



July 10, 2025

Matthew L. Homsher

Secretary Pennsylvania Public Utility Commission Commonwealth

Keystone Building

400 North Street, 2nd Floor North

P.O. Box 3265

Harrisburg, PA 17120-3265 R

Re: Technical Conference on Resource Adequacy in Pennsylvania

Docket No. M-2024-3051988

Dear Secretary Homsher:

The PJM Power Providers Group (P3) respectfully submits the attached document which will add to the record in the above-captioned proceeding. The attached document is P3's response to the June 12, 2025, Request for Information regarding new generation in Pennsylvania that was issued by several Pennsylvania EDC's. These comments relate directly to the issues raised in this proceeding and provide further details on considerations related to resource adequacy. P3 appreciates the opportunity to add to the record in this regard.



**Response of the PJM Power Provider Group (P3)<sup>1</sup> to the June 12, 2025,  
Request for Information Regarding New Generation in Pennsylvania**

Submitted July 10, 2025

P3 thanks Duquesne Light, PECO, FirstEnergy, Citizens' Electric and Wellsboro Electric (hereafter "PA Core EDCs") for the opportunity to engage in a thoughtful conversation about resource adequacy in the Commonwealth. P3 appreciates the opportunity to provide feedback which is consistent with the historically cooperative relationship between independent power producers and Pennsylvania's transmission and distribution utilities. The partnership has led to Pennsylvania's extraordinary success as an energy leader, and it is important for this partnership to continue to meet the challenges ahead and keep Pennsylvania in the vanguard as an energy producing state.

At its heart, the PA Core EDCs RFI explores the question of whether and how a capacity only PPA structure could stimulate investment in new power generation facilities in Pennsylvania. While the answer to that question is most certainly "yes," P3 respectfully submits that at least for now and for Pennsylvania, a state-mandated capacity only PPA structure is not the best path forward. The principal flaw of the PPA approach is that it burdens Pennsylvania consumers with costs for new generation and does not seek to maximize Pennsylvania's generation surplus to benefit Pennsylvania consumers. Instead, it could lead to long-term market costs and legal risks while chilling merchant investment that may otherwise occur. Again, PPAs are an option that can and will work to build new generation – there are just better options available, certainly in the short term, that should be allowed to work before heading down this road that will be very difficult to come back from.

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<sup>1</sup> PJM Power Providers Group (P3) is a non-profit organization that supports the development of properly designed and well-functioning markets in the PJM region. PJM is a regional transmission organization that manages the supply and movement of power in 13 states and the District of Columbia. Combined, P3 members own over 88,000 megawatts of generation assets and produce enough power to supply over 63 million homes in the PJM region, covering 13 states and the District of Columbia.

**Pennsylvania’s Competitive Market Has Proven Capable of Building New Generation**

Since 2000, Pennsylvania has witnessed a remarkable transformation in its electricity generation fleet, driven by the competitive power markets that PJM oversees. Over the past two decades, market-based investment decisions—not government mandates or utility contracts—have resulted in billions of dollars being invested in new, efficient, and cleaner generation facilities throughout the Commonwealth. These investments have enhanced reliability, reduced emissions, and provided significant economic benefits to Pennsylvania consumers and communities.

Leveraging Pennsylvania’s abundant Marcellus Shale resources, private investors have developed a fleet of modern combined-cycle natural gas plants that are among the most efficient in the world. P3 members have constructed many of these facilities employing countless Pennsylvanians to do so while investing billions of dollars without a guarantee of a return on investment. These facilities were built not because of subsidies or state mandates, but because the PJM capacity and energy markets sent the appropriate price signals to encourage private investment.

The state has also seen meaningful investment in renewable energy resources. While not as significant as the buildout of natural gas, wind and solar developers have taken advantage of Pennsylvania’s renewable portfolio standards and PJM’s open-access interconnection process to bring clean power onto the grid. At the same time, competitive markets have driven the retirement of older, inefficient, and more polluting units — facilitating a transition to a cleaner grid while maintaining system reliability and competitive prices.

Importantly, these market-driven investments have been made without placing the risk of cost overruns or stranded assets on Pennsylvania consumers. Competitive generation developers have put their own capital on the line, betting on the strength of PJM’s markets and the rule of law. That risk-based investment has paid dividends for the state in the form of jobs, tax revenue, cleaner air, and reliable power. Pennsylvania stands as a testament that competitive markets work—and that when given the freedom to compete, private capital can and will build the power plants of the future.

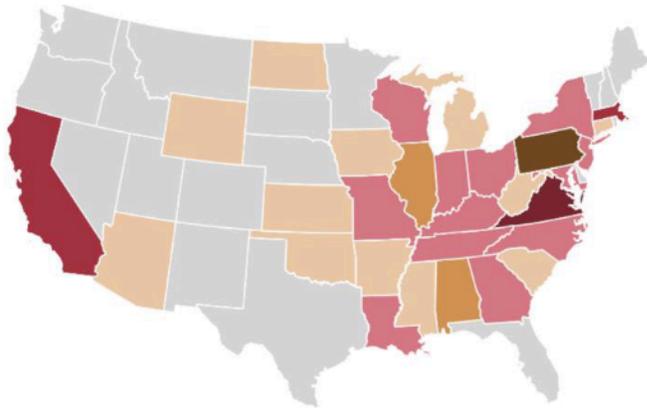
**Pennsylvania Enjoys a Remarkable In-State Generation Surplus**

Pennsylvania is the largest net exporter of electricity in the United States and it’s not even close, thanks to its robust and diverse generation fleet.<sup>2</sup>

**State net electricity interstate trade (2023)**

million megawatt-hours

interstate receipts interstate deliveries



**top deliverers**

Pennsylvania	83
Alabama	45
Illinois	38
Wyoming	24
Arizona	22

**top recipients**

50	Virginia
43	California
34	Massachusetts
28	Tennessee
26	Georgia

Every day, the Commonwealth produces significantly more electricity than it consumes, with the surplus flowing to neighboring states across the PJM grid.<sup>3</sup> This generation surplus is a direct result of Pennsylvania’s long-standing commitment to competitive electricity markets, which have incentivized private investment in efficient generation without placing financial risk on consumers.

To put this surplus into perspective, Pennsylvania produces nearly 40% more power than it needs on an annual basis. The chart below, based on data from the Energy Information Agency, shows just how much power Pennsylvania exports compared to its importing

<sup>2</sup> See <https://www.eia.gov/todayinenergy/detail.php?id=64104>

<sup>3</sup> See, <https://www.pjm.com/markets-and-operations/State-Import-Export-Map.aspx>

neighbors.<sup>4</sup>

## Electric Power Production and Consumption by State (2023)

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STATE	TOTAL PRODUCTION (MWH)	TOTAL CONSUMPTION (MWH)
Maryland	36,000,650	57,033,085
New Jersey	64,228,924	71,096,939
Pennsylvania	235,924,937	138,710,993
Ohio	133,223,464	146,640,983

There is no shortage of power in Pennsylvania and Pennsylvania’s needs are more than being met by the existing in-state fleet. This remarkable surplus was created without PPAs and without accessing utility rate base. In fact, but for Pennsylvania’s competitive market structure, this remarkable surplus would not have been built as regulators would have never permitted such an overbuilding of the generation fleet. There is also no reason to believe that this surplus cannot be expanded. While other states in the PJM region will continue to rely on Pennsylvania power for the foreseeable future, Pennsylvania can rest comfortably knowing that there is enough in state generation to meet its consumer’s needs.

### **Pennsylvania’s Challenge is to Make the Pennsylvania Surplus Benefit Pennsylvania Consumers**

While Pennsylvania does not need capacity to meet the needs of its consumers, Pennsylvania consumers should be the primary beneficiaries of its surplus within the regional grid. Pennsylvania consumers should not be asked to finance new capacity only to see that capacity used to make up the shortfalls from surrounding states.

Unfortunately, a capacity only PPA would do just that. While there is no doubt that Pennsylvania is in a regional grid and the reliability of the grid is a regional concern,

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<sup>4</sup> See, <https://www.eia.gov/electricity/state/>

Pennsylvania must be careful not to further encourage other states to lean on Pennsylvania's surplus – and Pennsylvania's consumer most certainly should not be asked to pay for the capacity needs of other states. With that in mind, P3 offers three options that will place Pennsylvania consumers in the most opportune position to benefit from the Pennsylvania surplus going forward:

### **Option One: Allow Competitive Markets to Work**

Over three decades, Pennsylvania's competitive markets with the support of PJM's competitive wholesale market have proven remarkably resilient. The markets have weathered natural disasters, multiple polar vortexes and heat domes, economic recessions, global conflicts and significant changes to environmental regulations. Throughout these ups and downs, there has been sufficient power supplies to meet Pennsylvania's and the region's needs while allowing consumers to benefit from competitive prices.

History suggests and earlier indications are that the competitive market will rise to the challenge of meeting the needs of increased demands on the system driven by data center load growth.<sup>5</sup> After decades of capacity prices well below the Cost of New Entry and after three specific years of prices below \$50/MWday, in the last year there have been significant announced additions to the PJM grid that are not relying on a rate base or a state-sponsored capacity PPA. Consider:

- On June 11, 2025, Talen and Amazon announced a PPA to provide power to support over \$20 billion in data center investments in Pennsylvania that includes “expanding the nuclear plant’s energy output through uprates, with the intent to add net-new energy to the PJM grid.”<sup>6</sup>
- On June 4, 2025, PJM announced that it had completed interconnection studies for 60% of its queue of 200 GW and expects to fully complete all studies in the queue by the end of next year.<sup>7</sup> While most of the resource in the current queue are wind, solar are batteries, the potential for significant megawatts to be added to the grid from the current queue cannot be ignored.

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<sup>5</sup> P3 would note that there remain significant questions on just how quickly and by how much load will grow in PJM. P3 applauds the recent announcement by the Public Utility Commission investigating the demand growth in Pennsylvania.

<sup>6</sup> See, <https://ir.talenenergy.com/news-releases/news-release-details/talen-energy-expands-nuclear-energy-relationship-amazon>.

<sup>7</sup> See, <https://insidelines.pjm.com/pjm-generation-interconnection-reforms-continue-to-produce-results/>.

- On May 2, 2025, PJM announced the results of its Reliability Resource Initiative which was a FERC-approved process to fast track high reliability projects through the PJM queue (over and above the 200 GW noted above). The result of the effort was the approval of 11.7 GW of new power from natural gas, coal, nuclear, and storage facilities – including seven projects in Pennsylvania.<sup>8</sup>
- April 2, 2025, Homer City Redevelopment and Kiewit Power Constructors unveiled plans to build a 4.5 GW combined-cycle natural gas plant, powered by seven hydrogen-capable GE Vernova turbines, targeted to come online in 2027. This \$10 billion project will not only supply a sprawling 3,200-acre AI and data center campus, but also feed excess power into the PJM grid—making it potentially the largest gas-fired power plant in the U.S.<sup>9</sup>
- On September 20, 2024, Constellation announced that it had entered into a PPA with Microsoft that will lead to the restart of Three Mile Island Unit 1 adding over 800 MWs of new capacity to the grid.<sup>10</sup> Constellation recently announced that the new capacity could be available as soon as 2027.<sup>11</sup>

The speed and the scope of these new announcements in competitive generation is impressive and unprecedented. While issues could certainly arise, early indications are that the market is responding vigorously to the challenges presented by data center load growth. Allowing the competitive market to just do its thing - attract private capital to find the most economic means of meeting demand while bearing the costs and risks associated with the development and operation of power facilities – has proven effective. This approach is by far the most preferable path forward and deserves a chance to succeed.

### **Option Two: Encourage Long Term Retail Contracts**

As a result of Pennsylvania’s competitive retail market structures, willing buyers and willing sellers have the ability to meet on their own terms and conditions. The Amazon-Talen deal

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<sup>8</sup> See, <https://www.pjm.com/-/media/DotCom/about-pjm/newsroom/2025-releases/20250502-pjm-chooses-51-generation-resource-projects-to-address-near-term-electricity-demand-growth.pdf>

<sup>9</sup> <https://www.homercityredevelopment.com/post/former-homer-city-pa-coal-plant-officially-reopens-as-state-of-the-art-natural-gas-facility>

<sup>10</sup> See, <https://www.constellationenergy.com/newsroom/2024/Constellation-to-Launch-Crane-Clean-Energy-Center-Restoring-Jobs-and-Carbon-Free-Power-to-The-Grid.html>

<sup>11</sup> <https://www.constellationenergy.com/newsroom/2025/central-pennsylvania-rallies-in-support-of-the-crane-clean-energy-center.html>

and the Microsoft-Exelon deals are terrific examples of willing buyers and willing sellers coming together to make a deal. All Pennsylvania consumers have the ability to enter into such agreements, albeit at a smaller scale. PA Power Switch provides residential consumers with the opportunity to select competitive options that extend to three years – many of which are very close in price to the current price to compare. The Commission can and should consider listing offers of up to five years to give customers the opportunity to lock in their price for supply. These longer-term retail deals will also provide market stability to suppliers that could lead to the addition of new megawatts to the grid. There is nothing to prevent Pennsylvania from pursuing Option One and Option Two simultaneously.

### **Option Three: Explore Longer Term POLR Procurements for Residential Consumers**

Option Two focuses on encouraging willing buyers and willing sellers to come together on their own commercially acceptable terms to secure long-term supply arrangements. Option Three is similar to Option Two but done so through the default service process for the residential consumers that elect not to shop for their electricity. Under this approach, the default supplier, in essence, would basically enter a long-term arrangement as a hedge for its default customers. Option Three is less desirable than Options One and Two because it is a state intervention in the market, but it nonetheless can be done consistently with a competitive market structure. The advantage of this approach over the capacity only PPA for new generation is that it allows Pennsylvania's default consumers to be supplied by the existing resources in Pennsylvania which are going to be lower cost than the new resources supported by the PPA. Option Three allows Pennsylvania's residential consumers to benefit from Pennsylvania's generation surplus by locking that capacity down for Pennsylvania's consumers while forcing other states that do not enjoy the surplus to seek supply from the newer, more expensive, capacity resources. Again, it is preferable for consumers to do this on their own, but if the Commonwealth wants to secure MWs as a hedge for default customers, this option can be considered by EDCs as part of the POLR plans (consistent with existing Pennsylvania and federal law).

### **The Challenge Presented by Capacity Only PPAs**

P3 respectfully submits that the three options should be exhausted before exploring capacity only PPAs for new generation. While P3 appreciates the desire of the PA Core EDCs to find a competitive means of adding new supply in Pennsylvania, there are challenges with this approach that make it significantly less desirable. As it relates to the

PPAs specifically, P3 member companies have participated in PPA solicitations in other states and regions that can serve as templates for a Pennsylvania specific PPA.

That said, capacity only PPAs come with significant economic and legal risks that Pennsylvania's consumers should not be exposed to – especially in light of the tremendous Pennsylvania surplus. The New Jersey LCAPP experience paints a brilliant picture of the potentially costly consequences of the PPA approach. In 2010, in response to concerns about resource adequacy, the New Jersey legislature directed the New Jersey Board of Public Utilities to pursue capacity only contracts for new natural gas power plants in New Jersey (very similar to what is suggested in the RFI).<sup>12</sup> As seen in the chart below, the contract prices were significantly above the market price and New Jersey consumers would have been paying the difference which over the term of the contract (and there were three contracts) would have resulted in over a billion dollars of excess charge on consumers. While it's arguable that the contracts facilitated the construction of the plants, it is inarguable that it did so at tremendous prices compared to the market. But for the fact the entire New Jersey program was deemed unconstitutional, consumers in New Jersey would have paid over a billion dollars for new plants that ended up being built anyway.

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<sup>12</sup> See, <https://www.youtube.com/watch?v=yLNvY5wVptU> at 41:40.

## New Jersey Woodbridge Contract Subsidies

Delivery Years (Ending May 31)	Contract Price for Capacity for CPV Woodbridge Plant (NJ)	Market Price for Capacity in EMAAC	Total Subsidy per year (assuming 700 MW ICAP)
2016	\$286.03	\$167.46	\$30.2 million
2017	\$294.61	\$119.13	\$44.8 million
2018	\$303.45	\$120.00	\$46.8 million
2019	\$312.55	\$225.42	\$22.3 million
2020	\$321.93	\$187.87	\$35.3 million
2021	\$331.59	\$165.73	\$41.9 million
2022	\$341.54	\$97.86	\$62.3 million
2023	\$351.79	\$49.49	\$77.3 million
2024	\$362.34	\$53.60	\$78.9 million
2025	\$373.21	\$269.92	\$26.4 million
2026	\$384.41		
2027	\$395.94		
2028	\$407.82		
2029	\$420.05		
2030	\$432.65		

Given the litigation that followed the New Jersey experience, any capacity only PPA structure would have to wrestle with challenges presented by the *Hughes* decision. In *Hughes v. Talen Energy Marketing* (136 S. Ct. 1288, 2016), the U.S. Supreme Court ruled that Maryland and New Jersey’s programs to incentivize new power plant construction by guaranteeing fixed capacity payments to generators violated the Federal Power Act. The Court found that the program intruded on FERC’s exclusive authority over wholesale electricity rates by effectively replacing the rate set by the PJM capacity auction. While P3 believes that capacity only PPAs can be structured in a way that is consistent with the Supreme Court’s decision, any legally compliant structure would most likely place greater risk on consumers that they would be paying above market prices.

Also, any PPA would need to be consistent with Pennsylvania law. Pennsylvania law clearly allows for long term contracts of four to twenty years to be part of the “prudent mix”

of power that is procured by the EDC to meet the needs of non-shopping customers.<sup>13</sup> However, any such long term purchases need to establish that the long term contract would be the “least cost to customers over time”<sup>14</sup> which will be very challenging for any new generation facility given the increased costs to build new generation compared to existing resources.<sup>15</sup>

Finally, and importantly, the mere presence of PPAs for new generation in Pennsylvania could serve as a disincentive to those who would consider building new capacity on a purely merchant basis. Those assets owners with a state-sponsored PPA will certainly behave differently in the market than those without one creating additional risks for those considering building without a PPA. Given Pennsylvania’s success with both new merchant-only construction and private entity PPAs, careful thought needs to be given to what state-sponsored PPAs would do to impact those very positive market-based responses that are occurring without state intervention.

## Conclusion

P3 again reiterates its appreciation for the opportunity to engage in this dialogue with PA’s Core EDCs. P3 members are committed to reliably generating power to meet the needs of Pennsylvania and the entire PJM footprint and doing so in a way that harnesses the benefits of competitive power to drive down prices for consumers. Partnering with PA’s Core EDCs in that shared goal is important to P3 and its member companies. While PPAs certainly are an option that can be considered and P3 members have engaged in PPAs in other jurisdictions, at this point, there are better options that Pennsylvania should be pursuing – including allowing the market time to respond (which early indications suggest it will). If the need to consider PPAs arises in the future, which P3 believes it will not, P3 stands ready to work with the PA Core EDCs to develop a structure that builds on the success of Pennsylvania’s competitive market structure to deliver reliability at the lowest costs to Pennsylvania’s homes and businesses. We just are not there yet.

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<sup>13</sup> PA Code Title 66 Chapter 28 Section 7(e).

<sup>14</sup> *Id.* at 7 (3)(3.4)(ii).

<sup>15</sup> See, <https://www.brattle.com/wp-content/uploads/2025/04/Brattle-2025-CONE-Report-for-PJM.pdf> which details the cost increases associated with new generation. This report also provides the answer Question 13 in the RFI.

## **P3 Member Pennsylvania Assets<sup>i</sup>**

### **Caithness**

- Caithness Moxie Freedom, 1,105 MW, Gas-fired (Salem Township, Luzerne County, PA)

### **Calpine**

- Bethlehem Energy Center, 1,130 MW, Natural Gas (Bethlehem, PA)
- York 2 Energy Center, 828 MW, Natural Gas (Delta, York County, PA)
- York Energy Center, 565 MW, Natural Gas (Delta, York County, PA)

### **Cogentrix**

- Hamilton Liberty Generation Plant, 858 MW, Natural Gas (Towanda, Bradford County, PA)
- Hamilton Patriot Generation Plant, 858 MW, Natural Gas (Montgomery, Lycoming County, PA)

### **CPV**

- CPV Fairview Energy Center, 1,050 MW, Natural Gas (Jackson Township, PA)
- CPV Maple Hill Solar, 100 MW, Solar (Portage, PA)
- CPV Rogue's Wind, 114 MW, Wind, Under Construction (Cambria/Clearfield Counties, PA)

### **JERA Americas, Inc.**

- Marcus Hook Energy Center, 848 MW, Natural Gas (Marcus Hook, PA)

**Lotus Infrastructure Partners**

- Fairless, 1,240 MW, Natural Gas (Fairless Hills, PA)
- Hazelton, 150 MW Natural Gas & Oil (Hazleton, PA)

**LS Power**

- Armstrong, 776 MW, Gas (Shelocta, PA)
- Chambersburg, 93 MW, Gas (Chambersburg, PA)
- Gans, 97 MW, Gas (Gans, PA)
- Hunterstown, 859 MW, Gas (Gettysburg, PA)
- Ironwood, 793 MW, Gas (Lebanon, PA)
- Springdale, 680 MW, Gas (Springdale, PA)
- Beaver Valley, 1 MW, Hydro (Beaver Falls, PA)
- Seneca, 508 MW, Hydro (Warren County, PA)
- Sandy Ridge I, 50 MW, Wind (Tyrone, PA)
- Sandy Ridge II, 88 MW, Wind (Tyrone, PA)

**Middle River Power**

- Blossburg, 22 MW, Gas (Covington, PA)
- Brunot Island, 267 MW, Gas/Oil (Pittsburg, PA)
- Hamilton, 20 MW, Oil (Abbottstown, PA)
- Hunterstown, 63 MW, Dual Fuel (Gettysburg, PA)
- Mountain, 40 MW, Dual Fuel (Mount Holly Springs, PA)
- New Castle, 328 MW, Gas (New Castle, PA)
- Orrtanna, 21 MW, Oil (Orrtanna, PA)
- Portland, 177 MW, Dual Fuel (Mt Bethel, PA)
- Shawnee, 20 MW, Oil (Middle Smithfield, PA)
- Shawville, 601 MW, Gas (Shawville, PA)
- Titus, 31 MW, Oil (Birdsboro, PA)
- Tolna, 41 MW, Oil (New Freedom, PA)
- Warren, 62 MW, Dual Fuel (Warren, PA)

**RPA Asset Management on behalf of Chief Power Finance**

- Keystone Generating Station, 761 MW, Coal, (44.45% ownership) (Shelocta, PA)
- Conemaugh Generating Station, 600 MW, Coal, (35.11% ownership) (New Florence, PA)

**Talen**

- Brunner Island Steam Electric Station, 1,429 MW, Coal/ Natural Gas (York Haven, PA)
- Conemaugh Generating Station, 386 MW, Coal (22% ownership) (New Florence, PA)
- Keystone Generating Station, 213 MW, Coal (12% ownership) (Shelocta, PA)
- Lower Mount Bethel Power Plant, 608 MW, Natural Gas (Bangor, PA)
- Martins Creek Power Plant, 1,705 MW, Natural Gas (Bangor, PA)
- Montour Steam Electric Station, 1,528 MW, Natural Gas (Washingtonville, PA)
- Susquehanna Steam Electric Station, 2,228 MW, Nuclear (Salem Township, PA)

**Tenaska**

- Westmoreland Generating Station, 940 MW, Natural Gas (Westmoreland County, PA)
- Alpaca Energy LLC, 21 MW, Natural Gas (Bradford County, PA)
- Beaver Dam Energy LLC, 21.4 MW, Natural Gas (Bradford County, PA)
- Milan Energy LLC, 21 MW, Natural Gas (Bradford County, PA)
- Oxbow Creek Energy LLC, 21.4 MW, Natural Gas (Wyoming County, PA)
- Roundtop Energy LLC, 21.4 MW, Natural Gas (Susquehanna County, PA)
- Wolf Run Energy LLC, 21.4 MW, Natural Gas (Bradford County, PA)
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**Tyr Energy, Inc**

- Hickory Run Energy Station, 1,000 MW, Natural Gas (New Castle, Lawrence County, PA)

**Vistra**

- Beaver Valley, 1,826 MW, 2 Nuclear units (Shippingport, PA)
- Fayette, 726 MW, Combined Cycle (Fayette County, PA)
- Liberty, 607 MW, Combined Cycle (Delaware County, PA)
- Ontelaunee; 600 MW, Combined Cycle (Reading, PA)

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<sup>i</sup> Note that this list is only generating capacity and does not include demand response capacity provided by P3 members.