AEP OHIO EX. NO._____

BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO

| | | |
|---|---|---|
| In the Matter of the Application Seeking Approval of Ohio Power Company's Proposal to Enter into an Affiliate Power Purchase Agreement for Inclusion in the Power Purchase Agreement Rider | ) | Case No. 14-1693-EL-RDR |
| In the Matter of the Application of Ohio Power Company for Approval of Certain Accounting Authority | ) | Case No. 14-1694-EL-AAM |

# DIRECT TESTIMONY OF PABLO A. VEGAS IN SUPPORT OF AEP OHIO'S APPLICATION

Filed: October 3, 2014

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PABLO A. VEGAS

BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO
DIRECT TESTIMONY OF
PABLO A. VEGAS
ON BEHALF OF OHIO POWER COMPANY

## PERSONAL DATA

**Q. WHAT IS YOUR NAME AND BUSINESS ADDRESS?**

A. My name is Pablo A. Vegas and my business address is 850 Tech Center Drive, Gahanna, Ohio 43230.

**Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

A. I am employed by Ohio Power Company ("AEP Ohio," or the "Company"), a unit of American Electric Power ("AEP"). My title is President and Chief Operating Officer of AEP Ohio.

**Q. WHAT ARE YOUR RESPONSIBILITIES AS PRESIDENT AND CHIEF OPERATING OFFICER OF AEP OHIO?**

A. I am directly responsible for the day-to-day operations of AEP Ohio. As part of my responsibilities, I oversee and lead AEP Ohio in establishing goals that are designed to align and support the corporate goals and objectives of AEP, as well as achieve the objectives of the state of Ohio for the benefit of customers and shareholders.

**Q. WHAT IS YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND?**

A. I earned a Bachelor of Science Degree in Mechanical Engineering from the University of Michigan and have attended the AEP Strategic Leadership Program at The Ohio State University. In 2014, I attended the Advanced Management Program at Harvard University. Before joining AEP, I held senior leadership positions with IBM,

PricewaterhouseCoopers and Andersen Consulting. I joined AEP in 2005, where I held leadership positions in Information Technology and Finance, leading both the Corporate IT Planning and Commercial Operations IT Planning organizations. I then served as Director of Strategic Planning, working cross functionally to formulate AEP's short and long-term strategic plans.

From 2008 to 2010, I was President and Chief Operating Officer of AEP Texas, overseeing distribution operations serving nearly one million electricity consumers in south and west Texas, as well as the operating unit's safety, customer services, marketing, communications, community affairs, governmental affairs, and regulatory functions. In 2010, I became Vice President and Chief Information Officer for AEP, responsible for development and support of AEP's software applications and operation of AEP's information technology infrastructure. I assumed my current position in 2012.

## PURPOSE OF TESTIMONY

**Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

A. I support AEP Ohio's overall proposal to enter into a purchase power agreement ("PPA") with AEP Generation Resources ("AEPGR") for the generation output of several of its generating units ("PPA Units") and to expand the PPA Rider that was proposed by the Company in its Electric Security Plan filed in Case Nos. 13-2385-EL-SSO and 13-2386-EL-AAM ("ESP III") to include the additional contracts requested in this filing. My testimony will address the following:

- Witnesses supporting the filing and a brief description of their sponsored testimonies;
- Background and Development of the PPA;

- Industry trends driving the need for the PPA; and
- The benefits of the PPA.

**Q. WHY IS AEP OHIO PROPOSING THIS PPA TO BE ADDED TO THE PPA RIDER?**

A. The confluence of deregulation, flawed capacity markets, and increasingly onerous environmental regulations is significantly changing the generation landscape in Ohio. AEP Ohio is proposing an additional PPA to address these changes, increasing price stability to its customers and protecting the local Ohio economies which it serves. In short, the proposal is beneficial to both AEP Ohio and its customers. In concert with the supporting testimonies of the other Company witnesses, I will discuss several issues in my testimony that are important to Ohio's electric generating economy including the following:

- Several Ohio baseload generating facilities, which are vital to Ohio's economy, are at risk of early retirement due to uncertain future economic conditions;
- These baseload generating facilities employ thousands of Ohioans and produce millions of dollars of annual economic benefit to the state and local economies.
- Retirements of these facilities can be devastating to the local economies in which the plants operate;
- Due to planned generation retirements alone, Ohio will see its generating capacity dramatically decline to the extent that it will be a large importer of energy for the foreseeable future; and
- Ohio's capacity deficit will only increase if more facilities are prematurely retired.

Further, I will discuss a combination of varying state regulation practices and flawed markets acting as a deterrent to generation investment in Ohio, including why:

- Retired capacity will need to be replaced in order to maintain the integrity of the system, while new capacity additions, and the jobs, tax base, and economic benefits associated with the new capacity are likely to be located in other states, with Ohioans still footing much of the bill;
- PJM's capacity and energy markets have been largely unsuccessful in attracting significant new generation in Ohio; and
- Other states, through regulation or other intervention, provide investors more clarity regarding cost recovery of large generating assets.

Finally, I will discuss how the PPA is designed to address these issues by:

- Providing a hedge to AEP Ohio's customers against the volatility associated with market-based rates;
- Protecting Ohio's local communities by providing a known revenue stream to generators, decreasing the likelihood they will be forced to prematurely retire; and
- Protecting Ohio's economic interests by supporting reliable generating facilities.

**Q. WHAT IS THE ALTERNATIVE TO SUPPORTING THE PPA?**

A. If the PPA is not approved as requested, business could go on as usual for some period of time. However, without the PPA, the PPA Units will be at greater risk of premature retirement, which would lead to significant job losses and have devastating effects on local communities. Additionally, as discussed by witness Bradish, the retirement of these units will lead to $1.6 billion of dollars of new transmission facilities that will be needed to support grid reliability. These new transmission facilities will lead to increased costs

for Ohioans that would be avoided or mitigated if such early generating unit retirements do not occur. Additionally, Ohioans will eventually bear the cost of new generating capacity, which as I will describe below, will likely be built in other states.

**Q. WHO WILL BE TESTIFYING IN SUPPORT OF AEP OHIO'S PPA PROPOSAL?**

A. Table 1 below summarizes the witnesses who will be testifying on AEP Ohio's behalf in support of the PPA.

**Table 1: Witnesses in the PPA Proposal**

| **Witness** | **Subject Area** |
|---|---|
| Pablo Vegas | • Policy Overview<br>• Introduction of Witnesses<br>• Background and Development of the PPA<br>• Industry Trends Driving the Need for the PPA<br>• Economic Benefits to Ohio from the PPA |
| Karl Bletzacker | • Fundamentals Forecast |
| Kelly Pearce | • Terms and Conditions of the PPA<br>• Forecasted Revenues and Costs under the PPA<br>• PJM Markets<br>• Cost Stability of the PPA |
| Toby Thomas | • PPA Generating Units<br>• Economic Viability in a Deregulated Market |
| Robert Bradish | • Results of Transmission Planning Impact Study |
| John McManus | • EPA Greenhouse Gas Regulations |
| Renee Hawkins | • Return on Equity<br>• Capital Structure |
| Thomas Mitchell | • PPA Accounting |
| Steve Fetter | • Regulatory and Public Interest Considerations Supporting the PPA |
| William Allen | • PPA Rider Structure<br>• Economic Development Benefits<br>• Customer Rate Impacts |

## BACKGROUND OF THE PPA

**Q. PLEASE DESCRIBE THE PPA THAT AEP OHIO IS PROPOSING.**

A. As described in detail by Company witness Pearce, the PPA is an agreement between AEP Ohio and AEPGR in which AEP Ohio will be entitled to output from several generating facilities owned by AEPGR. Specifically, AEP Ohio will be entitled to all of the capacity, energy, and ancillary service revenues received from PJM associated with AEPGR's ownership share of the nine PPA Units located in Ohio as shown in Table 2 below. In return, AEP Ohio will make payments to AEPGR for its costs of owning and operating these generating units as prescribed by the contract.

**Table 2 – PPA Units**

| Plant | Unit | PPA Entitlement (MW) | Currently Planned Retirement Year |
|---|---|---|---|
| Cardinal[1] | 1 | 592 | 2033 |
| Conesville | 4 | 339 | 2033 |
| Conesville | 5 | 405 | 2036 |
| Conesville | 6 | 405 | 2038 |
| Stuart | 1 | 150 | 2033 |
| Stuart | 2 | 150 | 2033 |
| Stuart | 3 | 150 | 2033 |
| Stuart | 4 | 150 | 2033 |
| Zimmer | 1 | 330 | 2051 |
| **Total** | | **2,671** | |

All of the energy, capacity, and ancillary services associated with the PPA Units will be bid into the PJM market and any PJM revenues and costs resulting from the PPA will be passed on to AEP Ohio's customers through the PPA Rider proposed in ESP III. The PPA Rider is designed to stabilize customer prices due to the relatively stable cost of

[1] AEPGR's entitlement to any surplus power produced by Cardinal Units 2 and 3, as well as a related obligation to back-up the power supply of Units 2 and 3, is also transferred to AEP Ohio in the PPA.

owning and operating the PPA Units compared to the market volatility, which Company witnesses Allen and Pearce discuss in more detail.

**Q. WHAT IS THE INTENT OF THE PPA?**

A. The PPA is designed to meet three primary objectives:

1) Stabilize retail rates in AEP Ohio's service area by providing a hedge against market volatility;
2) Protect reliability and the economy in Ohio by providing predictable revenues to Ohio generators; and
3) Protect against the adverse impact of early plant closures on the Ohio economy.

**Q. PLEASE DISCUSS THE ORIGINS OF THE PPA.**

A. Ohio's transition to deregulated generation rates has exposed its generators to the pricing uncertainty of the markets and exposed AEP Ohio's customers to the significant volatility associated with market-based rates. Artificially depressed market prices can force Ohio's generators to close their doors prematurely due to improper pricing signals, devastating the local economies where they operated. In the long run, prematurely retired units will likely be replaced by higher-cost units, which Ohio customers will have to pay for. Further, market volatility inhibits economic growth because AEP Ohio serves many large capital-intensive customers that depend on rate stability to invest and grow their businesses. Thus, AEP Ohio envisioned entering into long-term cost-based PPAs as an effort to support the generators and the local economies in which they operated, as well as provide long term price certainty for its customers.

**Q. PLEASE COMMENT ON THE UNITS SELECTED FOR INCLUSION IN THE PPA.**

A. All of the units included in the PPA are reliable sources of energy and, due to its prior ownership of the units, AEP Ohio is very familiar with their operation and maintenance history. These units have provided decades of reliable service to AEP Ohio's customers. AEP Ohio knows that these units have been properly maintained and are capable of operating reliably well into the future. As witness Thomas describes, significant investments have been made in all of the PPA Units and the portfolio of units is capable of operating in compliance with environmental regulations, as a result, these units are well-positioned to provide reliable capacity and energy going forward under the proposed PPA.

The portfolio of PPA Units also has characteristics that will protect customers from price volatility in the market. All of the units have the capability to store several weeks of fuel on site which makes them less susceptible to supply curtailments or prices spikes caused by fuel-supply issues. As seen in the Polar Vortex this past January the lack of a firm fuel supply, particularly with gas-fired generation, can contribute to significant price increases in the energy market. In similar future situations, AEP Ohio's customers will benefit from the hedge provided by units with a stable fuel supply. AEP Ohio's customers will also benefit from the portfolio approach to the PPA because it protects against the impact that an unforeseen outage at a single unit will have on the total energy cost to customers.

Unfortunately, for several reasons, the PPA Units are now on the economic "bubble," where low short term capacity and energy market prices have increased the risk

of premature retirement. In recent history, low natural gas prices have led to depressed energy prices for certain periods of time. Additionally, the PJM capacity market clearing prices do not appear to currently support the fixed costs of the PPA Units, in large part due to the artificial nature of the capacity construct in PJM, which has led to significant price volatility and suppressed clearing prices (this is explained in more detail by Witness Pearce). These historical clearing prices are largely below the PPA fixed costs, which include the aforementioned environmental upgrades.

We believe both of the energy and market price signals are temporary. For example, the average energy price for the entire year of 2013 was just under $37/MWH. However, as we saw this past winter, stress on the PJM system can cause prices in the volatile gas market to increase dramatically, which typically have a direct correlation with energy market prices because of the proliferation of gas units in PJM. Specifically, the January 2014 average real-time energy price for the PJM RTO was $113/MWH. This clearly shows that the energy market is volatile and will react to weather patterns and supply disruptions. This volatility will only get worse in the future as stable-priced coal-fired units are retired, while only comparatively volatile gas-fired units and intermittent renewable sources may be built.

We also expect prices in the capacity market to increase significantly in the future. In August, PJM introduced a proposal to introduce a new type of capacity product, called the Capacity Performance product, which could significantly change the Reliability Pricing Model (RPM) capacity construct. PJM said they wanted to improve the reliability of the system in the future because of: a) the experience in January 2014 when PJM had a significant number of units out due to the cold weather, combined with;

b) the upcoming retirement of several thousand MWs of coal-fired units in 2015 due to the Mercury and Air Toxics Standards regulation. PJM's proposal creates a new capacity product, called the Capacity Performance product. This product will need to have a combination of fuel inventory or firm supply, flexible operation, and high availability. AEP's coal-fired units should qualify for this category. PJM indicates it needs approximately 85% of its capacity requirements in the form of this new Capacity Performance category. And, in order to provide incentives for this category, PJM's proposal includes certain bidding rule changes that are expected to increase the clearing price significantly.

Details of the proposal need to be developed with PJM stakeholders. But PJM has indicated they plan on filing this proposal at FERC in November. These expected rule changes to the capacity market combined with the volatility inherent in the energy market create a lot of uncertainty in the future for Ohio consumers. The predictable revenues provided by the PPA will help address this issue going forward, increasing the probability that these plants will remain operating through their useful lives and provide a more stable rate for consumers. Further, any additional revenues above the costs to operate the units that are provided as a result of changes in PJM's capacity markets would flow to customers through the PPA rider.

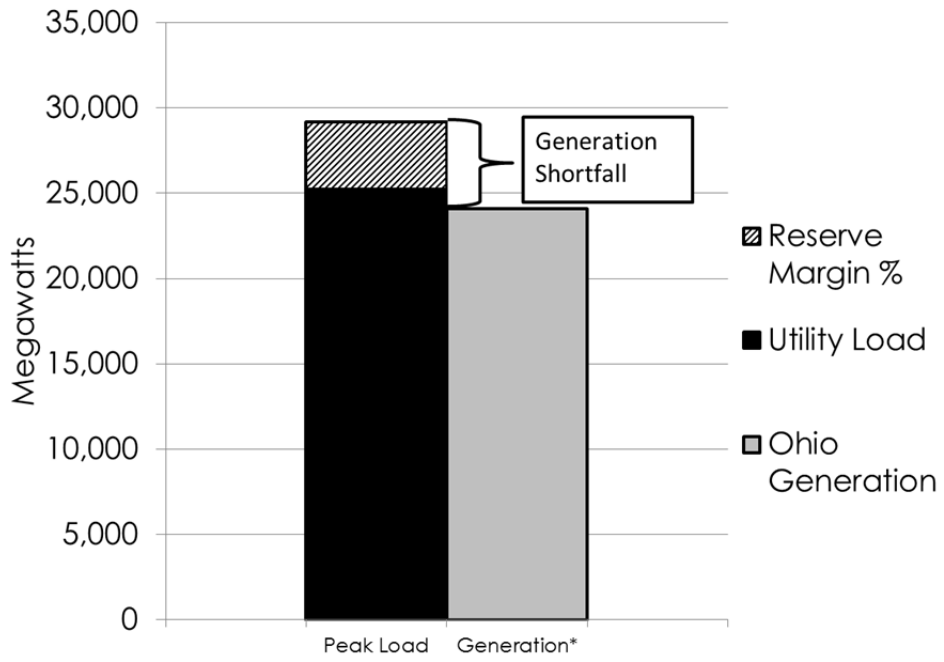
**OHIO'S GENERATION SUPPLY IS RETIRING AND NOT BEING REPLACED**

**Q. PLEASE COMMENT ON THE STATE OF GENERATION SUPPLY IN OHIO.**

A. A combination of factors has led to a significant decrease in the amount of generation that will be produced in Ohio in the future. Since 2012, utilities in Ohio have announced the retirement of over 5,500 MW of generation in Ohio by mid-2015. The majority of

these retirements were announced in response to several new regulations imposed by the EPA. However, current market conditions are such that even plants that will be environmentally compliant may be forced to shutter for economic reasons. As a result of known generation retirements, Ohio will already be greatly reliant on neighboring states for generation in 2015 as shown in Figure 1 below.

**Figure 1 – Ohio IOU Electric Supply & Demand**




* 2015 projected Ohio-sited merchant generation. Excludes municpal, cooperative and industrial generation.
Source: SNL Financials

**Q. PLEASE ELABORATE ON THE IMPACTS THAT MARKETS HAVE ON GENERATING CAPACITY.**

A. The current PJM market structure does not support the continued long term investment in existing units and has spurred very few plans for significant generation construction in Ohio. This situation not only threatens Ohio's economy, but also the reliability of the

PJM system. PJM recently acknowledged this in an August 20, 2014 white paper in which it stated:

> "Last winter's generator performance – when up to 22 percent of PJM capacity was unavailable due to cold weather-related problems – highlighted a potentially significant reliability issue. PJM's analysis shows that a comparable rate of generator outages in the winter of 2015/2016, coupled with extremely cold temperatures and expected coal retirements, would likely prevent PJM from meeting its peak load requirements."

AEP Ohio is keenly aware of this situation as 89% of AEP's capacity slated for retirement was online in the month of January. All of the PPA Units also ran during January so their premature retirement would likely compound this issue in the future.

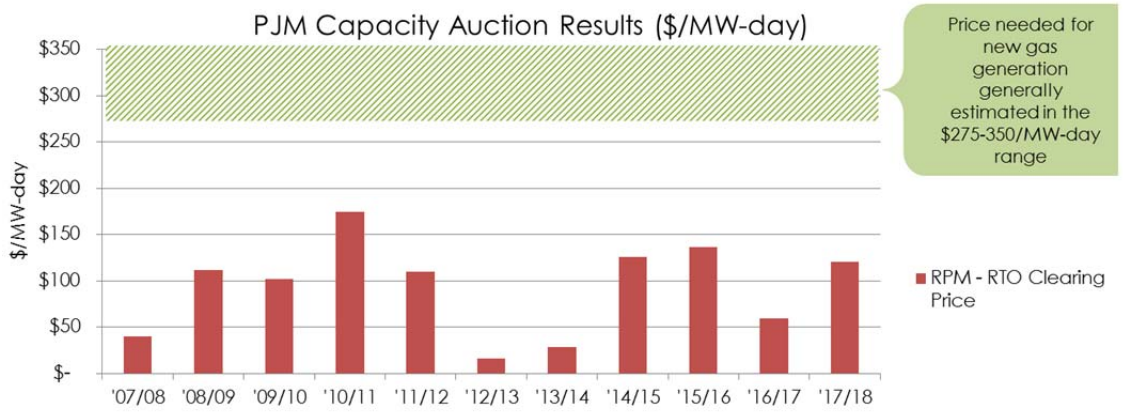
**Q. PLEASE ELABORATE ON THE FLAWS IN PJM'S CAPACITY MARKET.**

The major flaw is that the PJM capacity market forces investors to make long-term investment decisions based on erratic short-term price signals. Electric generating assets are long-term investments of at least 20 years. On the other hand, PJM's capacity market is operated on a three-year planning horizon, with each planning year price clearing one year at a time in the auction. This does not provide the proper long-term price signals to encourage such investment. As witness Pearce discusses further, the combination of this and several other market flaws (e.g. imports on non-firm transmission, speculative bidding, summer-only demand response, etc) has led PJM to reexamine its capacity market,

These market flaws have led to suppressed capacity prices and significant price volatility. PJM has conducted capacity auctions for eleven planning years with clearing

prices for the RTO (excluding constrained delivery areas) ranging from $16/MW-day to $174/MW-day (see Figure 2 below). It is difficult to predict the expected revenues associated with long-term investments if the expected revenues earned from those investments can vary by upwards of 1,000%. Moreover, the average clearing price over the 10-year period has been just $93/MW-day. This level is less than 27% of the Net Cost of New Entry (CONE) identified by PJM for the 2017/2018 planning period. Net CONE, which represents the cost of building a new gas-fueled combustion turbine power plant, was set at $351.39/MW-day for the most recent PJM Capacity Auction. The bottom line is that the average revenues expected as a result of PJM capacity auctions may not be enough to support existing units, let alone entice enough new construction to replace Ohio's retiring capacity. While these artificially depressed capacity prices have been reflected in Ohioans' rates, they are mortgaging their future at the expense of long term capacity additions.

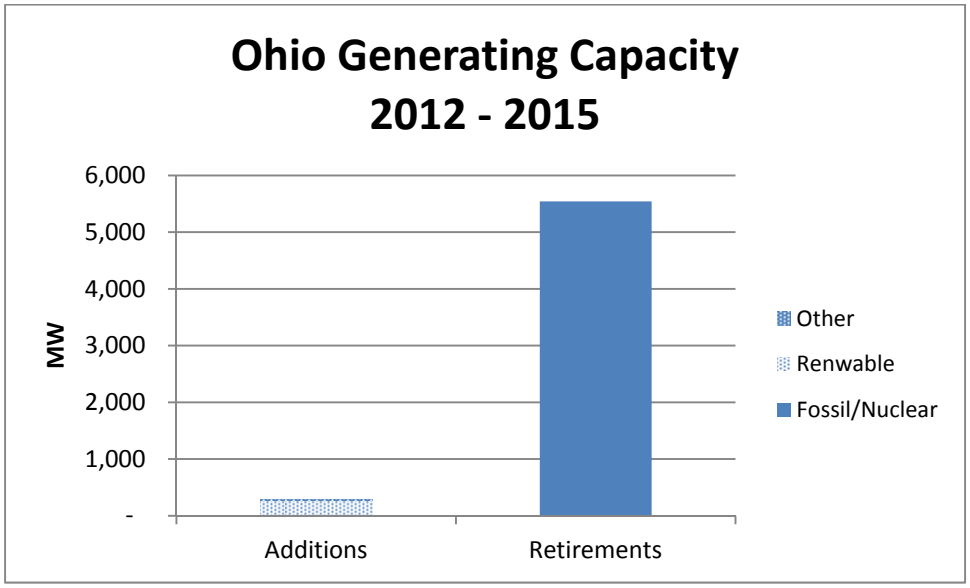
**Figure 2 – PJM Capacity Market**



**Q. HOW HAVE THESE MARKET FLAWS IMPACTED OHIO?**

A. In Ohio, the retirements of baseload plants in Ohio will outpace the addition of new capacity for the next several years. For example, as shown in Figure 3 below, in the same 2012-2015 period when Ohio will retire over 5,500 MW of generation, only 291 MW is expected to be placed in service.

**Figure 3 – Ohio Generating Capacity**




Further, the vast majority of planned generation is renewable which does not have the same operating characteristics of the baseload generation that is slated to retire. The situation does not improve beyond 2015, when there is only an additional 814 MW of generation currently identified as under construction[2] in Ohio in the PJM generation queue[3]. If even more plants are forced to retire due to economic reasons, it will only widen this gap.

[2] While marked as under construction by PJM, the physical construction of the plant has not begun.

[3] Capacity Interconnection Requests in Ohio listed as under construction in the PJM Generation Queue with in-service dates in 2016 going forward.

The lack of new Ohio generation identified in the PJM queue is alarming enough, but there is no guarantee that the small amount of capacity that has been identified as under construction will be built. It is common for developers to withdraw a generation interconnection request in PJM, even after they have a signed interconnection agreement on file with FERC. Further, the track record of merchant generators in Ohio provides little confidence that the future capacity can be relied upon.

The Ohio Power Siting Board's records show that, since 2007 when PJM implemented the RPM capacity market, merchant generators have only completed two projects consisting of just 500 MW out of 3,908 MW of nameplate capacity approved by the Board. Both of these projects are wind projects and are largely supported by purchased power agreements; the owners have long term purchase power agreements in place for over 70% of their output. Of course, the fact that these are both wind projects does little to support Ohio's capacity deficit. While the nominal capacity that was approved by the siting board for these projects was 484 MW, their capacity for PJM's planning purposes is just 100 MW.

**OTHER STATES ARE MORE ATTRACTIVE FOR GENERATION INVESTMENTS**

**Q. IS THE RETIRED CAPACITY BEING REPLACED IN OHIO?**

A. Very little. Ohio should be a prime location for new gas-fired generation investment as it is fortunate to sit on vast reserves of shale gas. Unfortunately, for reasons I will describe below, significant new capacity is not being built in Ohio. The lack of new gas-fired generation in Ohio could lead to situations where Ohio exports that natural gas out of state to generators who will in turn, sell the electricity back to Ohio. This out-of-state capacity and energy will likely cost more than the existing PPA Units.

**Q. WHY ARE SO FEW NEW CAPACITY PROJECTS BEING BUILT IN OHIO?**

A. Ohio has distinct disadvantages to attracting generation investment. Because Ohio has moved to SSO procurement through short-term auctions, investors can only count on projected market revenues to support long-term investment decisions. As discussed above, eleven years of market results have proven that the capacity markets in PJM do not provide sufficient returns in PJM's western footprint to support new investment. Based strictly on market economics, new generation is more likely to be built in eastern PJM, where PJM's capacity market has traditionally identified constrained delivery areas where capacity clearing prices are greater.

While reliance on the capacity market is enough to deter generation investment in Ohio, its location in proximity to several regulated states also puts it at a disadvantage to attracting investment. Ohio's adjacent neighbors Indiana, West Virginia, Michigan, and Kentucky all provide regulated recovery of generation investments providing investors more clarity regarding the return on such large investments. Near-neighbor Virginia not only provides regulated cost recovery, but also employs rate incentives and accelerated cost recovery mechanisms to encourage new generation investments. It is no surprise that during 2012-2015 when Ohio is adding just 291 MW of capacity, Virginia will add over 2,200 MW. By contrast, Pennsylvania (Ohio's deregulated neighbor) is adding just 595 MW in same time frame, with all but 140 MW located in the eastern half of the state where capacity prices have traditionally been greater.

In addition to the surrounding regulated states, some unregulated states are using other methods to address the same market flaws that are impacting Ohio. For example, both New Jersey and Maryland attempted to offer incentives to attract generation

investment in their states. While both of these attempts have experienced setbacks through the courts and are alternative solutions to the proposed PPA, the example underscores the steps that states recognize the problem and are actively pursuing to address these concerns.

At the end of the day, PJM is indifferent to the location where new generating capacity is built. PJM is responsible to provide adequate generating capacity for its entire system, regardless of where that capacity is located. In other words, PJM is indifferent to whether a single MW of capacity is built in Ohio so long as the long term reliability of the grid is protected. Similarly, PJM is indifferent as to whether costs of millions of dollars of transmission grid fixes are imposed on its members due to premature retirement of Ohio generating plants. Of course, PJM also has no regard for the harmful economic impacts to Ohio that would result from these plant closures. Conversely, the Commission should be concerned about these issues and looking for solutions, such as the proposed PPA. As witness Fetter discusses, the non-rate benefits associated with the PPA agreement are substantial and outweigh any negative rate impacts.

**ECONOMIC IMPACT OF THE PPA UNITS**

**Q. PLEASE ELABORATE ON THE ECONOMIC BENEFIT THAT BASELOAD POWER PLANTS PROVIDE TO OHIO.**

A. As further discussed by witness Allen, the PPA Units provide significant benefits to Ohio's economy in terms of both employment and revenues. Not including contractors, the PPA Units employ 1,147 workers and provide $86.2 million of direct annual payroll income. In addition to the direct employment, it is estimated that the employees of the PPA Units indirectly contribute to more than 1,800 additional jobs and over $87 million

of additional annual income to the state. Several of the PPA Units also burn Ohio coal, contributing to the employment of over 600 miners. The jobs created by the PPA Units are particularly important to the local economies in which they operate because they are high-paying jobs in regions that are economically lagging and have high-unemployment rates. In addition to the employment and income created by the plants, they also significantly contribute to the tax base. In 2013, these plants paid nearly $9 million of property taxes.

AEP Ohio is seeing firsthand the impact that plant retirements can have on local communities. For example, the 1,400 MW Muskingum River Plant in Waterford, Ohio is scheduled to retire in June 2015. The retirement of this plant alone will lead to the loss of approximately 260 jobs in Washington County which will result in the loss of approximately $16 million in direct income to the local economy. As an example, the Muskingum River plant contributes approximately $1.2 million annually to the Wolf Creek school district, or approximately 17 percent of the district's general budget. Additionally, the closure of this plant is expected to contribute to the elimination of over 100 other jobs in the area.

**Q. COULD THE MUSKINGUM RIVER PLANT HAVE BEEN UPGRADED TO KEEP THIS CAPACITY IN OHIO?**

A. The Muskingum River Plant was retired in order to comply with environmental regulations. However, over several years, AEP Ohio explored several options to maintain the Muskingum River Plant as a viable generation facility. For example, AEP Ohio had plans, and had begun the process of retrofitting Muskingum River Unit 5 ("MR5") with environmental controls to comply with the Clean Air Interstate Rule and

the Mercury and Air Toxics Standards. While this project was ultimately cancelled, AEP also explored the possibility of converting MR5 to, or replacing it with, a gas-powered facility to protect its generation supply and limit the economic damage to the area. Indeed, AEP Ohio had committed, as part of a package deal, to replace the retiring MR5 unit with a new combined cycle gas plant to be dubbed MR6 as part of the ESP II Stipulation and Recommendation[4] that was initially adopted by the Commission but subsequently rejected. More recently, MR5 was considered for a fuel switch, where the existing boiler could be fueled with natural gas, which would have required a significantly smaller investment than the environmental retrofits or the new MR6 Unit. Unfortunately, the PJM capacity market auction results could not justify either of these investments.

This MR 5 example highlights the issue with generation investments in Ohio. While AEP Ohio's plan to convert a coal-fired plant to a gas-fired plant was thwarted by the capacity markets, in nearby states AEP Ohio's affiliates are moving forward with similar conversions. Kentucky Power Company recently sought and received regulatory approval to convert one of its coal-fired plants to natural gas, retaining some of the employees and tax base that would have been lost if it had been forced to retire the unit. Likewise, Appalachian Power Company, another AEP subsidiary is also in the process of converting two of its coal-fired units in Virginia to natural gas because of their ability to recover the investment due to regulatory support there.

[4] September 7, 2011 Stipulation and Recommendation in AEP Ohio Case No. 11-346-EL-SSO and 11-348-EL-SSO.

**PPA BENEFITS**

**Q. HOW DOES THE PPA ADDRESS THESE PROBLEMS?**

A. The PPA will provide the PPA Units with a known revenue stream commensurate with the actual costs associated with providing this generating capability. The PPA Units will be less reliant on the volatile capacity market prices to support their continued operation, allowing them to make long-term investment decisions with a more certain and transparent view of how they will ultimately recover their expenditures. In other words, it should reduce the likelihood that these sources of reliable energy would be prematurely retired for economic reasons stemming from flawed and volatile markets.

This financial construct should not only lead to continued operation of this generating capacity, it will also mitigate certain reliability risks that could occur with the retirement of baseload facilities. Further, it will support Ohio's economy. Continued operation of the PPA Units will keep hundreds of Ohioans employed and support both the state and local economies. Most importantly, the PPA, coupled with the PPA Rider provides benefits to AEP Ohio's customers, which I will discuss further below.

**Q. HOW DOES THE PPA SUPPORT AEP OHIO'S CUSTOMERS?**

A. The PPA will allow AEP Ohio's customers to realize the financial benefits associated with stable sources of reasonably priced generation for years to come. This arrangement will act as a hedge that partially shields AEP Ohio's customers from the impacts of both capacity and energy market volatility. During the Polar Vortex, real-time energy prices in PJM cleared in excess of $1,000/MWh over several hours and as high as $1,841/MWh for one hour. While the Polar Vortex was an extreme weather event, it is not uncommon for energy prices to fluctuate significantly hour-to-hour, month-to-month, and year-to-

year. As discussed above, the January 2014 average real-time energy price for the PJM RTO was $113/MWH, compared to an average energy price for the entire year of 2013 of just under $37/MWH. This clearly shows that the energy market is volatile and will react to weather patterns and supply disruptions. This volatility will likely get worse in the future because all the retiring coal-fired units are either being replaced by gas-fired units or not being replaced at all, increasing the market's overall reliance on gas.

Figures 4 and Figure 5 below display the price volatility in the energy market over the past several years and this past January. Much of this price volatility in the energy market is directly related to natural gas pricing. Many gas-fired units used for capacity purposes in the PJM market do not have firm gas supplies. As a result, in cold weather situations where gas is needed for both home heating and to run gas units, the short term price of gas can be over 30x the "normal" daily price we might see in the trade presses. Further, these short term supplies may not be available in longer cold weather periods, when firm gas supplies must be used for heating homes instead of generating electricity.

**Figure 4 – Historic PJM Energy Prices**

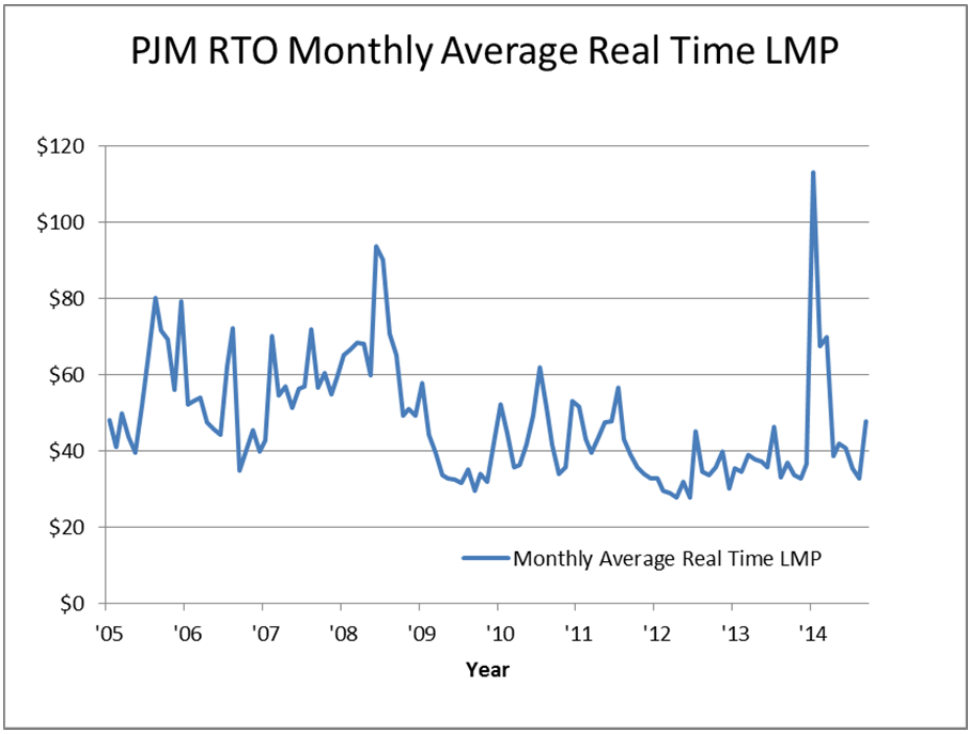
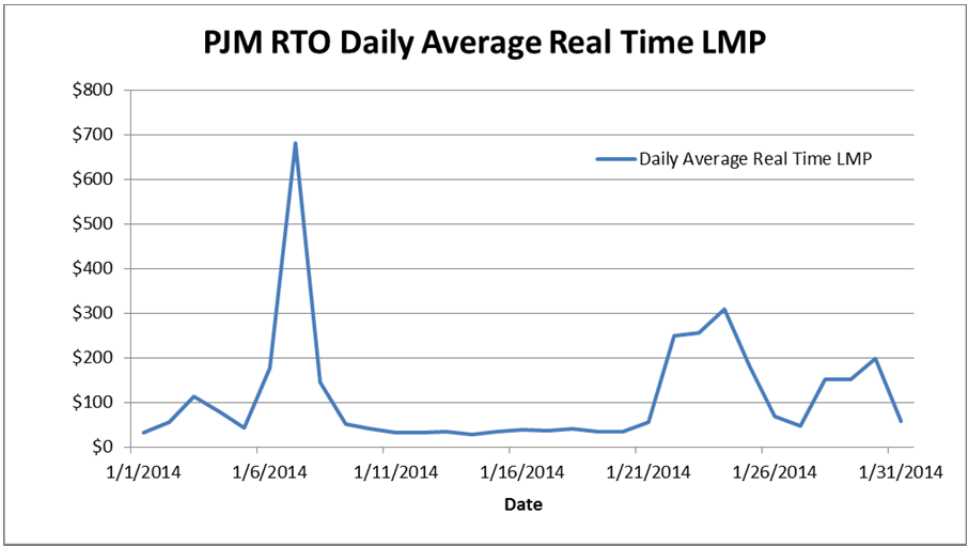



**Figure 5 – January 2014 PJM Energy Prices**




This type of market volatility impacts AEP Ohio's customer's rates. Those customers with variable rates that follow the market will experience prices spikes immediately. Other customers with fixed rates will eventually pay more as the risk of

volatility is incorporated into future offers. The PPA will positively address both of these situations. It will not only reduce the impact of severe price shocks caused by unusual weather events, it will also smooth out the typical fluctuations that exist in the market, increasing price certainty, which is a benefit to AEP Ohio's customers. Because of the relative stability of the costs of the PPA Units compared to the market, the PPA Rider will rise and fall in a direction that will help mitigate the fluctuations of the market. In addition, the stable price structure of the PPA could also be used to provide economic development opportunities in AEP Ohio's service territory, as Company witness Allen discusses.

**Q. WILL THE COMMISSION HAVE THE ABILITY TO REVIEW THE COSTS AND REVENUES ASSOCIATED WITH THE PPA?**

A. Absolutely. While the terms of the PPA will determine what costs AEP Ohio pays to AEPGR, the Commission will be able to review the costs incurred by AEP Ohio under the PPA for purposes of retail rate recovery. The Company will provide the Commission with detailed data supporting both the costs and revenues associated with the PPA. This data will be comparable to the data that the Commission has historically been provided related to these units. In addition, as the President and Chief Operating Officer of AEP Ohio, I will be a member of a committee that oversees decisions affecting the plants included in the PPA. This will allow me to keep the Commission informed of decisions affecting these plants similar to the way that the Company has constructively worked with this Commission for many years. It is important to note that decisions related to these plants will consider the impacts on Ohio and our customers. This is in sharp contrast to the PJM market where decisions are largely made through a stakeholder

process where the Company and this Commission have a much more limited say. In the absence of the PPA, those decisions – that are not necessarily focused on the best interests of Ohio's economy – will directly impact the ability of these plants to continue to provide the significant benefits that they have provided to our economy for many years.

**Q. WILL THE PPA BENEFIT AEP OHIO'S CUSTOMERS?**

A. Yes. The PPA will benefit AEP Ohio's customers from the beginning by providing an insurance policy to hedge against price spikes caused by market volatility. While weather and load forecasts are typically "normalized" for planning purposes, actual results are anything but normal. As more fully described by witness Pearce, in the long-term, as PJM works to reform its capacity market and capacity prices increase, it is expected the PPA Rider would result in a credit to AEP Ohio's customers, reducing their costs for electric service. Unfortunately for Ohio's generating assets, these market corrections could come too late to keep assets from retiring prematurely.

**Q. PLEASE SUMMARIZE THE BENEFITS OF THE PPA.**

A. The PPA will benefit AEP Ohio's customers, protect Ohio's economy, and bolster Ohio's reliability. It will provide a hedge to AEP Ohio's customers that will protect them from the impacts of market volatility, provide Ohio generators with a predictable source of revenue to maintain operations keeping jobs and taxes in the state, and promote economic development in Ohio by providing price certainty to Ohio businesses.

The PPA provides many benefits to our customers and communities including the supply of stable and reasonably priced power for years to come, which is a fundamental need for our communities to position themselves to prosper.

**Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

A. Yes.

Summary: Testimony - Direct Testimony of Pablo A. Vegas electronically filed by Mr. Steven T Nourse on behalf of Ohio Power Company