### **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	)	Case No. 14-1693-EL-RDR
Power Purchase Agreement	)	
For Inclusion in the Power Purchase	)	
Agreement Rider	)	
In The Matter of the Application of	)	
Ohio Power Company for Approval of	)	Case No. 14-1694-EL-AAM
Certain Accounting Authority	)	

### **DIRECT TESTIMONY OF**

### **DEAN ELLIS**

IN OPPOSITION TO AEP OHIO'S APPLICATION

Filed: September 11, 2015

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#### 1 INTRODUCTION

- 2 Q. WHAT IS YOUR NAME AND BUSINESS ADDRESS?
- 3 A. My name is Dean Ellis and my business address is 601 Travis Street, Suite 1400, Houston,
- 4 TX 77002.
- 5 Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?
- 6 A. I am employed by Dynegy Inc. ("Dynegy"). My title is Vice President, Regulatory Affairs.
- 7 Q. WHAT ARE YOUR RESPONSIBILITIES AS VICE PRESIDENT OF REGULATORY AFFAIRS?
- 8 A. I am responsible for overseeing the development and advancement of Dynegy's
- 9 wholesale and retail regulatory and environmental policy. I also oversee Dynegy's
- 10 governmental and legislative affairs activities.
- 11 Q. WHAT IS YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND?
- 12 A. I have a Bachelor of Science Degree in Electric Power Engineering from Rensselaer
- 13 Polytechnic Institute in Troy, N.Y. Prior to working for Dynegy, I was Manager of Transmission
- 14 Studies for the New York Independent System Operator ("NYISO"). Prior to that, I held a variety
- of engineering and construction roles pertaining to electric transmission, power generation and
- 16 critical facilities. I am a licensed Professional Engineer in New York (inactive).

#### 18 PURPOSE OF TESTIMONY

- 19 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?
- 20 A. This testimony is offered on behalf of Dynegy in opposition to AEP Ohio's proposal to
- enter into a power purchase agreement ("PPA") with AEP Generation Resources ("AEPGR") for
- 22 the generation output of several of its generating units ("PPA units") and to include such PPA

- 1 contracts in AEP Ohio's Electric Security Plan Case Nos. 13-2385-EL-SSO and 13-2386-EL-AAM
- 2 ("ESP III"). Dynegy's opposition also includes the AEP OVEC entitlement, for which AEP already
- 3 has a direct contractual relationship through an existing agreement.<sup>1</sup>
- 4 Q. WOULD YOU BRIEFLY SUMMARIZE THE BASIS FOR DYNEGY'S OPPOSITION TO AEP OHIO'S
- 5 PROPOSAL?
- 6 A. Of course. First and foremost, Dynegy operates power generating facilities in eight
- 7 states in the Midwest, the Northeast and the West Coast. The company's portfolio consists of
- 8 nearly 26,000 megawatts of generating facilities that are capable of generating enough
- 9 electricity to power about 21 million homes nationwide. Dynegy believes in the efficient
- operation of markets, generally, and of markets for wholesale electric power and electric
- capacity, specifically. Dynegy opposes arrangements or constructs that are designed to distort
- the markets in a manner that assure benefits to one market participant and therefore
- inappropriately disadvantage other market participants.
- AEP Ohio's proposal is just such a construct. AEP Ohio's principal justification for its
- proposed PPAs and the related distribution charge it wishes to impose is its stated concern with
- 16 system reliability in the event that generation units are retired in the future. To a somewhat
- 17 lesser extent, AEP Ohio purports to express concerns on behalf of the State of Ohio and of
- localities within Ohio regarding the potential loss of employment and tax revenues.
  - But AEP exaggerates the importance of a number of facts and minimizes the importance
- 20 of others, all with the obvious purpose of attempting to lend credibility to its expressed
- 21 concerns and thereby supporting its anti-market proposals. For example, its concern with

<sup>&</sup>lt;sup>1</sup> AEP witness Pearce, Page 10

- 1 system reliability largely overlooks the existing excess capacity within PJM, which well exceeds
- the PJM-required reserve margin for capacity. At the same time, AEP Ohio ignores new
- 3 generation that is under development, and even approximately 2,800 MW of new generation
- 4 that has been announced for development within Ohio itself.
- 5 A principal threat to AEP's stated concern with maintaining system reliability comes
- 6 from AEP itself. AEP threatens that absent the PPA construct it may have to shut down
- 7 generation that it operates. At best, this is an exaggerated threat. AEP Ohio simply cannot
- 8 unilaterally retire anywhere near the volume of generation capacity that it claims is at risk in its
- 9 application.
- AEP Ohio then exaggerates concerns regarding the robustness of PJM's transmission
- system and the ability of that system to ensure power and capacity to the residents of Ohio. In
- doing so, it minimizes or overlooks PJM initiatives undertaken to ensure the robustness of that
- 13 system even though AEP itself has described PJM as the operator of the largest wholesale
- 14 electricity market in the world, and as the best-established RTO in North America with a
- 15 "proven performance record."
- 16 Reliability issues do not necessarily mean system collapse, of course, and AEP Ohio is
- 17 quick to also point to market volatility to justify its application. Again, however, AEP Ohio
- 18 grossly exaggerates claims of market volatility, which simply cannot be supported by the
- 19 historic evidence. In fact, its claims of volatility are based wholly upon 2 days in the same
- 20 month over a period of the last ten years.
- 21 Because AEP Ohio cannot unilaterally eliminate the capacity it claims is at risk, its
- 22 expressions of concern over jobs and tax revenues are also overstated. Even if this were not so,

- 1 however, AEP Ohio overlooks the simple inevitability that inefficient plants will be replaced by
- 2 more efficient plants. This means that AEP Ohio's customers must actually suffer twice if its
- 3 proposal is approved. To the extent that AEP Ohio succeeds in forcing Ohio residents to
- 4 subsidize the operation of its plants, it is also delays the jobs, taxes, and other economic
- 5 benefits related to the construction and operation of more efficient plants.
- 6 AEP Ohio dismisses the market disincentives that result from the subsidies it seeks.
- 7 AEP's proposal may artificially decrease the costs of energy and capacity in the PJM market, but
- 8 it does so by forcing the citizens of Ohio to subsidize that decrease through distribution charges
- 9 that benefit AEP alone, while at the same time delaying the citizens of Ohio from realizing both
- the economic and non-economic benefits market competition. AEP's proposal harms AEP
- Ohio's rate payers. AEP's proposal harms the State of Ohio. AEP's proposal harms the
- efficiency of the markets, and harms those entities, such as Dynegy, who participate in that
- market. Therefore, the proposal should be rejected.
- 14 Q. CAN YOU STATE WHICH UNITS WOULD BE COVERED BY THE PPAs?
- 15 A. As I understand AEP's proposal, the following units would be covered by the PPAs:<sup>2</sup>

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<sup>&</sup>lt;sup>2</sup> AEP witness Pearce, Exhibit KDP-1, Page 7.

Generating Unit	Total Size (MW)	AEP Share (MW)	
Cardinal Unit 1	592 MW	592 MW	
Conesville Units 5-6	810 MW	810 MW	
Conesville Unit 4	779 MW	339 MW	
Stuart Units 1-4	2,308 MW	600 MW	
Zimmer Unit 1	1,300 MW	330 MW	
OVEC <sup>3</sup>	1,086 MW	423 MW	
Total	6,875 MW	3,094 MW	

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### 3 THE REGIONAL TRANSMISSION OPERATOR (RTO)

- 4 Q. WHAT IS AN RTO AND TO WHICH RTO DOES AEP BELONG?
- 5 A. AEP belongs to the PJM RTO. According to the PJM website:<sup>4</sup>
- 6 "PJM Interconnection is a regional transmission organization (RTO) that coordinates the
- 7 movement of wholesale electricity in all or parts of Delaware, Illinois, Indiana, Kentucky,
- 8 Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West
- 9 Virginia and the District of Columbia. Also,
  - Acting as a neutral, independent party, PJM operates a competitive wholesale electricity market and manages the high-voltage electricity grid to ensure reliability for more than 61 million people.
  - PJM's long-term regional planning process provides a broad, interstate perspective that identifies the most effective and cost-efficient improvements to the grid to ensure reliability and economic benefits on a system wide basis.
  - An independent Board oversees PJM's activities. Effective governance and a collaborative stakeholder process help PJM achieve its vision: "To be the electric industry leader – today and tomorrow – in reliable operations, efficient wholesale markets, and infrastructure development."

PJM History: PJM began in 1927 when three utilities, realizing the benefits and efficiencies possible by interconnecting to share their generating resources, formed the world's first

<sup>&</sup>lt;sup>3</sup> The Ohio Valley Electric Corporation (OVEC) is comprised of two plants – Clifty Creek in Jefferson County, Indiana, and Kyger Creek in Gallia County, Ohio. The amount shown above represents the portion of OVEC located in Ohio (the Kyger Creek plant).

<sup>4</sup> http://www.pjm.com/about-pjm/who-we-are.aspx

1 2 3	continuing power pool. Additional utilities joined in 1956, 1965 and 1981. Throughout this time PJM was operated by a department of one member utility.
4	AEP'S DECISION TO JOIN PJM
5	Q. WHEN AND WHY DID AEP JOIN PJM?
6	A. AEP Joined PJM in 2004. According to a Question and Answer document on AEP's
7	website (emphasis added) <sup>5</sup> :
8	Why did AEP decide to join PJM?
9	AEP chose PJM over other RTOs because it is the most established and mature of the
10	FERC-approved RTOs adjacent to AEP's eastern service territory and has a proven
11	performance record.
12	
13	And, also according to the same AEP reference document:
14	
15	How will AEP's membership in PJM benefit consumers and the competitive electricity
16	marketplace?
17	Retail customers will benefit from enhanced transmission service reliability. PJM also
18	operates the largest competitive wholesale electricity market in the world. Membership
19	in PJM will provide:
20	Greater access to low-cost generation for transmission owners and other load-
21	serving entities within the PJM footprint. The PJM region has nearly 135,000
22	megawatts of generation.
23	Efficient energy, capacity and ancillary services markets where all market
24	participants can buy and sell.
25	Attractive customer options, such as real-time spot market trading and day-ahead
26	pricing, among others.
27	Market monitoring to ensure the rules are followed.  The state of
28	• The certainty of supply that comes from a liquid spot market for electricity.
29	<ul> <li>Many market participants attracted by fair, visible pricing.</li> </ul>
30	O MULATIC VOLID IMPRECCIONI OF AFRIC CURRENT MEM OF RIAG
31	Q. WHAT IS YOUR IMPRESSION OF AEP'S CURRENT VIEW OF PJM?

<sup>&</sup>lt;sup>5</sup> http://www.aep.com/newsroom/resources/pjm/PJM AEPintegrationQ&A.pdf

- 1 A. AEP is critical of PJM in its testimony. AEP witness Vegas states "PJM is indifferent to
- 2 whether a single MW of capacity is built in Ohio so long as the long-term reliability of the grid is
- 3 protected."<sup>6</sup>
- 4 AEP witness Vegas also states that "PJM is indifferent as to whether the costs of millions
- of dollars of transmission grid fixes are imposed on its members due to premature retirement
- 6 of Ohio generating plants, completely disregarding the operational advantages of local
- 7 generation..." along with "PJM also has no regard for the harmful economic impacts to Ohio
- 8 that would result from these plant closures." AEP witness Vegas complains about the "flaws"
- 9 in PJM's capacity market.<sup>8</sup>
- 10 Q. HOW DO THE AEP STATEMENTS REGARDING AEP'S DECISION TO PJM COMPORT WITH AEP'S
- 11 TESTIMONY IN THIS PROCEEDING?
- 12 A: AEP's testimony here is ironic considering that AEP originally chose to join PJM because
- it is the most established and mature of the FERC-approved RTOs adjacent to AEP's eastern
- service territory and has a proven performance record, and Retail customers will benefit from
- 15 enhanced transmission service reliability, yet now, despite the evolution of the PJM markets,
- including new reliability products such as Capacity Performance, AEP now characterizes PJM as
- 17 a sub-standard option.
- 18 Q. ARE AEP'S CLAIMS NOW ABOUT PJM'S MARKET VALID?
- 19 A: AEP's assertions are simply not true for example, PJM has created 27 Local
- 20 Deliverability Areas (LDAs), 5 of which are located in Ohio (AEP, ATSI, ATSI-Cleveland, Dayton,

<sup>&</sup>lt;sup>6</sup> AEP witness Vegas, page 25

<sup>&</sup>lt;sup>7</sup> AEP witness Vegas page 25

<sup>&</sup>lt;sup>8</sup> AEP witness Vegas, page 21

and DEOK). The purpose of the LDAs is to respect reliability constraints across the system, and

2 send the appropriate price signals to those areas to incent new investment when needed. This

3 ensures that local generation is built when and where needed, including Ohio.

4 AEP witness Bradish cites the need for Ohio to be a net "exporter" of electricity, 10

suggesting that being or becoming a net "importer" is somehow a threat to Ohio. Ohio is one

of the 37 states that comprise one of the three major electrical interconnections in North

America, the Eastern Interconnection. The simple laws of physics dictate that not all 37 states

can be "net exporters" of electricity – and this is the very fundamental advantage of being part

of an interconnected grid and regional market: That is, each state can leverage supply with

other states, and the most cost-effective supply can be chosen to reliably serve a state's needs.

Even AEP acknowledged such in its press release from when it joined PJM: Greater access to

low-cost generation for transmission owners and other load-serving entities within the PJM

footprint. 11

Lastly, at a macro level every state is an importer of energy in some form, be it coal,

natural gas, uranium, fuel oil or gasoline. No single state is completely energy independent,

and the same logic and rationale applies to power – that is, as long as customer's needs are

being served safely, reliably and securely, it is more beneficial to provide energy via the most

competitive and cost effective manner.

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9 http://pjm.com/~/media/markets-ops/rpm/rpm-auction-info/2018-2019-bra-planning-parameters.ashx

<sup>10</sup> AEP witness Bradish, pages 3, 4

<sup>11</sup> http://www.aep.com/newsroom/resources/pjm/PJM\_AEPintegrationQ&A.pdf

#### 1 GENERATING UNIT RETIREMENTS

- 2 Q: WHO ARE THE OTHER OWNERS OF THE UNITS PARTIALLY OWNED BY AEP, OR THE JOINTLY
- 3 OWNED UNITS?
- 4 A: For the units only partially owned by AEP Conesville unit 4, Stuart units 1-4, and
- 5 Zimmer unit 1 the other owners are Dynegy and Dayton Power & Light ("DP&L"). OVEC is
- 6 owned by numerous entities in addition to AEP, including DP&L, FirstEnergy and Duke. The PPA
- 7 generating units partially owned by AEP are commonly referred to as Joint Owned Units
- 8 ("JOUs") and are covered by Joint Operating Agreements ("JOAs").
- 9 Q. WHAT ARE THE REQUIREMENTS IN THE JOINT OPERATING AGREEMENTS THAT ADDRESS
- 10 RETIREMENT OF THE JOINTLY OWNED UNITS?
- 11 A: AEP witness Vegas correctly points out, "AEPGR would effectively have a veto over any
- proposed closure of the units..." However, this is true for each the owners of the JOUs:
- Dynegy, DP&L and AEP cannot unilaterally retire any of the units without unanimous consent of
- all the joint owners. Therefore, of the PPA generating units, only a small fraction is wholly-
- owned by AEP and under unilateral control of AEP. Said differently, and as noted above and
- detailed below, only Cardinal Unit 1 and Conesville Units 5-6 are wholly owned by AEP. All of
- 17 the remaining generating units are only partially owned by AEP.

<sup>&</sup>lt;sup>12</sup> [Vegas, P. 11]

Generating Unit	Total Size (MW)	AEP Share (MW)	MW of Plants Wholly Owned by AEP
Cardinal Unit 1	592 MW	592 MW	592 MW
Conesville Units 5-6	810 MW	810 MW	810 MW
Conesville Unit 4	779 MW	339 MW	0 MW
Stuart Units 1-4	2,308 MW	600 MW	0 MW
Zimmer Unit 1	1,300 MW	330 MW	0 MW
OVEC <sup>13</sup>	1,086 MW	423 MW	0 MW
Total	6,875 MW	3,094 MW	1,402 MW

- 3 Q. PLEASE RESPOND TO THE CLAIMS MADE BY AEP CONCERNING THE RETIREMENT OF 6,800
- 4 MW OF OHIO GENERATION?
- 5 A: AEP witness Vegas refers to the potential retirement of "6,800 MW (of generation) in
- 6 Ohio" 14 should the PPAs not be granted.
- 7 AEP witness Bradish states that the purpose of his testimony is "...to describe the
- 8 results of a transmission planning impact study, which estimates the required transmission
- 9 upgrades and related costs that would be necessary if certain generating units (PPA units)
- owned by AEP Generation Resources (AEPGR) are retired." Furthermore, AEP witness Bradish
- goes on to say that for the purpose of his study, "...he performed a preliminary analysis of the
- scenario in which Cardinal 1, Conesville 4, 5, and 6, Stuart 1, 2, 3, and 4, and Zimmer 1

<sup>&</sup>lt;sup>13</sup> OVEC is comprised of two plants – Clifty Creek in Jefferson County, Indiana, and Kyger Creek in Gallia County, Ohio. The amount shown above represents the portion of OVEC located in Ohio (the Kyger Creek plant).

<sup>&</sup>lt;sup>14</sup> AEP witness Vegas, page 13

<sup>&</sup>lt;sup>15</sup> AEP witness Bradish, pages 2-3

- generating units are simultaneously retired." <sup>16</sup> As shown above in Table 2, these units, along
- with AEP's share of OVEC, represent approximately 6,800 MW of total generating capacity.
- 3 Q. HOW LIKELY IS THE SIMULTANEOUS RETIREMENT OF 6,800 MW OF OHIO GENERATION?
- 4 A: As shown in AEP witness testimony and above in Table 2, the amount of capacity
- 5 covered under the PPAs, which represents plants that AEP wholly owns and those it co-owns
- 6 with joint owners, is only 3,100 MW<sup>17</sup> of the 6,800 MW. Furthermore, given that the
- 7 retirement of any JOU requires unanimous consent of all the owners, and that the total amount
- 8 of capacity for which AEP is requesting a PPA and over which AEP has unilateral decision making
- 9 authority is only 1,400 MW, it is very misleading to characterize or suggest that 6,800 MW of
- capacity is at simultaneous risk of retirement should the PPAs not be granted.
- 11 Q. IS THERE AN ALTERNATIVE TO AEP RETIRING THE UNITS?
- 12 A: Yes, there are several alternatives available to AEP, including:
- AEP could sell the units it owns outright and/or shares of the units it owns;
- Enter into a Reliability-Must-Run (RMR) agreement; or
- Continue to operate through the current market conditions, until the market improves
- 16 consistent with AEP's testimony.
- 17 Q. DID DYNEGY PURCHASE ITS SHARE OF THE PPA GENERATING UNITS WITH THE INTENT TO
- 18 RETIRE THEM?
- 19 A: No. Dynegy sees value in its share of the units it purchased, and did not make the
- investment with any intention to retire or otherwise shut down the plants.
- 21 Q. DOES DYNEGY CURRENTLY HAVE ANY PLANS TO RETIRE THE PPA GENERATING UNITS?

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<sup>&</sup>lt;sup>16</sup> AEP witness Bradish, page 6

<sup>&</sup>lt;sup>17</sup> AEP witness Vegas, page 13

1 A: No. Dynegy intends to continue to operate and invest in the plants.

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### 3 IMPACT OF GENERATING PLANT RETIREMENTS ON THE TRANSMISSION SYSTEM

4 Q. CAN YOU DISCUSS THE POTENTIAL FINANCIAL OR OPERATIONAL IMPACT OF THE

5 RETIREMENTS?

A. AEP witnesses Vegas, Bradash and Fetter refer to an additional \$1.6 billion of new transmission facilities as needed to support grid reliability in the event of the retirement of the PPA generating units representing 6,800 MW.<sup>18</sup> As demonstrated above, AEP has unilateral control over only 1,400 MW of these units; therefore, it is misleading to suggest that Public Utilities Commission of Ohio's (PUCO's) failure to grant the PPAs will result in 6,800 MW of retirements, which in turn, will lead to a required \$1.6 billion of transmission investment.

Furthermore, it is unclear from the testimony whether AEP's analysis showing a need for \$1.6 billion in transmission investment considered any one of the new generation projects that are in various stages of development and are described in more detail in testimony below.

These new projects total approximately 2,800 MW.

AEP witness Vegas threatens that reliance on the transmission system can lead to power outages, and refers to the region-wide power outage affecting parts of Washington D.C. on April 7, 2015. <sup>19</sup> The fact is, power outages can be caused by a variety of factors, with by far the most expensive and wide-spread power outage in recent history being the Northeast Blackout of 2003, which affected approximately 50 million people and caused an estimated \$4-10 billion

<sup>&</sup>lt;sup>18</sup> AEP witness Vegas (page 14), AEP witness Bradash (page 9), AEP witness Allen (page 12) and AEP witness Fetter (page 12)

<sup>&</sup>lt;sup>19</sup> AEP witness Vegas, pages 14-15

of economic damage. That blackout was found to be caused by First Energy in Ohio as a result 1

2 of First Energy's 1) lack of situational awareness, 2) failure to trim trees, and 3) poorly trained

system operators. 20 The final 2003 blackout report found no overreliance on the transmission 3

4 system as a proxy for generation.

5 Q. IS THERE A PROCESS TO MITIGATE THE IMPACT OF POTENTIAL GENERATOR RETIREMENTS?

AEP witness Bradish describes the process by which the regional transmission operator, 6 A.

PJM, evaluates generator retirements to prevent reliability issues. 21 If PJM determines that the

retirement of a generator triggers a reliability need, the generator owner may enter into a cost-

of-service Reliability Must Run (RMR) agreement, whereby a contract is issued to the retiring

unit for a predetermined amount of time until the reliability need is resolved. In this way, PJM,

as the operator of the grid, ensures that generation assets needed for reliability remain

operational. 12

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13 Q. IS ELECTRIC TRANSMISSION THE ONLY POTENTIAL RELIABILITY SOLUTION TO A GENERATOR

14 **RETIREMENT?** 

No. AEP witness Bradish states that "...an RMR designation...only reinforces the need A. 15

for the transmission upgrades."<sup>22</sup> While transmission is generally the preferred option, there

are a variety of potential solutions to a reliability need in lieu of transmission upgrades, 17

including a host of non-transmission alternatives ("NTAs"), many of which are market-based

and funded by private investors rather than ratepayers. Alternatives include new generation

developed by independent power producers ("IPPs"), demand response and energy efficiency. 20

http://energy.gov/sites/prod/files/oeprod/DocumentsandMedia/BlackoutFinal-Web.pdf
 AEP witness Bradish, page 5

<sup>&</sup>lt;sup>22</sup> AEP witness Bradish, Page 5

#### 1 RESOURCE ADEQUACY IN PJM

- 2 Q. CAN YOU FURTHER DISCUSS ELECTRIC SYSTEM RELIABILITY, SPECIFICALLY RESOURCE
- 3 ADEQUACY?
- 4 A. There are two primary metrics of electric system reliability transmission security and
- 5 resource adequacy. Transmission security typically involves reliably dispatching generation to
- 6 meet actual demand without overloading the transmission lines, providing adequate voltage
- 7 support and preventing dynamic instability. Resource adequacy is the measure of having
- 8 enough supply resources to meet future demand.
- 9 Q. WHAT IS PJM'S ACTUAL AND FORECAST RESOURCE ADEQUACY?
- 10 A. For this past summer of 2015, PJM had a required reserve margin (actual supply in
- excess of demand) of 15.6%; however, the actual reserve margin in PJM was well in excess of
- the requirement, at 20.8%.<sup>23</sup>
- For the summer of 2019, PJM is continuing to forecast an actual reserve margin in
- 14 excess of the required reserve margin, not including the ability to import power from other
- 15 regions.<sup>24</sup>

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### 17 MARKET VOLATILITY

- 18 Q. CAN YOU DISCUSS AEP'S CLAIMS OF WHOLESALE MARKET VOLATILITY?
- 19 A. Looking at Vegas testimony Figure 1, PJM RTO Monthly Average Real Time LMP, when
- 20 removing from consideration the monthly price spike associated with the Polar Vortex of 2014,

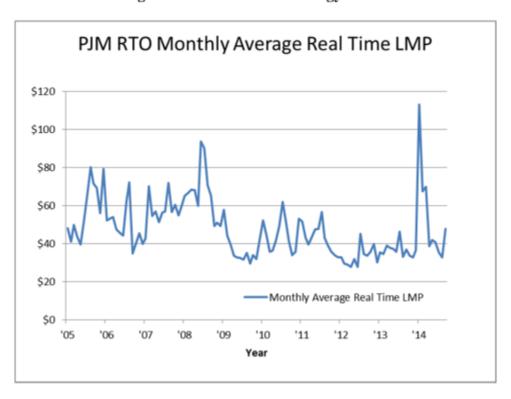
http://www.pjm.com/sitecore%20modules/web/~/media/pjm-annualmeeting/postings/2015-summer-outlook ashx

<sup>44</sup> http://www.pjm.com/~/media/planning/res-adeq/20150609-forecasted-reserve-margin-graph.ashx

- 1 PJM Monthly Average LMPs have actually been quite stable over the other 119 months or 10
- years, with relatively flat average pricing and a noticeable decline beginning in 2008. More
- 3 specifically, since 2008, according to Vegas Figure 1, the Monthly Average LMP is remarkably
- 4 stable and low, at around \$40/MWh.

Figure 1: Historic PJM Energy Prices

Figure 1 – Historic PJM Energy Prices



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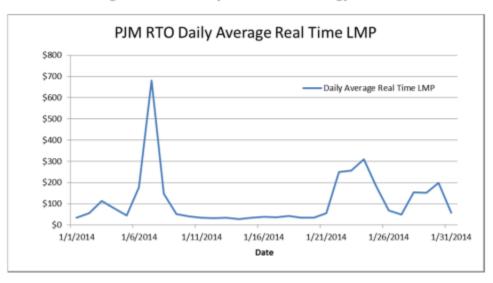
Similarly, when looking at Vegas Figure 2 – PJM RTO Daily Average Real Time LMP for the month of January 2014 (the month that the Polar Vortex of 2014 occurred), the prices are again remarkably stable for the majority of the month, particularly given the record cold weather across the region and balance of the United States at that time.<sup>25</sup> This weather included Maryland's, Pennsylvania's, and New Jersey's 12<sup>th</sup>, 13<sup>th</sup> and 19<sup>th</sup> coldest January on

<sup>&</sup>lt;sup>25</sup> https://www.ncdc.noaa.gov/sotc/national/201401

- 1 record, respectively. Toledo set an all-time record for January snowfall, along with its 6<sup>th</sup>
- 2 coldest January on record with an average temperature of only 16.0 degrees. <sup>26</sup>

Figure 2: Historic PJM Energy Prices

Figure 2 - January 2014 PJM Energy Prices



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- As AEP witness Pearce states, "No one will know what the weather will hold over the
- 6 next ten years in Ohio and across PJM."<sup>27</sup> While this statement is correct, the figure above
- 7 demonstrates that the past ten years have shown wholesale prices to be relatively stable and
- 8 even declining, despite relatively short periods in time when the region experienced record cold
- 9 weather.
- 10 Q. HAVE ANY STEPS BEEN TAKEN THAT WILL ADDRESS THE RELIABILITY AND WHOLESALE PRICE
- 11 VOLATILITY AS EXPERIENCED DURING THE POLAR VORTEX OF 2014?
- 12 A. Yes. PJM recently filed with FERC, and FERC accepted, a new capacity product called
- Capacity Performance ("CP"). 28 Capacity Performance was designed and implemented to

<sup>&</sup>lt;sup>26</sup> http://www.weather.gov/cle/climate\_Jan2014

<sup>&</sup>lt;sup>27</sup> AEP witness Pearce, page 18

<sup>&</sup>lt;sup>28</sup> FERC Docket ER15-623

- address conditions experienced during the Polar Vortex of 2014. Elements of this product
- 2 include high penalties for capacity suppliers that are unable to deliver energy during shortage
- 3 events, which will provide a strong incentive for those suppliers to perform and in turn reduce
- 4 wholesale price volatility.
- 5 Furthermore, energy prices are predicted to fall by approximately \$2.2 billion annually
- 6 across the system under the implementation of Capacity Performance.<sup>29</sup> This translates into
- 7 approximately \$3/MWh when taking into account the energy market cost reduction cited
- 8 above by PJM and dividing it by the total number of PJM MWh . 30
- 9 Q. HAVE THERE BEEN ANY OTHER STEPS TAKEN THAT WILL ADDRESS THE WHOLESALE PRICE
- 10 VOLATILITY AS EXPERIENCED DURING THE POLAR VORTEX OF 2014?
- 11 A. Yes. PJM is in the process of revising the timing of its day-ahead electric offer window
- to better align with the natural gas nomination cycles, along with moving the electric offer
- window to earlier in the day. 31 This change will allow natural-gas fired power plants the ability
- 14 to purchase gas when there is more market liquidity, along with purchasing that gas with longer
- lead time before the start of the power day.
- 16 Q., WHAT ARE YOUR CONCLUSIONS REGARDING AEP'S TESTIMONY ON WHOLESALE MARKET
- 17 VOLATILITY?
- 18 A. AEP's claims of market volatility are repeatedly overstated and misleading, as evidenced
- 19 by the fact that AEP is only able to point to only two days during one month over the past ten
- 20 years when prices could be called "volatile". Furthermore, PJM has implemented or is in the

<sup>&</sup>lt;sup>29</sup> http://pjm.com/~/media/committees-groups/committees/elc/postings/capacity-performance-cost-benefit-analysis.ashx

<sup>&</sup>lt;sup>30</sup> http://www.pjm.com/~/media/about-pjm/newsroom/annual-reports/2014-annual-report.ashx

<sup>&</sup>lt;sup>31</sup> FERC Docket ER15-2260

- 1 process of implementing a number of tariff revisions that will reduce volatility and further
- 2 enhance reliability.

- 4 RESULTS OF RECENTLY-COMPLETED PJM CAPACITY PERFORMANCE AUCTIONS
- 5 Q. WHAT WERE THE RESULTS OF THE RECENTLY-COMPLETED PJM CAPACITY PERFORMANCE
- 6 AUCTIONS FOR DELIVERY YEARS 2016-2017, 2017-2018 AND 2018-2019?
- 7 A. For delivery year 2016-2017, the auction clearing price was \$134/MW-Day. 32 For
- 8 delivery year 2017-2018, the auction clearing price was \$151.50/MW-Day. 33 For delivery year
- 9 2018-2019, the auction clearing price (for units in AEP Ohio) was \$164.77/MW-Day for Capacity
- 10 Performance and \$149.98/MW-Day for Base Capacity. 34
- 11 Q. HOW DO THESE RESULTS COMPARE TO THE PREVIOUSLY-RUN CAPACITY AUCTIONS FOR THE
- 12 SAME YEARS?
- 13 A. The previously-cleared Base Residual Auction (BRA) for delivery year 2016-2017 yielded
- 14 \$59.37/MW-Day for units in AEP Ohio. 35 The previously-cleared Base Residual Auction (BRA)
- 15 for delivery year 2017-2018 yielded \$120/MW-Day for units in AEP Ohio. 36 For example, a plant
- with 1,000 MW of capacity that originally cleared the auction at \$59.37/MW-Day earned \$21.7
- million for 2016-2017; if that same plant cleared the same amount of capacity in the transition
- auction, its capacity revenue would increase by \$27.2 million to \$48.9 million.

 $<sup>\</sup>frac{^{32}}{\text{http://www.pjm.com/}^{\sim}/\text{media/markets-ops/rpm/rpm-auction-info/2016-2017-transition-incremental-auction-results.ashx}$ 

<sup>33</sup> http://www.pjm.com/~/media/markets-ops/rpm/rpm-auction-info/2017-2018-cp-transition-auction-report.ashx

<sup>34</sup> http://www.pjm.com/~/media/879A2FA2A1794C7887A98686A70336D2.ashx

 $<sup>\</sup>frac{35}{\text{https://www.pjm.com/}^{\sim}/\text{media/markets-ops/rpm/rpm-auction-info/2016-2017-base-residual-auction-report.ashx}}$ 

 $<sup>\</sup>frac{^{36}}{\text{https://www.pjm.com/}^{\sim}/\text{media/markets-ops/rpm/rpm-auction-info/2016-2017-base-residual-auction-report.ashx}}$ 

- Q. HOW MUCH REVENUE DID THE AEP PPA UNITS RECEIVE FROM THE ABOVE-MENTIONED 1
- 2 **AUCTIONS?**
- On September 10, 2015, AEP disclosed results for all of its AEP Generation Resources 3 A.
- (AEPGR), stating that all of the capacity that was offered into the auction actually cleared the 4
- auction, representing approximately 7,000 MW. Of that capacity, AEP's share of the PPA units 5
- 6 (excluding OVEC) represents approximately 2,700 MW. Given the clearing process mentioned
- 7 above, AEP's share of the PPA units (excluding OVEC) had the potential to earn an additional
- \$74 million for the 12 months beginning June 1, 2016, 37 and an additional \$31 million the 12 8
- months beginning June 1, 2017.<sup>38</sup> For the 12 months beginning June 1, 2018, the PPA units 9
- (excluding OVEC) had the potential to earn a total of \$162 million in capacity revenue. 39 10

#### **NEW GENERATION** 12

- 13 Q. WHAT IS THE STATUS OF NEW GENERATION IN OHIO?
- A list of new generation projects under development in Ohio is shown below in Table 3. 14 A.

<sup>&</sup>lt;sup>37</sup> 2,700 MW x (\$134-59.37)MW/Day x 365 days <sup>38</sup> 2,700 MW x (\$151.50-120)MW/Day x 365 days

<sup>&</sup>lt;sup>39</sup> 2,700 MW x \$164.77/MW-Day x 365 days

New Project	Case No.	Size and Type	Status
Oregon Clean Power	12-2959-EL-BGN	800 MW CCGT	Under
			Construction
Carroll County Energy Gen	13-1752-EL-BGN	742 MW CCGT	Site preparation
			underway,
			construction
			commenced
Rolling Hills Gen Station	12-1669-EL-BGA	554 MW CCGT	Approved May
		upgrade	2013; OEPA Air &
			Water permits
			approved spring
			2015
Middletown Energy Center	14-0534-EL-BGA	510-525 MW CCGT	Conditions to
			construct satisfied
			effective
			6/22/2015;
			construction
			commenced
			9/11/2015
Lordstown – Clean Energy	14-2322-EL-BGA	800 MW CCGT	In application
			process, not yet
			approved
	Total	Approx. 3,400 MW	

#### Q. WHAT IS AEP'S STATED VIEW OF NEW GENERATION IN OHIO? 3

- AEP Witness Vegas states that the PJM capacity market structure does not support the 4 A:
- continued long-term investment in existing units and has spurred very few plans for significant 5
- 6 generation in Ohio. Yet, new projects are in various stages of development across Ohio, such as
- those shown in Table 3. 7
- AEP witness Wittine correctly describes construction activity at the Oregon and Carroll 8
- County sites, with an in-service date of 2017, 41 only approximately 1.5 years from now. 9

Ohio Power Siting Board <a href="http://www.opsb.ohio.gov/opsb/">http://www.opsb.ohio.gov/opsb/</a>
 Wittine, page 8

- 1 However, according to the Ohio Power Siting Board, certain construction activities at
- 2 Middletown have commenced.
- 3 Q. WHAT IS THE OUTLOOK FOR ADDITIONAL NEW GENERATION IN OHIO?
- 4 A: Dynegy is currently investing in its coal-fired plants to make them more reliable during
- 5 extreme-weather conditions, and is undertaking several uprate projects at its natural gas-fired
- 6 plants. With Ohio's proximity to the Marcellus and Utica shale gas formations, it is reasonable
- 7 to predict that there will be significant additional generation built in Ohio.
- 8 In short, the PPAs will give undue preference to existing utility generation, hindering the
- 9 development of new gas generation and possibly making compliance with Section 111(d) of the
- 10 Clean Air Act<sup>42</sup> more costly for ratepayers. Said differently, the PPAs are a self-fulfilling
- prophecy if granted they will be a disincentive to new generation projects and no new
- 12 generation will be built.

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### **IMPACT OF THE PPA RIDERS ON COMPETITION**

- 15 Q. CAN YOU BRIEFLY DESCRIBE THE EFFECTS OF THE PPAS ON COMPETITION AND THE
- 16 MARKETS?
- 17 A. Generation owners in Ohio, including First Energy, DP&L, AEP and Dynegy, compete to
- offer their capacity and energy into the wholesale capacity and energy markets at the lowest
- 19 possible cost.
- The PPA riders will have direct and indirect harmful impacts on competition in Ohio.
- 21 First, and most importantly, should any generation owner receive a subsidy like the out-of-

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<sup>&</sup>lt;sup>42</sup> 42 USC 4711

market PPAs under consideration in this proceeding, that owner would become agnostic to the markets given that their revenue is not only coming from outside the competitive market but it is also guaranteed. This owner could then easily engage in market behavior that would distort prices, such as offering its capacity or energy in the market at prices that do not reflect the owner's actual cost of operations, suppressing the market clearing price for the other owners of generating units.

One of the desired outcomes from competition in any market is that the most costeffective and efficient suppliers will prevail, and the oldest, least efficient and most obsolete
suppliers will exit the market. When the oldest, most expensive and least efficient suppliers are
artificially kept in the market, market signals that would incentivize the development of newer,
cheaper, cleaner plants are suppressed.

Ironically, AEP witness Vegas notes that "artificially depressed market prices could force Ohio's generators to close their doors prematurely due to improper price signals." Dynegy completely agrees with witness Vegas – that is, artificially depressed prices will force premature retirements. However, approving the PPAs to AEP will preserve some of the oldest and least efficient units, suppress prices and put more efficient generators at risk of shutting down.

AEP's PPA proposal effectively prioritizes AEP's plants, jobs and communities over those of other suppliers.

AEP witness Vegas states that the PPA units are now on the economic bubble where low short-term capacity and energy prices have increased the risk of premature retirement.<sup>44</sup> Yet, plants that are on the bubble in a competitive market are not at risk for *premature* retirement,

<sup>&</sup>lt;sup>43</sup> AEP witness Vegas, pages 13-14

<sup>&</sup>lt;sup>44</sup> AEP witness Vegas, page 16

- they are at risk for appropriate and rationale retirement. This is the very basic nature of
   competition.
- In sum, the long term effect of preserving the oldest, least efficient plants is that consumers will eventually pay more.
- 5 Q. WHAT IS THE EFFECT OF "NON-BYPASSABLE" RIDERS ON CUSTOMER BILLS?
- 6 A. Non-bypassable riders take the cost of a service and embed those costs in consumers'
- 7 bills, and amount to effectively a tax or surcharge on those bills. The outcome of these
- 8 surcharges is that when they are used to subsidize inefficient and/or uneconomic generation,
- 9 they can reduce the actual cost of electricity but raise the total costs to consumers.
- 10 Fundamentally, riders disguise the actual cost of service. Sometimes riders are necessary (e.g.
- storm riders for recovery of significant, unexpected damage to the system). But the
- overreliance on riders to mask actual cost to customers (e.g. deferrals for fuel recovery) only
- delays the charge paid by customers. A better approach would be to minimize riders and allow
- 14 customers to make more fully informed decisions based on the actual costs associated with
- their energy consumption.

17 IMPACT OF THE PPA RIDERS ON DYNEGY

- 18 Q. HOW WOULD DYNEGY BENEFIT FROM THE RETIREMENT OF COMPETITORS' PLANTS?
- 19 A. As described above, there are several negative impacts on wholesale competition
- 20 should the PPAs be approved. Dynegy, its plants and its communities would be harmed
- 21 through the impact on the market. As shown above, the actual reserve margin in PJM is in
- 22 excess of the required reserve margin, along with several new generation projects in various

- 1 stages of development or construction; therefore, there is no need to artificially support 2 uneconomic plants.
- 3 Should AEP retire any of its plants – of which, as noted earlier in my testimony, AEP has
- only 1,400 MW under its direct decisional authority theoretically, there could be some 4
- 5 increase in prices in the capacity and energy markets, but at this time it is unclear what that
- 6 effect might be, given the unknown operating characteristics of those plants (capacity factors,
- 7 in-market availability, marginal hours, inframarginal hours, capex, opex, etc.), along with
- 8 countervailing market forces such as new generation that could reduce the costs.

**BENEFITS OF COMPETITION** 

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11 Q: HOW WOULD YOU CHARACTERIZE THE BENEFITS OF ELECTRIC COMPETITION?

- A: Electric competition has provided a number of benefits to consumers and the respective 12
- 13 states in which those consumers reside. According to a recently-released analysis by the
- COMPETE coalition, All Sector electric rates have declined 1.3% over the period 1997-2014 in 14
- the restructured states, while rates have increased 9.8% in the non-restructured states. 45 15
- Similarly, according to COMPETE rates have increased only 1.2% in RTO states, while they have 16
- increased 8.6% in the non-RTO states.<sup>46</sup> 17
- 18 In addition to the cost savings, competition allows for a greater number of choices for
- 19 consumers including the number of suppliers and product offerings, along with more
- 20 transparent pricing.

http://www.competecoalition.com/files/EIA%20restructured%20states%20data%20chart%20April%202015%20up

 $http://w\underline{ww.competecoali\underline{tion.com/files/EIA\%20RTO\%20data\%20chart\%20April\%202015\%20update.pdf}$ 

#### 1 THREATS TO "RE-REGULATE"

- 2 Q: THERE HAVE BEEN STATEMENTS MADE THAT ELECTRIC RE-STRUCTURING HASN'T WORKED
- 3 AND RE-REGULATION OF OHIO'S UTILITIES MIGHT BE A BETTER COURSE OF ACTION; HOW
- 4 WOULD YOU RESPOND TO THAT?
- 5 A: AEP witness Vegas alludes to the fact that "Ohio's neighbors Indiana, Michigan,
- 6 Virginia, West Virginia, and Kentucky all provide regulated recovery of generation..." 47 AEP
- 7 witness Fetter a former Michigan regulator also states that "It's interesting to note that
- 8 Ohio's neighboring regulators in Indiana, West Virginia and Kentucky all continue to provide
- 9 regulated recovery of generation investment," along with referencing the current electrical
- 10 restructuring environment in Michigan. 48
- 11 Setting aside the fact that Michigan's All-Sector electric rates were 6.2% higher than the
- 12 U.S. national average according to EIA data YTD 2014, and Ohio's All Sector rates were 7.2%
- below the U.S. average for the same period, <sup>49</sup> comparing Ohio to Indiana, West Virginia and
- 14 Kentucky is apples-to-oranges.
- 15 For example, the Real Gross Domestic Product (GDP) of each of these states in 2014 is
- 16 shown below:<sup>50</sup>
- 17 Indiana: \$317,840 million
- 18 West Virginia: \$75,337 million
- 19 Kentucky: \$188,602 million
- 20 Ohio: \$583,261 million

<sup>48</sup> AEP witness Fetter, page 9

<sup>&</sup>lt;sup>47</sup> AEP witness Vegas, page 24

<sup>&</sup>lt;sup>49</sup> US Energy Information Administration, YTD 2014 All Sector rates: Ohio, US Average and Michigan All-sector rates 9.67, 10.45 and 11.10 cents per kWH, respectively.

https://www.bea.gov/newsreleases/regional/gdp\_state/2015/pdf/gsp0615.pdf

- As shown above, Ohio has the largest economy of any of these states, and in fact, Ohio's
  economy is larger than Indiana's, West Virginia's and Kentucky's *combined*. This is important
  because GDP is one of the primary measures of both the relative size and strength of an
  economy.
  - As a matter of fact, all but one of the eight states with the largest and most advanced economies California, Texas, New York, Illinois, Pennsylvania, Ohio and New Jersey have all elected to embrace competitive electric markets. <sup>51</sup> Clearly there is a relationship between the relative size and maturity of the economies in these states and their decision to migrate to electric competition.

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#### TRANSFERABILITY OF THE PPAs

- 12 Q. DO YOU UNDERSTAND THE PPAS TO BE TRANSFERRABLE WITH THE PPA UNITS SHOULD AEP
- 13 DECIDE TO SELL THOSE UNITS AFTER RECEIVING THE PPAS?
- 14 A. While AEP has not explicitly stated in its testimony that it intends to enter into the PPAs
- and then sell the units, it appears to be an option available to AEP should they choose to do so.
- 16 The value of AEP's units would be dramatically increased by entering into the above market,
- 17 long term PPAs. This would make sale/liquidation of those assets a very easy calculus, with a
- return on investment to AEP's shareholders at the detriment of Ohio's consumers.
- 19 Q. IS IT APPROPRIATE FOR THE PUCO TO ALLOW TRANSFER OF THE PPAS WITH A SALE OF THE
- 20 GENERATING UNITS?

E 1

<sup>&</sup>lt;sup>51</sup> Of the eight states with the largest GDP, only Florida remains largely vertically-integrated.

- No. If the PUCO grants AEP's request for the PPA riders, it should also require that the 1 A.
- 2 riders are non-transferrable to new owners in order to protect consumers.

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#### **ALTERNATIVES TO THE PPA RIDERS**

- 5 Q. CAN YOU DISCUSS ANY POTENTIAL OPTIONS TO THE PPA RIDERS?
- AEP Witness Vegas stated that the PPAs are needed as a financial hedge to protect 6 A.
- AEP's consumers against future volatility in the market. 52 As described above, AEP has grossly 7
- 8 overstated the volatility in the market, presumably to justify the above-market rates for the
- 9 PPAs. If AEP were truly interested in providing a financial hedge to consumers, there are other
- effective and less costly ways to do so, including issuing an RFP for the capacity and energy over 10
- 11 the period in question. The RFP could take on a variety of forms, including a fixed-price option,
- a variable-priced option, or a combination of both. 12

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#### CONCLUSION

- Q. WHAT ELSE SHOULD THE COMMISSION CONSIDER IN EVALUATING AEP OHIO'S REQUEST 15
- FOR PPAs? 16
- A. AEP's chairman, president and CEO Nick Akins has stated publicly in the context of the 17
- PPA request that "A choice not to decide is not a choice," referring to Rush's 1980 song 18
- Freewill.53 19
- This appears to be an attempt by AEP's chairman, president and CEO to pressure the 20
- 21 Commission into approving the long-term, above-market contracts for an extended amount of

<sup>&</sup>lt;sup>52</sup> AEP witness Vegas, page 3

 $<sup>^{53}\</sup> http://www.dispatch.com/content/stories/business/2015/04/23/0423-cold-winter-good-for-aep.html$ 

- time, without AEP, its shareholders, directors or executives accepting or bearing any financial
- 2 responsibility for the business decisions AEP might have made in the past, or the inability of
- 3 these plants to compete in the market place. AEP's request in this proceeding would shift the
- 4 financial downside of running these plants from AEP investors to the ratepayers of the state of
- 5 Ohio.
- 6 Squarely placing the fate of these plants in the hands of the PUCO along against the
- 5 backdrop of AEP's threat to retire the plants is more akin to the Eagles' Hotel California, where
- 8 AEP is effectively giving consumers in the state of Ohio a false choice that amounts to "You can
- 9 check-out any time you like, but you can never leave."
- 10 Q. DOES THIS CONCLUDE YOUR TESTIMONY?
- 11 A. Yes.

#### **CERTIFICATE OF SERVICE**

The Public Utilities Commission of Ohio's e-filing system will electronically serve notice of the filing of this document on the parties referenced on the service list of the docket card who have electronically subscribed to the case (those individuals are marked with an asterisk below). In addition, the undersigned certifies that a courtesy copy of the foregoing document is also being served (via electronic mail) on the 11<sup>th</sup> day of September 2015 upon all persons/entities listed below:

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Summary: Testimony of Mr. Dean Ellis electronically filed by Mr. Michael D. Dortch on behalf of Dynegy Inc