ,2023

The Honorable Representative Josh Kail

Republican House Policy Committee

Michael Butler

Mid-Atlantic Executive Director

Consumer Energy Alliance

Consumer Energy Alliance (CEA) brings together consumers, producers and manufacturers to engage in a meaningful dialogue about America's energy future. Founded in 2006, CEA is a nonpartisan, nonprofit organization representing virtually every sector of the U.S. economy – from the iron and steel industry to truckers, airlines, agriculture, labor unions, restaurants, chemical manufacturers, small businesses, and families all across the nation. Our more than 500,000 members, including over 30,000 in Pennsylvania support a rational, all-of-the-above energy policy that utilizes all of our domestic natural resources – both traditional and renewable – while ensuring continued progress in protecting our shared environment.

Across the country, and increasingly here in Pennsylvania, we are witnessing irresponsible policies and proposals that have the unfortunate consequences of increasing prices and harming reliability while failing to achieve environmental goals. The genesis of these policy proposals originated in the Green New Deal proposed in Congress. They ignore the remarkable progress our country and Pennsylvania have made due in large part to the record production and use of natural gas in addition to new renewable deployment. These harmful policies will lead to higher energy bills, significant service disruptions, and increase income inequality while doing little to achieve the environmental progress we all desire. We need only look to similar policies enacted in Germany and the UK to see how disastrous they are, in terms of increasing costs as much as 300 percent and making energy scarcer – which is borderline dangerous in a crisis.

To be clear, CEA supports actions that thoughtfully advance our nation towards a cleaner, more environmentally responsible energy future. We believe that responsible policies always consider the needs of consumers while leveraging and supporting the development of state-of-the-art technologies to improve our environmental stewardship, aiding in the continued reductions of all emissions. However, well- intentioned but misguided attempts at environmental stewardship will lead to

astronomical costs and jeopardize energy resources that are helping our nation reduce harmful emissions.

A few facts and figures to put this in context. Two-thirds of Pennsylvania households use natural gas as their primary home heating fuel. The annual total energy expenditures per capita for Pennsylvania are $2,890. More than 12% of Pennsylvanians live at or below the poverty line. Based on annual total energy expenditures, that means that over 1.5 million Pennsylvanians are spending nearly a quarter of their annual income for energy expenses. It is a story playing out nationwide. According to 2020 data, 34 million U.S. households (27% of all U.S. households) reported difficulty paying energy bills or reported that they had kept their home at an unsafe temperature because of energy cost concerns. It doesn't have to be this way. We have the means at our disposal for affordable and reliable energy that keeps costs down for our families and small businesses. I've included with my submitted written testimony the energy burden (the percentage of gross household income spent on energy costs) by county for Pennsylvania.

A key question the public should be asking of policy makers and elected officials is why are we making it harder for regular people, small businesses, farmers and industries to get back to work and save on energy costs. We all want to diversify our energy resources with more renewable energy, but the evidence shows that the political goals – designed to please a small, vocal minority – are disconnected from the realities. Energy is a fundamental right, and Pennsylvania of all places – as the nation's second largest provider of energy to other states behind only Texas, according to the Energy Information Administration – should lead the way and advance a legislative and regulatory agenda that recognizes that. Anything else would be an energy injustice. We stand ready to work with the legislature in pursuit of smart, realistic policies that keep our needs for abundant, affordable energy and environmental progress in balance, and recognize the incredible value Pennsylvania's energy economy brings to both goals.

Energy burden (the percentage of gross household income spent on energy costs) by county for Pennsylvania (NREL):

| geoid | energy_burden_lmi | county_name | state_abbr |
|---|---|---|---|
| 42107 | 44.50% | Schuylkill | PA |
| 42009 | 40.70% | Bedford | PA |

| | | | |
|---|---|---|---|
| 42033 | 36.40% | Clearfield | PA |
| 42057 | 35.40% | Fulton | PA |
| 42061 | 33.50% | Huntingdon | PA |
| 42097 | 33.00% | Northumberland | PA |
| 42113 | 32.20% | Sullivan | PA |
| 42111 | 31.90% | Somerset | PA |
| 42115 | 31.30% | Susquehanna | PA |
| 42131 | 30.80% | Wyoming | PA |
| 42087 | 28.60% | Mifflin | PA |
| 42035 | 26.30% | Clinton | PA |
| 42025 | 26.00% | Carbon | PA |
| 42037 | 25.30% | Columbia | PA |
| 42021 | 25.00% | Cambria | PA |
| 42067 | 24.80% | Juniata | PA |
| 42089 | 24.50% | Monroe | PA |
| 42127 | 23.80% | Wayne | PA |
| 42015 | 23.00% | Bradford | PA |
| 42109 | 22.70% | Snyder | PA |
| 42079 | 22.20% | Luzerne | PA |
| 42081 | 22.10% | Lycoming | PA |
| 42119 | 22.00% | Union | PA |
| 42023 | 19.00% | Cameron | PA |
| 42063 | 18.30% | Indiana | PA |
| 42051 | 17.60% | Fayette | PA |
| 42011 | 17.50% | Berks | PA |
| 42075 | 17.20% | Lebanon | PA |
| 42099 | 17.10% | Perry | PA |

| | | | |
|---|---|---|---|
| 42105 | 17.10% | Potter | PA |
| 42117 | 17.10% | Tioga | PA |
| 42093 | 16.90% | Montour | PA |
| 42013 | 16.80% | Blair | PA |
| 42073 | 16.60% | Lawrence | PA |
| 42059 | 16.50% | Greene | PA |
| 42103 | 16.10% | Pike | PA |
| 42039 | 15.00% | Crawford | PA |
| 42053 | 14.90% | Forest | PA |
| 42065 | 14.50% | Jefferson | PA |
| 42069 | 14.50% | Lackawanna | PA |
| 42077 | 13.90% | Lehigh | PA |
| 42083 | 13.80% | McKean | PA |
| 42095 | 13.60% | Northampton | PA |
| 42121 | 13.40% | Venango | PA |
| 42041 | 12.90% | Cumberland | PA |
| 42043 | 12.60% | Dauphin | PA |
| 42027 | 12.30% | Centre | PA |
| 42085 | 12.30% | Mercer | PA |
| 42017 | 12.20% | Bucks | PA |
| 42029 | 12.20% | Chester | PA |
| 42031 | 12.20% | Clarion | PA |
| 42055 | 12.10% | Franklin | PA |
| 42047 | 11.90% | Elk | PA |
| 42005 | 11.80% | Armstrong | PA |
| 42071 | 11.80% | Lancaster | PA |
| 42123 | 10.90% | Warren | PA |

| | | | |
|---|---|---|---|
| 42125 | 10.60% | Washington | PA |
| 42091 | 10.20% | Montgomery | PA |
| 42133 | 10.10% | York | PA |
| 42129 | 10.00% | Westmoreland | PA |
| 42001 | 9.80% | Adams | PA |
| 42049 | 9.60% | Erie | PA |
| 42101 | 9.50% | Philadelphia | PA |
| 42045 | 8.90% | Delaware | PA |
| 42007 | 8.70% | Beaver | PA |
| 42019 | 8.70% | Butler | PA |
| 42003 | 6.10% | Allegheny | PA |