PA House of Representatives
Republican Policy Committee

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

PA House Republican Policy Committee Hearing

"Balancing Your Budget & Thermostat: Consumer-Focused Energy Policy"

April 2, 2024, at 1 p.m.

US Hotel Tavern
401 S Juniata St.
Hollidaysburg, PA 16648

1:00 p.m.	Welcome and Pledge of Allegiance
1:10 p.m.	**Michael Butler** *Mid-Atlantic Executive Director, Consumer Energy Alliance*
1:15 p.m.	**Emily Stipe** *Senior Manager – Federal & State Advocacy, Vistra Corp.*
1:20 p.m.	**Steven Kratz** *President, Pennsylvania Chemical Industry Council*
1:25 p.m.	**Questions for the Testifiers**
1:55 p.m.	**Closing Comments**

Testifier Biographies

PA House of Representatives Policy Committee Hearing

"Balancing Your Budget & Thermostat:

Consumer-Focused Energy Policy"

Michael Butler
Mid-Atlantic Executive Director, Consumer Energy Alliance

Michael Butler is a respected leader in the energy sector, currently serving as the Mid-Atlantic Executive Director for Consumer Energy Alliance since 2013. With a B.A. from Dickinson College and a JD/MPIA from the University of Pittsburgh, Butler combines academic prowess with extensive experience in energy policy and advocacy. His insightful editorials have garnered widespread media coverage in publications like the Baltimore Sun, Harrisburg Patriot-News, Newark Star-Ledger, Philadelphia Inquirer, and Pittsburgh Tribune-Review.

Consumer Energy Alliance has emerged as a prominent voice for sensible energy and environmental policies. Representing over 350 member companies and more than 550,000 individuals nationwide, CEA advocates for an environmentally sustainable energy future that encompasses both traditional and renewable resources. Through dialogue, education, and advocacy efforts, Butler and CEA strive to ensure access to reliable, affordable, and environmentally sound energy resources while promoting energy justice and sensible solutions for communities across the nation.

Steven Kratz
President, Pennsylvania Chemical Industry Council

Steven Kratz is the president of the Pennsylvania Chemical Industry Council (PCIC), the premier statewide business organization representing the commonwealth's chemical and polymers industries.

Working closely with the PCIC board of directors and council staff, Kratz aims to foster an economic and regulatory environment to encourage investment and growth in technology and innovation and advance the chemical and related industries overall.

Kratz brings 18 years of political, advocacy, and economic development marketing experience to the council, with an extensive background in advancing projects, policies, and initiatives, and leading diverse coalitions.

He served as the communications director and press secretary for the Pennsylvania Department of Community & Economic Development and led or supported several political campaigns in southeast Pennsylvania and the Lehigh Valley. He is a graduate of Lebanon Valley College.

Emily Stipe
Senior Manager—Federal & State Advocacy, Vistra Corp.

Emily Stipe is Sr. Manager of Federal and State Advocacy at Vistra Corp where she advises the company's business units and executes policy strategies on a wide variety of policy areas, including grid reliability, environmental regulation, business and consumer tax, and the energy transition.

She previously worked in Washington, DC for the Policy Resolution group, part of Bracewell LLP, advising clients on legislative and executive branch strategies in the energy, transportation, and natural resources industries.

Emily holds a Master of Public Policy degree from Georgetown University and a bachelor's degree in economics and political science from the University of Pittsburgh.

HOUSE REPUBLICAN POLICY COMMITTEE

SEAL OF THE HOUSE OF REPRESENTATIVES OF PENNSYLVANIA

CONSUMER ENERGY ALLIANCE
THE VOICE OF THE ENERGY CONSUMER

March 28, 2024

Chairman Kail and Members of the House Policy Committee, I wish to thank you for allowing Consumer Energy Alliance (CEA) the opportunity to offer proponent testimony on issues facing energy consumers. My name is Mike Butler, and I am the Executive Director of Consumer Energy Alliance Mid-Atlantic.

Thank you for holding this these field hearings to discuss the important consumer and economic impacts facing energy consumers and we encourage the committee to strongly consider the consumer impacts created by failing to invest in Pennsylvania's natural gas and energy infrastructure. It is imperative that our lawmakers prioritize a future where energy remains reliable and affordable for all Pennsylvanians, while continuing to achieve our environmental and climate goals.

Consumer Energy Alliance (CEA) brings together families, farmers, producers, small businesses, and manufacturers to engage in a meaningful dialogue about America's energy and environmental 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.

I offer this testimony in support of sensible energy and environmental policies that ensures families and businesses continue to receive safe, affordable, reliable and environmentally responsible energy. Far too often we are seeing projects tabled that stymie the growth of the energy industry in Pennsylvania and have severe negative consequences for energy consumers. In the most extreme situations, canceling energy infrastructure projects could have Pennsylvanians facing with brown-out, black-outs or other health and economic calamities.

Across the country, and increasingly here in Pennsylvania, we are witnessing irresponsible policies and proposals that would 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 buildout and use of natural gas in addition to new renewable deployment and improved efficiency and conservation. 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.

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 recent report CEA put together identified that delays and cancellations of pipeline projects, including many in Pennsylvania, have cost our nation more the $13.6 billion in lost investments, forgoing up to 66,000 jobs, and more than $280 million in annual state and local tax revenues. Here in Pennsylvania, losing the PennEast, Northeast Supply Enhancement, and Northern Access pipelines have cost the Commonwealth over $1.5 billion in economic activity, approximately 11,500 jobs, and over $790 million in state and local tax revenue. Furthermore, energy infrastructure construction creates and spurs demand in the manufacturing and industrial sector for steel, parts, services and other supply chain needs.

COVID-19 laid bare our great national weaknesses in our supply chains and a problematic over reliance on China for key components including in the renewable energy sectors for solar development and battery storage. Ending our national supply chain vulnerabilities and while putting Americans to work can happen and should be happening here in Pennsylvania.

It is particularly egregious to forego these jobs and revenues when the enormous consumer benefit is taken into account. A CEA report showed that in a 10-year window, Pennsylvania consumers had saved over $30.5 billion with lower energy prices due to the bountiful reserves of natural gas in the Commonwealth.

This supply of affordable energy is most critically needed for our fellow Pennsylvanians, the nearly 1.6 million of us, that live at or below the poverty line. On average, Pennsylvanian's spend over $3,100 on energy needs. A staggering sum for a low income family, it is simply unconscionable that anti-energy development zealots block projects that would help alleviate that cost for working families and seniors on a fixed income. Those same natural gas pipeline projects would have saved consumers the following; the Penn East pipeline would have saved consumers $1.3 billion in energy costs in just two winters, the Northeast Supply Enhancement would have saved residential consumers 65% on their utility bills and the average commercial or industrial user would have saved $36,000 per year.

During these past few years as our nation struggled with the COVID pandemic the vital role that energy plays in all of everyday lives became even more clear. From the production of PPE and fuel for food delivers to creation of life savings products, energy and pipeline companies stepped up even in the face of their industrial turmoil. These companies provided services to keep hospitals, first responders, grocery stores and our homes powered – often a great personal risk to their workers, to help maintain our public health and the health of the nation. With all the worries many had, the one worry that was rarely had was having enough energy, fuel, or power. Yet, we now find ourselves deliberately sabotaging the reliability that we've all become accustomed to.

All of these self-inflicted economic wounds might be tolerable if our nation was a laggard in environmental progress. However, nothing could be further from the truth. We at CEA refer to America's environmental progress as the greatest story never told. This great story is unfolding here as well. Our nation has trimmed almost twice as much carbon dioxide from the atmosphere as any other nation. Overall, the United Sates has cut over 12% of its greenhouse gas emissions from the 2005 baseline. In Pennsylvania over the last 30 years, carbon monoxide by 80%, nitrogen oxide by 79%, course particulate matter by 73%, sulfur dioxide by 96%, and volatile organic compounds by more than 61%.

Too often our politics and governments have recently catered to extremist who oppose – without factual basis - the infrastructure that delivers the energy we use, the energy that makes our lives easier and our environment better. This extreme anti-energy effort champions lawsuits, procedural delays, and regulatory roadblocks to stop construction projects. Ironically, stopping projects that almost always wagers far above the national average and which, when complete, can lower energy bills and emissions in a host of communities. Our regulatory framework has gone from ensuring safety and soundness abs at times reaching compromised solutions to balance many needs to bodies that are wielded to kill projects. This isn't traditional energy versus renewables, as it's also becoming increasingly difficult to build wind and solar projects and nearly impossible to build nuclear.

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 especially coming on the heels of COVID driven economic downturn and now with a few years of staggering high inflation. 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 of engineering and construction. With rising gasoline prices and inflation, we can see now more than ever that energy is a fundamental right, and Pennsylvania of all places should lead the way and advance a regulatory agenda that recognizes that. Anything else would be an energy injustice.

CONSUMER ENERGY ALLIANCE
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March 28, 2024

Chairman Kail and Members of the House Policy Committee, I wish to thank you for allowing Consumer Energy Alliance (CEA) the opportunity to offer proponent testimony on issues facing energy consumers. My name is Mike Butler, and I am the Executive Director of Consumer Energy Alliance Mid-Atlantic.

CEA is the nation's leading consumer energy and environmental advocate – ensuring families, farmers, and local businesses have access to sustainably produced, affordable, reliable and environmentally responsible energy. Our members represent a cross-section of the economy, all of whom have been impacted by rising inflation and higher energy prices.

We support a rational, all-of-the-above energy policy that utilizes all our domestic natural resources – both traditional and renewable – while ensuring commonsense environmental protections are in place. As Pennsylvania makes legislative and policy choices setting the course for its energy future, we urge law makers and regulators to take note of trends around the nation toward adoption of electric vehicles and the heavy handed and counterproductive methods that some states are adopting.

As consumers become more accepting of electric vehicles (EV), taxpayer-funded incentives expand, and automobile manufacturers produce a greater variety of models, EV purchases are expected to keep growing. Despite this, policymakers in several states have embarked on a regulatory regime designed to force a market transition without holistically examining the impacts these mandates will have on consumers.

Our latest report, *Freedom to Fuel: Consumer Choice in the Automotive Marketplace* reviewed several questions which policymakers must ask themselves to ensure consumer acceptance and reduce negative economic and societal impacts. Some of these questions include:

- What is the true cost to consumers of moving from internal combustion engine-powered vehicles to electric vehicles?
- What electric generation requirements and transmission investments are necessary to power a move to electric vehicles?
- How does a transition and vehicle affordability affect equitable job growth in the United States?

Unfortunately, by not addressing these questions, consumers are driven to purchase products they aren't ready to accept, they can't afford to purchase, and that face significant supply-chain bottlenecks that are already limiting supply and increasing costs.

Looking at total cost of ownership, there is a $16,360 upfront price difference between EV and ICE vehicles - more than two times the federal tax credit. As a result, the break-even point for

families in the United States would be close to 24 years. In addition, as reported by *Consumer Reports* in November 2023, "Electric vehicles are less reliable than conventional cars," and, "on average, EVs from the past three model years had 79 percent more problems than conventional cars."

While the push to transition to EVs from ICE vehicles is an effort to shift to a low-carbon economy, the shift from a transportation system based on gasoline to one based on electricity is far more complicated and costly than most decision-makers consider.

Nationally, there are about 250 million light-duty, clocking over 2.8 trillion miles. This would require over 1 trillion Kwh/year of new generation. To account just for the increase in electricity usage to power light duty vehicles, over the next decade we would need to build the equivalent of 122 new nuclear stations, or almost 284,000 MW of onshore wind capacity.

More than just generation, investments in transmission and distribution would also be required. Brattle identified $15-$25 billion in required upgrades for transmission and distribution systems, and another $30-$50 billion for charging infrastructure as automobiles move from ICE to EV. This investment represents only about 7% of the US light-duty vehicle fleet.

There is often a component of the debate over EV mandates that declares that the benefits of shifting the public to electric vehicles is helpful to working-class and lower-income families. Often ignored are the direct impacts on the practical use of EVs for a working-class family and how the benefits of an EV transition mostly flow to the wealthier segments of the population.

Charging infrastructure is a critical component for EV usage, with access to chargers (and specifically fast chargers) a major consideration in purchasing an EV. Wealthier users are far more likely to live in single family homes where installation of a fast charger costing thousands of dollars is simply a matter of fact. Lower income families who are more likely to reside in apartments or rented properties do not have the option of installing their own personal dedicated fast chargers.

In fact, a recent MIT study on EVs and equity noted that public charging, when available to lower income communities, typically costs more than home charging. "This higher cost would disproportionately affect low-income households who already pay a higher proportion of their income towards transportation."

Electric vehicles will play an important role in diversifying our vehicle mix, and, if integrated correctly, can help meet our shared environmental goals. Yet, it is increasingly clear that public officials and regulators are not fully considering all the implications of aggressively mandating EVs and banning ICE vehicles. Without adequately considering the impact this will have on consumers, acceptance of EVs will suffer as overall negative impacts on low- and middle-income earners will increase.

Thank you, again, for the opportunity to provide comments on House Bill 2783. I am happy to answer any questions the committee may have.

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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 across the nation. Our members 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, we have witnessed irresponsible policies put forth by local and state governments that would 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. It is simply not feasible nor practical to prohibit the use of traditional fuels like natural gas and propane in homes and businesses either through outright bans or backdoor bans by changes to building codes.

These harmful policies will lead to higher energy bills, significant service disruptions, and increase income inequality and segregation while doing little to achieve the environmental progress we all desire.

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. In fact, we are seeing emissions reductions through the use of such advanced technologies as renewable natural gas and hydrogen blending.

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.

However, misguided attempts to ban natural gas service by forcing mandates onto consumers will lead to astronomical costs and jeopardize energy resources that are helping our nation reduce harmful emissions. According to an analysis done by CEA, the cost to replace just major gas appliances in homes nationwide would cost households over $250 billion. This conservative estimate does not include costs for rewiring houses, decommissioning existing energy infrastructure, or increases in utility bills – especially for home heating.

Moreover, the most comprehensive municipal study performed by the City of Ann Arbor Michigan found that these policies will lead to "further exacerbating class and race segregation" as they will increase rental costs and the construction of new housing units which will be occupied by primarily higher income residents.[1] According to a study by the National Association of Home Builders, requiring forced electrification on new construction can add upwards of $15,000 in construction costs for homes in colder climates like the City of Erie and across our Northern Tier Counties.

Consider, the U.S. Department of Energy released their average unit costs for energy for residential energy sources in August. They found that electricity was 266% more expensive than natural gas as a residential energy source. Electricity was also 103% more expensive than propane.

We can and must have energy that is affordable, reliable and meets our shared environmental goals. Utilizing all of our resources like natural gas, coupled with new technology like renewable natural gas

and hydrogen blending, is leading us to a cleaner energy future with lower emissions. And, we can continue to achieve this without harming our families, farmers, and local businesses along the way.

The irony is that the groups supporting these harmful mandates ignore the tremendous air quality improvements and carbon reduction benefits that natural gas has provided our country and Pennsylvania.

Since 1990, Pennsylvania GDP and population have both markedly increased while the state has seen emissions decline sharply – especially among key air pollutants identified by the U.S. EPA. This is due in large part to increased use of natural gas. Based on federal air quality data, from 1990 to 2019, Pennsylvania's emissions of key pollutants have decreased across the board:

72 percent reduction in nitrogen oxides (NOx) • 92 percent reduction in sulfur dioxide (SO2) • 77 percent reduction in carbon monoxide (CO) • 53 percent reduction in volatile organic compounds (VOCs) • 45 percent reduction in fine particulate matter (PM2.5) • 61 percent reduction in coarse particulate matter (PM10) • 45 percent reduction in ammonia (NH3)

Further, these trends all occurred while Pennsylvania's natural gas production soared eleven fold from 2010 to 2018 and natural gas plant processing expanded more than eightfold from 2010 to 2017.

Thank you, again, for the opportunity to testify. In the event the committee may have any questions, please feel free to contact me at mbutler@consumerenergyalliance.org or 412-448-6851.

Pennsylvania House Republican Policy Committee
Testimony of Emily Stipe, Sr. Manager of Federal and State Advocacy, Vistra Corp.
Hearing on Consumer-Focused Energy Policy
April 2, 2024

Chairman Kail, Vice Chair Ecker, and members of the Republican Policy Committee, Vistra appreciates the opportunity to testify during this hearing on consumer-focused energy policies, and our efforts to ensure a reliable electric grid. My name is Emily Stipe; I am the Senior Manager of Federal and State Advocacy.

Vistra[1] is a leading Fortune 500 integrated retail electricity and power generation company providing essential resources for customers, commerce, and communities. Vistra combines an innovative, customer-centric approach to retail with safe, reliable, diverse, and efficient power generation. The company brings its products and services to market in Pennsylvania – via our Pennsylvania Gas & Electric, Public Power, Brighten, Dynegy, and Ambit brands – as well as 19 other states and the District of Columbia, including all major competitive wholesale power markets in the U.S. Vistra retail brands serve approximately 5 million residential, commercial, and industrial retail customers with electricity and natural gas. Vistra is one of the largest competitive electricity providers in the country and offers a array of plans aimed at serving the varied preferences of our customers. The company is also the largest competitive power generator in the U.S. with a capacity of approximately 41,000 megawatts powered by a diverse portfolio, including natural gas, nuclear, solar, and battery energy storage facilities. Over 8,600 MW of that generation serves the PJM region, of which Pennsylvania is a part. Specifically in Pennsylvania, Vistra operates four power plants (nuclear and gas) making up 3,805 MW of the electric grid. The company also owns and operates the 750-MW/3,000-MWh battery energy storage system in Moss Landing, California, one of the largest of its kind in the world.

Vistra is guided by four core principles: we do business the right way, we work as a team, we compete to win, and we care about our stakeholders, including our customers, our communities where we work and live, our employees, and our investors.

First and foremost, Vistra believes that competitive retail markets deliver the best outcomes for all consumers. According to Pennsylvania's Public Utility Commissioner, almost than six million[2] residential and industrial customers have chosen their own electric plan from a retail electric provider, rather than relying on their local utility. Vistra strongly believes in retail choice because it places control in the hands of the consumer. Retail choice treats each consumer as an individual and gives them access to a market where they can pick the best product and service to suit their needs. Competition trusts consumers to know what they want and to seek out those plans and services that provide them with the best overall value, not just price. Markets with true choice treat each consumer as an individual, allowing them to pick the electric service that best fits their unique needs — whether that's finding the least frills, lowest-price plan; a plan that lets them set a monthly budget and easily track usage; or a plan that provides access to renewable energy.

[1] Learn more about Vistra at https://vistracorp.com/about/

[2] Based on PA Power Switch data from the Pennsylvania State Public Utility Commission; Current as of January 2024.

Vistra also works to ensure our top priorities — reliability, affordability, and sustainability — are aligned with consumer concerns. When given a choice, 47% of consumers surveyed ranked reliability as their top concern. Meanwhile, 36% of consumers noted affordability as their primary concern, and less than 10% said environmental friendliness is their priority.[3] Consumers want sustainable energy, but once their reliability and affordability needs are met. The same survey found that 70% of Americans agree that reliable energy should not be sacrificed for the sake of laws and regulations that aim to address climate change. Customers are prioritizing reliable, cost-effective power, and the market should reflect that.

The Reliability Challenge

With the stage set on consumer preferences for grid reliability, it is important to understand the reliability challenge the country is facing, and PJM (Pennsylvania's RTO) is a great example of that challenge over the next decade. In the preceding decade (2014-2023), PJM's demand grew less than 1% per year, primarily due to stagnant industrial and population growth. However, updated projections for the next 10-year period (2024-2033) show a growth rate double the previous decade, now up to 1.6%. In fact, looking at projections from 2022, 2023, and 2024, that projection actually quadrupled from 0.4% in 2022, 0.8% in 2023, to 1.6% in 2024.[4] The forecasted growth is driven in large part by an influx of data centers to the region and widespread electrification, particularly of the transportation sector.

Despite load growth, by 2030 over 20% of PJM's 217 installed GW of electricity is set to retire, for a variety of reasons. New projections from PJM's Independent Market Monitor found that PJM risks losing nearly 58 GW in mostly fossil fuel power-generating capacity before 2030.[5] This is more than 18 GW higher than what PJM had predicted just a year earlier in 2023. The most significant forces behind these projected retirements are rapid drops in prices in the region's capacity markets and state and federal regulatory and environmental requirements that increase costs of compliance until generation units are no longer economical. 90% of the capacity set to retire is dispatchable generation – the resources the grid and ratepayers depend on to maintain reliability during those periods of greatest system stress like Winter Storm Elliott.

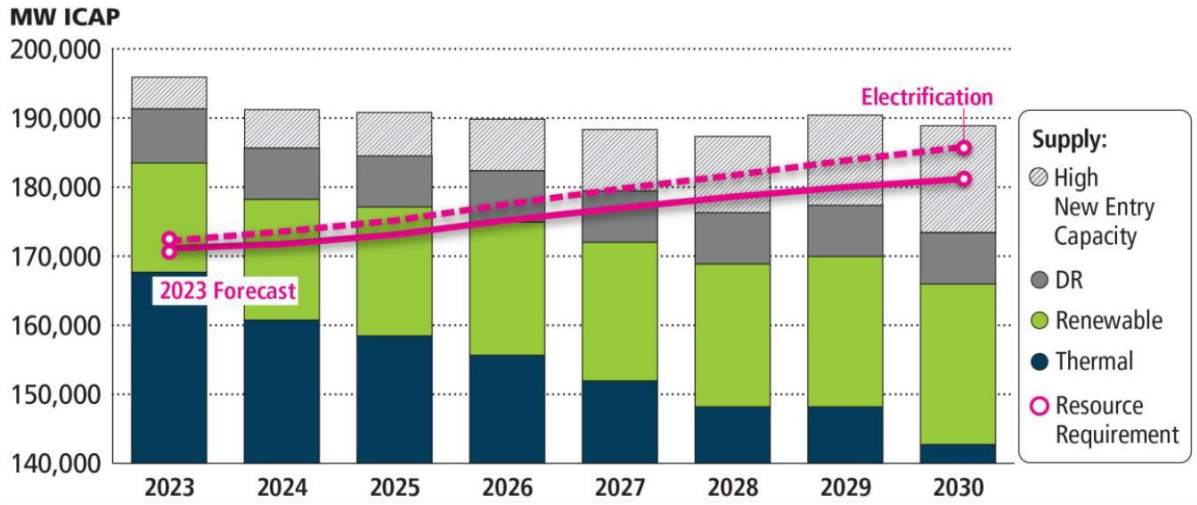
With the projected level of load growth and anticipated retirements, PJM could face a resource adequacy problem as early as 2027.[6] The projected mismatch between load growth and generation retirements are demonstrated in the below graph by PJM.

[3] Remaining consumers prioritized transparency of utility bills, consumer choice, and technology innovation. Source: Electric Power Supply Association Morning Consult Survey 2023

[4] Source: PJM Load Forecast Report 2022, 2023, 2024

[5] Source: Independent Market Monitor's PJM State of the Market Report

[6] Source: Energy Transition in PJM: Resource Retirements, Replacements & Risks



PJM projected various scenarios for new entry of generation resources into the region alongside load growth forecasts, and the above graph considers both low and high new entry scenarios. In the absence of a high new entry scenario, PJM could experience a resource adequacy issue by the middle of this decade. In its 2023 report, PJM notes that "The amount of generation retirements appears to be more certain than the timely arrival of replacement generation resources, given that the quantity of retirements is codified in various policy objectives, while the impacts to the pace of new entry of the Inflation Reduction Act, post-pandemic supply chain issues, and other externalities are still not fully understood."[7]

It is important to note that the new entry expected in the region is heavily weighted to renewable generation, which has different operating characteristics than dispatchable thermal generation. Looking at the PJM interconnection queue through 2030, less than 1% of the new entry each year is dispatchable generation (gas). Why is that important? The key difference that separates renewables from dispatchable generation like coal and gas is that renewable resources like wind and solar are intermittent, meaning that their ability to provide power throughout the day fluctuates based on specific weather conditions. Of course, we have also seen instances when some gas-fired resources have not been able to perform during extreme winter weather due to limitations of the gas system. These physical realities do not mean renewables are bad and gas-fired resources are good or vice versa. It means that PJM needs to appropriately account for the reliability value of all resources and ensure that it procures enough of all resources to meet the reliability challenge.

To meet this challenge PJM has undertaken a series of important market reforms. Vistra believes that reforms recently approved by the Federal Energy Regulatory Commission to be implemented ahead of PJM's next capacity auction this summer are an important first step in ensuring the market sends the right price signals to incentivize both the development and retention of the resources PJM and Pennsylvania will need to meet the energy transition reliably and affordably. While additional market reforms will be necessary, Vistra believes that competitive markets are the most effective means to ensure both reliability and affordability. PJM's performance during the past two significant winter weather events highlights the benefit of being part of a large, diverse pool of resources. During Winter Storm Elliott, despite significant challenges, PJM kept the light on while other regions that have traditional vertically integrated utilities operating single balancing areas experienced power outages.

[7] [7] Source: Energy Transition in PJM: Resource Retirements, Replacements & Risks

Similarly, during the week-long cold period this past January, the PJM markets were not only able to reliability serve Pennsylvanians and ratepayers across the footprint but exported significant power to keep the lights on across the eastern interconnect. While the PJM rules are not perfect and need to be adjusted to properly incentives dispatchable thermal generation, competitive power markets are capable of providing an unmatched level of reliability while promoting a cost-efficient energy transition.

The Technology Challenge

Vistra is committed to responsibly incorporating new, zero-emission resources into our own fleet in a way that achieves significant emissions reductions without sacrificing the continued reliability of the grid or forcing unreasonable costs on consumers. Vistra Zero, the company's zero-carbon generation portfolio, has set goals to develop new and keep existing zero-carbon generation online: targeting 7,300 MW by 2026.

We recognize that the replacement of fossil fuel-powered assets with zero-carbon resources is certainly not a one-to-one exchange. Vistra is working to ensure that reliability is maintained by utilizing energy storage and installing zero-carbon generation on the sites of retired or soon-to-be-retired fossil fuel plants. This practice of replacing retired assets and repowering fossil sites with clean energy technology is a model that will be incredibly important moving forward to not only our company, but the entire industry and energy communities. It enables access to transmission interconnection, protects regional electric supply, and continues investment in vulnerable energy communities. This also ensures that communities do not lose key energy supplies or ongoing tax revenue. Vistra is also focused on ensuring that existing zero-carbon generation remains online, such as the Beaver Valley Nuclear Power Plant in Western Pennsylvania, which we recently acquired from Energy Harbor. This high-performing plant is able to produce power – rain, snow, or shine - increasing grid reliability for residents of Pennsylvania and making it a keystone generation asset for the PJM grid.

Other clean and reliable energy technologies are promising and have substantial government incentives but are still under development and not ready for widespread deployment. Carbon Capture and Sequestration (CCS) is a particularly valuable developing technology for Pennsylvania, as it can help coal and gas plants capture their emissions and comply with federal and state environmental rules, enabling grid reliability and sustainability by decarbonizing dispatchable thermal generation and preventing their early retirements. However, CCS technology is still being developed and demonstrated at scale, and the pipeline system needed to transport the captured carbon dioxide is a challenge to permit at the federal, state, and local levels. To make CCS viable, solutions need to be developed to its many challenges, including the economics, regulatory structure, and technology limitations. Other technologies that could provide both sustainability and reliability benefits include:

- Hydrogen: Could be a form of energy storage and enable deep, economy-wide decarbonization, particularly in hard to decarbonize sectors
- Small Modular Reactor (SMR) Nuclear Technology: Design flexibility and modularity enables scalability
- Long Duration Energy Storage: can help shape renewable output, while providing grid services

- Demand Response and Energy Efficiency: Provides load side energy reduction, lessening need for new generation and transmission infrastructure, provides benefits to consumers to reduce energy consumption and prices

Vistra is actively studying and working towards the development and deployment of these technologies, as they contribute to a reliable, affordable, sustainable grid.

Conclusion

Too often, grid reliability is taken for granted and is not included in the conversation regarding policies impacting our industry. Consumers depend on their electricity; when they hit the light switch, they expect the lights to come on. Grid reliability is not only an economic imperative, but a human health issue during extreme weather events and to run the state's world class hospitals. Pennsylvania, with its deep connection to the energy sector, uniquely understands the importance of grid reliability and electric affordability. It is necessary that grid reliability is a central tenant of any policy discussion. This conversation is incredibly important, and we encourage you to continue the discussion, and to continue to share the perspective of Pennsylvanians. Pennsylvania is part of a RTO for a reason, and it is crucial that you participate in PJM, FERC, and other federal and regional processes to share your concerns and perspectives. Since electric market deregulation in 1996, Pennsylvania has benefitted from the PJM market to maintain reliability. With the right focus and attention, and with the help of engaged stakeholders, PJM's market can evolve to continue to play this invaluable role.

Thank you again for the opportunity to testify, and I look forward to answering your questions.

Submitted Respectfully,

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April 2, 2024

PA House GOP Policy Committee
PA Chemical Industry Council Testimony
Steve Kratz, President

Chairman Kail, Representative Gregory, and members of the Pennsylvania State House Republican Policy Committee. Thank you for the opportunity to participate in this discussion about creating an economic environment where business, industry, and consumers can thrive in Pennsylvania.

My name is Steve Kratz and I proudly serve as the President of the Pennsylvania Chemical Industry Council. For more than 30 years, PCIC has served as the industry trade group representing the state's chemical and polymer manufacturing operations, and associated industries that provide critical services.

As an organization, we work every day to foster an economic and regulatory environment in Pennsylvania that encourages industry growth, new job creation, and investments in new and innovative sustainable technologies.

The contributions of the chemical and polymers industry in Pennsylvania are significant. We are the eleventh largest chemistry-producing state in the country supporting more than 55,000 jobs and another 39,000 jobs in plastics and rubber production. The industry pays nearly $1.8 billion in wages annually with an average salary of nearly $80,000 and contributes more than $600 million a year in federal, state, and local taxes.

Perhaps the most important contribution of our industry is that nearly every aspect of modern life quality relies on chemistry. Chemicals and polymers are responsible for most healthcare products and medical equipment, as the building blocks for renewable energy, high-performing building materials, food packaging, electronics, clothing, vehicles, and more.

Modern society needs continued chemical and polymer production and demand is expected to increase. We are working hard every day to foster an economic and regulatory environment that helps us secure new growth right here in the Commonwealth.

When companies are looking to invest to expand a facility or build a new facility, there are a lot of factors that are considered including tax climate, regulatory climate, available sites, workforce, and energy costs. This discussion is important because manufacturers, our members depend on reliable and cost effective energy for operations. More affordable energy costs means contained costs for consumers throughout the supply chain.

What our state government leaders do and say matters. The policies that are enacted, and even the policies that are simply introduced, all play a critical role in the decision-making process of a company looking to invest and grow. Policies that impact permitting timelines, regulatory costs, operating costs, and energy reliability can make the difference between an investment coming to Pennsylvania or going to another location in the United States or abroad.

To be clear, our organization is not anti-tax or anti-regulation. Our members are simply looking for predictability, transparency, and a stable economic, energy, and regulatory climate. We believe that to achieve meaningful environmental goals, we need to chart a path that brings innovators, regulators, and policymakers together to develop forward-thinking policies that drive impactful environmental solutions while unleashing economic growth.

Our chemical manufacturers are making significant investments to find new, safe, and innovative ways to make their products and operations more sustainable. They are expanding advanced chemical recycling, decarbonizing supply chains, and incorporating renewable resources, combined with traditional energy sources to reduce emissions. All with the highest level of safety and sustainability standards in the world.

Our member companies practicing Responsible Care® – the industry's world-class framework to advance a safe and sustainable chemical industry – have worked to significantly enhance their environmental, health, safety, and security performance. The fact is that we produce everyday products safer and more environmentally sustainable than anywhere else in the world.

In closing, while our innovative companies are leading the way to harness new technological innovations to reduce emissions, reduce waste, and recycle more, legislators and regulators at all levels of government must enact sound, market-driven policies that advance sustainability efforts and unleash economic prosperity for all Pennsylvanians. Our members prove every day that it's not only possible, they're already doing it.

Thank you for the opportunity to provide testimony today. Working together, we can move toward a more sustainable future led by the men and women of our industry who are paving the way for a better tomorrow, today. I look forward to further discussion and questions.

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